



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Robert J. Ehrler
Senior Corporate Attorney
E.ON U.S.
220 West Main Street
Louisville, KY 40232

Mr. Victor A. Staffieri
President and CEO
Kentucky Utilities Company
1 Quality Street
Lexington, KY 40507

Re: Notice of Violation

Dear Messrs. Ehrler and Staffieri:

Enclosed is a Notice of Violation (NOV) issued to E.ON U.S. and Kentucky Utilities Company (KU) under Section 113(a)(1) of the Clean Air Act (CAA), 42 U.S.C. § 7413(a)(1). In the NOV, the United States Environmental Protection Agency notifies E.ON U.S. and KU of violations of the Prevention of Significant Deterioration (PSD) permitting requirements of the CAA at the Ghent Station, operated by KU, a subsidiary of E.ON U.S.

Please note the opportunity to confer outlined in the NOV. As indicated in the NOV, any requests to confer should be directed to Jennifer Lewis. Ms. Lewis can be reached at (404) 562-9518.

Sincerely,


Carol L. Kemker
Acting Director
Air, Pesticides and Toxics
Management Division

Enclosure

cc: Jeff Cummins, KY Division of Enforcement
John Lyons, KDAQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:)
)
E.ON U.S. and)
Kentucky Utilities Company) **Notice of Violation**
)
)
Proceedings Pursuant to)
Section 113 of the)
Clean Air Act, 42 U.S.C. § 7413)
)
_____)

NOTICE OF VIOLATION

This Notice of Violation (NOV) is issued to E.ON U.S. and Kentucky Utilities Company for violations of the Clean Air Act, 42 U.S.C. §§ 7401-7671q (the Act), at the Ghent Station, owned and operated by Kentucky Utilities (KU), a subsidiary of E.ON U.S. The Ghent Station is a coal-fired power plant located on U.S. Highway 42, Ghent, Carroll County, Kentucky. E.ON U.S.'s headquarters and principal place of business is located in Louisville, KY. KU's headquarters and principal place of business is located in Lexington, KY. Specifically, this NOV alleges violations of the Prevention of Significant Deterioration (PSD) requirements of the Act and Kentucky State Implementation Plan (SIP) requirements. This NOV is issued pursuant to Section 113 of the Act. The authority to issue this NOV has been delegated to the Regional Administrator of the United States Environment Protection Agency (U.S. EPA, EPA, or the Agency) Region 4 and further re-delegated to the Director, Air, Pesticides and Toxics Management Division, U.S. EPA, Region 4.

STATUTORY AND REGULATORY BACKGROUND

A. Federal Clean Air Act Requirements

1. The New Source Review (NSR) provisions of Parts C and D of Title I of the Act require preconstruction review and permitting for modifications of stationary sources. Pursuant to applicable regulations, if a major stationary source is planning upon making a major modification, then that source must obtain either a PSD permit or a NSR permit, depending on whether the source is located in an attainment or a nonattainment area for the regulated pollutant being increased above the significance level. To obtain the required permit, the source must agree to the Best Available Control Technology (BACT) for an attainment pollutant or the Lowest Achievable Emission Rate (LAER) in a nonattainment area. The relevant regulations for purposes of this Notice are the regulations in effect at the time of the violation.

2. Part C of Title I of the Act, 42 U.S.C. §§ 7470-7492, includes Section 165(a) of the Act, 42 U.S.C. § 7475(a), which prohibits the construction or operation of a major modification of a major stationary source in an area designated as attainment without first obtaining a permit under the Act. The operation of a major stationary source after a major modification, unless the source has applied BACT pursuant to 40 C.F.R. § 52.21(j), is prohibited.
3. 40 C.F.R. § 52.21(b)(1)(i)(a) defines a “major stationary source” as any stationary source within one of 28 source categories which emits, or has the potential to emit, 100 tons per year or more of any air pollutant subject to regulation under the Act. Fossil fuel-fired steam electric plants of more than 250 million British thermal units (“BTU”) per hour heat input are included among the 28 source categories.
4. 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 emissions increase of any pollutant subject to regulation under the Act.
5. 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) any increase in actual emissions from a particular physical change or change in method of operation at a stationary source; and (b) any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable. See also 40 C.F.R. § 52.21(b)(21) (defining “actual emissions” after July 1992).
6. Sulfuric acid mist (SAM) is a regulated NSR pollutant as defined at 40 C.F.R. § 52.21(b)(50). 40 C.F.R. § 52.21(b)(23) defines “significant” and states that in reference to SAM, significant net emissions increase means an emissions rate that would equal or exceed 7 tons or more per year.
7. An applicant for a permit to modify a stationary source is required to submit all information necessary to allow the permitting authority to perform any analysis or make any determination required in order to issue the appropriate permit. 40 C.F.R. § 52.21(n).
8. Any owner or operator of a source or modification subject to 40 C.F.R. § 52.21 who commences construction after the effective date of the PSD regulations without applying for and receiving a PSD permit, shall be subject to appropriate enforcement action. See 40 C.F.R. § 52.21(r)(1).
9. 40 C.F.R. § 52.21(i) prohibits the construction of any new major stationary source or any major modification without a permit which states that the source or modification would meet the requirements of 40 C.F.R. § 52.21(j) through (r). 40 C.F.R. § 52.21(j) through (r) require, among

