**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 5**

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| **IN THE MATTER OF:** | ) | **NOTICE OF VIOLATION** |
| | ) | **FINDING OF VIOLATION** |
| Kent State University (Inc) | ) | |
| Kent, Ohio | ) | EPA-5-01-OH-15 |
| | ) | |
| | ) | |
| Proceedings Pursuant to | ) | |
| Section 113 of the Clean Air Act, | ) | |
| 42 U.S.C. § 7413 | ) | |

## STATUTORY AUTHORITY

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 (the Act), 42 U.S.C. § 7413(a)(1), and Finding of Violation under Section 113(a)(3) of the Act, 42 U.S.C. § 7413(a)(3). U.S. EPA finds that Kent State is violating the Ohio State Implementation Plan (SIP) and its Title V Permit, as follows:

## STATUTORY AND REGULATORY BACKGROUND

1. Section 110 of the Act, 42 U.S.C. § 7410, requires each State to adopt and submit a plan which provides for the implementation, maintenance, and enforcement of any national primary or secondary standard established pursuant to Section 109 of the Act, 42 U.S.C. § 7409. These plans are required to include enforceable emissions limitations, control measures, schedules for compliance, emissions monitoring requirements and permit programs for new and modified sources.

2. 40 CFR § 52.23 provides that failure to comply with any approved regulatory provision of a State Implementation Plan (SIP) or with any permit limitation or condition contained within an operating permit issued under an EPA-approved program that is incorporated into the SIP, shall render the person so failing to comply in violation of a requirement of an applicable implementation plan and subject to enforcement action under Section 113 of the Clean Air Act.

3. Pursuant to Section 110 of the Act, 42 U.S.C. § 7410, the Administrator approved OAC Chapter 3745-17 as part of the Federally enforceable SIP on May 27, 1994 (59 Fed. Reg. 27464).

4. OAC 3745-17-10(C) states, in pertinent part, that any owner or operator of fuel burning equipment which is located within, among other places, Portage County, Ohio, shall operate said equipment so that the particulate emissions do not exceed the allowable emission rate specified by "Curve P-1" of "Figure I".

5. OAC 3745-17-07(A) states, in pertinent part, that visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six-minute average, except once per hour not greater than sixty percent.

6. Pursuant to Section 110 of the Act, 42 U.S.C. § 7410, the Administrator approved OAC Chapter 3745-35-02 as part of the Federally enforceable SIP on June 10, 1982 (47 Fed. Reg. 25144). Revisions to OAC 3745-35-02 were approved as part of the federally enforceable SIP on June 8, 1999 (64 Fed. Reg 30394).

7. OAC 3745-35-02 prohibits the operation of any air contaminant source without applying for and obtaining a permit to operate from the Ohio Environmental Protection Agency.

8. Section 502(a) of the Clean Air Act, 42 U.S.C. § 7661a, requires a major source to operate with a permit issued pursuant to an approved 40 C.F.R. Part 70 ("Title V") operting permit program.

9. The State of Ohio operating permit program was granted approval on August 15, 1995, with an effective date of October 1, 1995 (60 Fed. Reg. 42045; 40 C.F.R. Pt. 70, App. A).

10. The regulation at 40 C.F.R. § 70.6(b)(1) specifies that all terms and conditions in a permit issued under a Part 70 program, including any provisions designed to limit a source's potential to emit, are enforceable by the U.S. EPA under the Act.

**FACTUAL BACKGROUND**

11. Kent State University (KSU or the University) owns and operates a heating plant for the purpose of providing useful heat and cooling for the University. This heating plant currently consists of two coal-fired boilers (B001 and B004 respectively) and one natural gas boiler (B002). On January 4, 1999, construction on another natural gas fired boiler (B007) was completed and it began operation. Each boiler has its own stack.

12. B001 and B004 have a rated heat capacity of 97 and 50 mmBTU/hr respectively. B002 has a rated heat capacity of 143 mmBTU/hr. B007 has a rated heat capacity of 121 mmBTU/hr.

13. On June 17, 1998, The State of Ohio issued Permit to Install (PTI) 16-01800 to allow KSU to install a new boiler, B007, at its heating plant. PTI 16-01800 established emission limitations in order to keep KSU's potential to emit below the major modification threshold levels that would require a Prevention of Significant Deterioration review of the facility. The permit was administratively modified May 24, 2000.

14. Paragraph A of the Additional Special Terms and Conditions section of PTI 16-01800 required the facility to place one of its three existing boilers on standby, only to be used in times of emergency (i.e., failure of any of the two existing boilers or Boiler B007).

15. After January 4, 1999, the facility continued to operate all three existing boilers and unit B007 in violation of the Special Terms and Conditions of PTI 16-01800.

16. Paragraph C.3 of the Additional Special Terms and Conditions of PTI 16-01800 establishes that KSU must install, calibrate, maintain and operate a Continuous Emission Monitoring (CEM) system for measuring nitrogen oxide emissions. Paragraph E.1.c. establishes that KSU shall conduct performance testing of the CEM as required under 40 C.F.R. § 60.46b in accordance with 40 C.F.R. § 60.8.

17. 40 C.F.R. § 60.8(a) requires the facility to conduct a performance test within 180 days of the startup of the facility.

18. KSU failed to conduct a performance test of the CEM on or before July 4, 2000. KSU is in violation of the Special Terms and Conditions of PTI 16-01800.

19. The General Terms and Condition of PTI 16-01800, ninth paragraph, "<u>Permit to Operate Application</u>" states, "A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be made at least 90 days prior to start-up of the source." KSU was required to submit an application for a Permit to Operate by October 6, 1998.

20. KSU did not make an application for a Permit to Operate. KSU is in violation of PTI 16-01800 and OAC Rule 3745-35-02.

21. On September 10, 1998, The State of Ohio issued a Title V Permit ("the permit") to KSU for emissions from boilers B001, B002 and B004.

22. Part III of the permit, for emissions unit B001, Part A.I.1 requires KSU, among other things, to limit its emissions to 0.18 pounds of particulate matter/per million BTU and to limit its visible emissions to 20% opacity.

23. Part III of the permit, for emissions unit B001, Part A.III.3 requires KSU to read and record the opacities of the emissions from unit B001 on a daily basis for a minimum of twelve consecutive minutes while the emission unit is in operation.

24. Part III of the permit, for emissions unit B001, Part A.V.2 requires KSU, among other things, to perform emission testing on unit B001 within 3 months of the permit's issuance.

25. Part III of the permit, for emissions unit B004, Part A.I.1 requires KSU, among other things, to limit its emissions to 0.18 pounds of particulate matter/per million BTU and to limit its visible emissions to 20% opacity.

26. Part III of the permit, for emissions unit B004, Part A.II.2 requires KSU to maintain a baghouse differential pressure drop between 3 and 5 inches of water while the unit is in operation.

27. Part III of the permit, for emissions unit B004, Part A.V.2 requires KSU, among other things, to perform emission testing on unit B004 within 3 months of the permit's issuance.

28. After June 27, 1994 (the effective date of the U.S. EPA's approval of OAC Chapter 3745-17), OAC 3745-17-10(C)(1) required that particulate matter emissions from fuel burning equipment in Portage County not exceed the allowable emission rate specified by "Curve P-1" of "Figure I (the SIP limit)." Curve P-1 has the equation:

$$E = 0.8 \times H^{-0.3010}$$

where E is the particulate matter emission limit in lbs/mmBTU and H is the total heat input for the facility in mmBTU/hr. For the KSU Steam Plant. OAC 3745-17-10(B) provides that "the total heat input of all fuel burning units on a plant or

premises which are united either physically or operationally shall be the total of the maximum capacities for all such units." OAC 3745-17-10(B)(1) provides that "[a]ny new or existing fuel burning equipment which is fired only with gaseous fuels ... shall not be included ... for purposes of determining the total hear input...." In this case, H equals 147 mmBTU/hr. Therefore, E equals 0.18 lbs/mmBTU.