other things, that a source subject to PSD regulations undergo a control technology review, apply BACT, and conduct air quality modeling.

10. Pursuant to 40 C.F.R. § 70.1(b), all subject sources shall have Title V permits which ensure compliance with all applicable requirements.

B. Kentucky State Implementation Plan

11. Section 161 of the Act, 42 U.S.C. § 7471, requires that each SIP include a PSD permit program. On September 1, 1989, EPA approved Kentucky's PSD program as part of the Kentucky SIP. See 40 C.F.R. § 52.920; 54 Fed. Reg. 56307. Kentucky's PSD regulations are currently codified at 401 Kentucky Administrative Regulation (KAR) 51:017.

12. The Kentucky SIP provides that major modifications to which the PSD rules apply shall not be constructed until the owner or operator of the major stationary source obtains a PSD permit. 401 KAR 51:017 Section 1(3).

13. The Kentucky SIP defines "major stationary source" to include fossil fuel-fired steam electric plants of more than 250 million BTU/hr heat input. 401 KAR 51:001 Section 1(120)(a)(1)(b).

14. The Kentucky SIP defines "major modification" in pertinent part, as a physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of a regulated NSR pollutant. 401 KAR 51:001 Section 1(116).

15. The Kentucky SIP defines the term "net emissions increase" for any regulated NSR pollutant emitted by a major stationary source as the amount by which the sum of the following exceeds zero: (1) an increase in actual emissions from a particular physical change or change in method of operation at a stationary source...; and (2) any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. 401 KAR 51:001 Section 1(146)(a). See also 401 KAR 51:001 Section 1(2) (defining "actual emissions").

16. The Kentucky SIP defines "significant" in reference to SAM as a rate of emissions that would equal or exceed 7 tons per year (tpy). 401 KAR 51:001 Section 1(221)(a).

17. 401 KAR Section 1(3) requires the owner or operator of a new major stationary source or major modification to obtain a proposed permit meeting the requirements of Sections 8 to 16 prior to beginning actual construction. 401 KAR Section 1(8) through (16) require, among other things, that a source subject to PSD regulations undergo a control technology review, apply BACT, and conduct air quality modeling.

18. The Kentucky SIP provisions identified in Paragraphs 10 through 16 are all federally enforceable pursuant to Section 113 of the Act.

FACTUAL BACKGROUND

19. KU operates four coal-fired electrical generating units at the Ghent station.

20. In 2003, KU began phasing in the operation of new control devices to reduce nitrogen oxide (NO_x) and/or sulfur dioxide (SO₂) emissions from the four coal-fired units at the Ghent Station (Units 1 through 4). These control devices consist of Selective Catalytic Reduction (SCR) to control NO_x and Wet Flue Gas Desulfurization (WFGD) to control SO₂. At or around the same time, KU switched to a higher sulfur coal.

21. KU began seasonal operation of an SCR device on Unit 1 in 2004. At the time, the emissions from Unit 1 were also controlled with a WFGD, which was constructed prior to 2000. KU has plans to begin controlling Unit 2 with a WFGD device in 2009. KU began seasonal operation of an SCR device on Unit 3 in 2003 and began operation of a WFGD device on this unit in 2007. KU began seasonal operation of an SCR device on Unit 4 in 2004 and began operation of WFGD on this unit in 2008.

22. Switching to a higher sulfur content fuel, such as often occurs when a WFGD device is installed, as well as the addition of an SCR device, has the potential to cause a significant increase in SAM emissions from a coal-fired utility unit.