29. Between August 30, 1996, and January 26, 2001, KSU conducted stack tests to determine the particulate emission rate from boilers B001 and B004. Between August 30, 1996 and September 9, 1998, KSU was in violation of OAC 3745-17-10(C) and, since September 10, 1998, KSU has been in violation of its Title V Permit and OAC 3745-17-10(C) based on the stack test results and the applicable emission limits as tabulated below:

| Date of Test | Boiler | Average Emission Rate (lb/MMBtu) | Emission Limit Allowed by OAC 3745-17-10 or Title V, As Applicable (lb/MMBtu) |
|---|---|---|---|
| 08/30/96 | B001 | 0.46 | 0.18 |
| 1/21/97 | B001 | 0.26 | 0.18 |
| 2/10/97 | B001 | 0.26 | 0.18 |
| 3/19/97 | B004 | 0.23 | 0.18 |
| 12/30/98 | B001 | 0.60 | 0.18 |
| 1/13/99 | B001 | 0.54 | 0.18 |
| 1/3/01 | B001 | 0.21 | 0.18 |

30. Monthly, from August 30, 1996 through March 18, 2001 an inspector from the Akron Regional Air Quality Management District (ARAQMD)performed visual emission readings of the emissions exiting the KSU B001 boiler stack. Thirty-seven hours of readings were taken on 32 different occasions. Emissions from the source exceeded 20 percent opacity for 262 six-minute periods not designated exempt since January 21, 1997. From August 30, 1996 through September 9, 1998, KSU was in violation of OAC 3745-17-07 and, since September 10, 1998, KSU has been in violation of its Title V Permit and OAC 3745-17-07 based on the visual emission readings and the applicable emission limits as tabulated below:

| Date | # of readings | 6-min avgs >20% | #of violations | High 6-min avg |
|---|---|---|---|---|
| 02/12/01 | 10 | 5 | 4 | 21.8 |
| 01/03/01 | 25 | 21 | 18 | 49.1 |
| 10/11/00 | 10 | 10 | 9 | 32.2 |
| 09/20/00 | 10 | 7 | 6 | 26.9 |
| 08/28/00 | 10 | 10 | 9 | 25.6 |
| 07/25/00 | 10 | 10 | 9 | 27.5 |
| 06/07/00 | 10 | 9 | 8 | 25.8 |
| 04/25/00 | 10 | 10 | 9 | 31.6 |
| 03/21/00 | 10 | 10 | 9 | 27.0 |
| 01/11/00 | 10 | 9 | 8 | 26.8 |
| 09/25/99 | 10 | 10 | 9 | 39.5 |
| 08/11/99 | 10 | 10 | 9 | 37.5 |
| 07/08/99 | 10 | 10 | 9 | 52.0 |
| 06/22/99 | 10 | 10 | 9 | 44.5 |
| 04/27/99 | 10 | 6 | 5 | 27.9 |
| 03/16/99 | 10 | 10 | 9 | 51.6 |
| 12/30/98 | 13 | 12 | 10 | 35.0 |
| 12/09/98 | 10 | 10 | 9 | 56.8 |
| 08/25/98 | 2 | 2 | 1 | 26.8 |
| 03/18/98 | 10 | 8 | 7 | 22.9 |
| 02/11/98 | 10 | 8 | 7 | 34.1 |
| 01/21/98 | 10 | 10 | 9 | 34.3 |
| 12/03/97 | 10 | 10 | 9 | 32.0 |
| 10/15/97 | 10 | 10 | 9 | 57.2 |
| 09/17/97 | 10 | 9 | 8 | 25.0 |
| 08/20/97 | 10 | 10 | 9 | 33.7 |
| 06/10/97 | 10 | 10 | 9 | 56.6 |
| 02/10/97 | 20 | 20 | 18 | 47.9 |
| 01/21/97 | 10 | 10 | 9 | 36.2 |
| 12/23/96 | 10 | 3 | 2 | 26.2 |
| 11/21/96 | 3 | 3 | 2 | 27.5 |
| 08/30/96 | 20 | 7 | 5 | 25.2 |
| Total | 343 | 299 | 262 | |

31. From August 30, 1996 through March 19, 2001 an inspector from the Akron Regional Air Quality Management District (ARAQMD)performed visual emission readings of the emissions exiting the KSU B004 boiler stack. Fifteen hours of readings were taken on 13 different occasions. Emissions from the source exceeded 20 percent opacity for 109 six-minute periods not designated exempt since January 21, 1997. From March 18, 1997 through September 9, 1998, KSU was in violation of OAC 3745-17-07 and, since September 10, 1998, KSU has been in violation of its Title V permit and OAC 3745-17-07 based on the visual emission readings and the applicable emission limits as tabulated below:

| Date | # of readings | 6-min avgs >20% | #of violations | High 6-min avg |
|---|---|---|---|---|
| 3/19/01 | 10 | 10 | 9 | 42.2 |
| 12/1/99 | 10 | 10 | 9 | 32.9 |
| 11/3/99 | 10 | 10 | 9 | 24.7 |
| 10/26/99 | 10 | 10 | 9 | 28.5 |
| 2/3/99 | 10 | 10 | 9 | 48.7 |
| 3/21/00 | 10 | 10 | 9 | 27.0 |
| 11/5/98 | 10 | 10 | 9 | 37.9 |
| 10/26/98 | 10 | 6 | 5 | 27.9 |
| 7/15/98 | 10 | 9 | 8 | 38.1 |
| 6/9/98 | 10 | 4 | 3 | 22.2 |
| 5/14/98 | 10 | 10 | 9 | 39.1 |
| 4/29/98 | 10 | 5 | 4 | 23.5 |
| 3/18/97 | 20 | 20 | 17 | 33 |
| Total | 140 | 124 | 109 | |

32. KSU is required to submit an annual compliance certification by Part I paragraph 12 of its Title V permit. The annual compliance certifications submitted by KSU for the years 1998, 1999 and 2000 show the following violations:

opacity exceeding 20% (not exempted), B001 - 11/7/98, 11/8/98, 11/9/98, 12/22/98, 1/27/99, 2/8/99, 2/9/99, 4/1/99, 4/8/99, 4/29/99, 6/11/99, 6/21/99, 7/5/99, 7/13/99, 7/28/99, 8/2/99, 8/15/99, 12/2/99, 12/7/99, 12/15/99, 2/23/00, 6/22/00, 10/12/00, 3/12/01;

opacity exceeding 20% (not exempted), B004 - 10/30/98, 11/4/98, 1/18/99, 2/8/99, 5/3/99, 5/4/99, 5/5/99, 5/9/99, 5/10/99, 5/12/99, 2/23/00 8/13/00, 3/12/01;

pressure drop on baghouse outside established parameters, B004 - 11/3/98, 11/6/98, 11/11/98, 11/12/98, 11/13/98, 11/14/98, 12/24/98, 12/25/98, 12/26/98, 12/27/98, 12/28/98, 12/29/98, 1/4/99, 12/10/00, 12/11/00, 12/12/00, 12/13/00;

failure to record opacity, B001 - 9/10/1998 - 10/27/1998, 1/8/99, 1/19/99, 4/7/99, 6/14/99;

failure to perform a stack test within 3 months, B001 - 9/10/98 through 12/30/98;

excessive particulate matter emissions, B001 - 12/30/98 through 7/16/99;

failure to perform a stack test within 3 months, B004 - 9/10/98 through 1/19/99.

U.S. EPA considers each of these reported violations as a violation of the Act and KSU's Title V permit.

33. KSU did not conduct emission testing until December 30, 1998, for the B001 emissions unit and until January 19, 1999, for the B004 emissions unit and thus violated the requirement its Title V Permit to conduct emission testing within 3 months after issuance of the permit.

**NOTICE OF VIOLATION/FINDING OF VIOLATION**

The Administrator of the U.S. EPA, by authority duly delegated to the undersigned, hereby notifies you and the State of Ohio that Kent State University is in violation of the Ohio SIP and in its Title V permit as set forth in this Notice of Violation and Finding of Violation.

8/10/01
Date

Bharat Mathur, Director
Air and Radiation Division

**CERTIFICATE OF MAILING**

I, Loretta Shaffer, certify that I sent a Notice of Violation, No. **EPA-5-01-OH-15**, by Certified Mail, Return Receipt Requested, to:

Dr. Carol A. Cartwright, President
Kent State University
Kent, Ohio 44242

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

Joe Orr, Manager
Kent State Heating Plant
Kent State University
Kent, Ohio 44242

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

Lynn Malcolm
Akron Regional Air Quality Management District
146 S. High St., Room 901
Akron, Ohio 44308

on the 13 day of Aug, 2001.

Alicia Threatt for
Loretta Shaffer, Secretary
AECAS, (OH/MN)

CERTIFIED MAIL RECEIPT NUMBER: 7099 3400 0000 9581 0348