23. The Ghent Station is located in an area that has at all relevant times been classified as attainment or unclassifiable for NO_x, SO₂ and particulate matter. Accordingly, the PSD provisions of Part C, Title I of the Act apply to operations at the Ghent Station.

24. KU submitted various applications to construct the control devices outlined in Paragraph 20 above, to the Kentucky Division for Air Quality (KDAQ) for Units 1-4. None of those applications quantified annual increases in SAM emissions or contained an evaluation of whether or not a PSD permit would be required as a result of increases in SAM emissions.

25. KU informed EPA in 2007 that it had previously anticipated potential increases in SAM emissions as a result of its new overall emissions control strategy for NO_x and SO₂, that the use of higher sulfur fuel would present a concern, and that they had installed, and would be installing, control devices to mitigate SAM emissions. According to KU, the target SAM emissions concentration in the exhaust gas is 15 parts per million (ppm).

26. KU also informed EPA in 2007 that the SAM emission control system for Units 1 and 3 failed during most of the 2007 ozone season, that upgrades would be made in time to operate the

system during the 2008 ozone season for Units 1 and 3, that SAM emissions for Unit 4 would be controlled beginning in May of 2008, and that a SAM control system would be operated on Unit 2 beginning in May of 2009. EPA understands that the existing SAM mitigation systems for these units are not operated outside of the ozone season.

FINDINGS

27. EPA's calculations indicate that KU should have projected a significant net emissions increase in SAM emissions resulting from the installation and operation of the SCR and WFGD control devices on Unit 3, in conjunction with the use of higher sulfur fuel. KU therefore should have applied for a PSD permit and installed Best Available Control Technology (BACT) based on the projected increased SAM emissions. KU failed to comply with the PSD provisions of 401 KAR 51:017 of the Kentucky SIP.

28. EPA's calculations indicate that the installation and operation of the SCR and WFGD control devices on Unit 3, in conjunction with the use of higher sulfur fuel, resulted in a significant net emissions increase of SAM. Unit 3 has thus undergone a major modification that requires a PSD permit and the installation of BACT. Since KU did not obtain such a permit, KU has failed to comply with the PSD provisions at 401 KAR 51:017 of the Kentucky SIP.

29. Because Units 1, 2 and 4 are very similar in size and configurations as Unit 3, EPA's calculations indicate that KU should have projected a significant net emissions increase in SAM emissions from these units as a result of the installation of NO_x and SO₂ control devices and/or switching to a higher sulfur fuel. Therefore, EPA finds that KU has failed to comply with the provisions of 401 KAR 51:017 of the Kentucky SIP with regard to these units.

30. Units 1, 2, 3 and 4 do not have Title V permits that ensure compliance with the applicable PSD requirements pursuant to 40 C.F.R. § 70.1(b).

ENFORCEMENT

Section 113(a)(1) of the Act provides that at any time after the expiration of 30 days following the date of the issuance of this NOV, the Administrator may, without regard to the period of violation, issue an order requiring compliance with the requirements of the state implementation plan or permit, and/or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties of not more than \$25,000 per day for each violation on or before January 30, 1997, no more than \$27,500 per day for each violation between January 31, 1997, and March 14, 2004, no more than \$32,500 per day for each violation between March 15, 2004, and January 12, 2009, and no more than \$37,500, after January 12, 2009.

E.ON U.S. may, upon request, confer with EPA. The conference will enable E.ON U.S.

to present evidence bearing on the finding of violation, on the nature of violation, and on any efforts it may have taken or proposes to take to achieve compliance. E.ON U.S. has the right to be represented by counsel. Any request for a conference should be made within 10 days of receipt of this NOV, and the request for a conference or other inquiries concerning the NOV should be made in writing to:

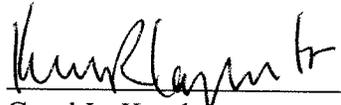
Jennifer Lewis
Associate Regional Counsel
Office of Environmental Accountability
U.S. EPA - Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303
404-562-9518

By offering the opportunity for a conference or participating in one, EPA does not waive or limit its right to any remedy available under the Act.

EFFECTIVE DATE

This NOV shall become effective immediately upon issuance.

3/19/09
Date



Carol L. Kemker
Acting Director
Air, Pesticides, and Toxics
Management Division