



**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

April 18, 2011

RE: NOV
HIGH PRIORITY FACILITY - GC8

CERTIFIED MAIL

Ms. Claudia Ferrini
Environmental Health & Safety Manager
Oberlin College
173 West Lorain Street
Oberlin, OH 44074-1092

RE: Notice of Violations of Nitrogen Oxides (NO_x) emissions limits at (B001 & B002) 53.3 mmBtu/hr coal-fired boiler nos. 1 & 2 and at (B003) 64.6 mmBtu/hr natural gas boiler no. 3 at Oberlin College – DAPC Facility ID: (02-47-10-0408)

Dear Ms. Ferrini:

The reports for the Method 7E tests to determine the nitrogen oxides (NO_x) emissions rates of the above specified emissions units, conducted on 1/18/11, 1/31/11 and 2/03/11, were received on 3/30/11. The primary purpose of the tests was to demonstrate the compliance status of the Reasonably Available Control Technology (RACT) NO_x emissions limits for the boilers. Another objective of the tests was to certify compliance with NO_x emissions limits as required by Ohio Administrative Code (OAC) rule 3745-110-04(A)(1)(a).

Ohio EPA's (OEPA's) review of the test reports found the following results:

NO _x EMISSIONS FROM THE BOILERS					
Emissions Unit Id.	EU Description	Average NO _x Emissions lb NO _x /mmBtu	Allowable NO _x Emissions lb NO _x /mmBtu	Average Steam flow lbs/hr	Average Steam flow capacity percent
B001	53.3 mmBtu/hr coal-fired boiler no. 1	0.401	0.30	38,058	95
B002	53.3 mmBtu/hr coal-fired boiler no. 2	0.312	0.30	36,533	91
B003	64.6 mmBtu/hr gas-fired boiler no. 3	0.424	0.10	45,500	91

The test results show that actual emissions from each of the three boilers (B001 – B003) are in violation of the NO_x emissions limits within OAC rule 3745-110-03(B). Continued operation of the boilers will require that measures be taken to bring each one into compliance.

Various compliance options were discussed during a 2/11/11 teleconference meeting between Oberlin College representatives and OEPA representatives because there was concern about the preliminary test results which showed possible violations. A conventional design change that would increase combustion efficiency and lower NO_x emissions is flue gas recirculation for any of the three boilers. Replacement of the older burner in the natural gas boiler (B003) with a low-NO_x burner is a typical, technically feasible option. Other NO_x reduction technologies that may be considered are listed in sub-paragraph (I)(h) of OAC rule 3745-110-03, which may be found at http://www.epa.ohio.gov/dapc/regs/3745_110.aspx.

Instead of bringing each of the three boilers into compliance, one or two boilers can be "over controlled" and have the third one can be uncontrolled (unchanged) as allowed by an emissions averaging program specified in OAC rule 3745-110-03(H). The net NO_x emissions reduction for the group must be equal to or greater than the actual emissions reduction that would be required by the emissions requirements of OAC rule 3745-110-03(B) or OAC rule 3745-110-03(I) if an emissions averaging program were not employed. Any emissions averaging program must be approved by the OEPA Director and then included as a proposed revision to OAC Rule 3745-110-03. Once the state rule revision becomes final, it must be submitted to and approved by U.S. EPA.

Another compliance option is to accept and run the boilers under operating restrictions to limit NO_x emissions. Operation under a steam load restriction was mentioned during the 2/11/11 teleconference call as one type of an operating restriction. A relationship between the NO_x emissions rate(s) and the operating restriction(s) would need to be discussed and eventually demonstrated (via exhaust gas stack testing). If the operating restriction is such that a boiler capacity is restricted below the 50 mmBtu/hr, then it would not be subject to a NO_x emissions limit in OAC rule 3745-110-03(B) or OAC rule 3745-110-03(I). The requirements of a federally enforceable restriction that are practically enforceable would need to include the same criteria in OAC rule 3745-31-05(D)(2) for a synthetic minor permit:

In order to be federally enforceable, a limitation on the potential to emit of an air contaminant source or stationary source must:

- (a) Specify an annual limit on emissions from the source;*
- (b) Specify a short-term limit on emissions for each pollutant to be restricted, and specify a short-term limit on production or operation, provided that for purposes of limiting potential to emit, acceptable short-term limitations on production or operation shall include but not be limited to:
 - (i) A thirty-day summation limitation or three-hundred and sixty-five day rolling summation limitation computed each calendar day;*
 - (ii) A monthly limitation; or*
 - (iii) A rolling twelve-month summation limitation;**
- (c) Specify adequate and enforceable methods for establishing compliance with the annual and short-term limits, using methods from 40 CFR Part 60, Appendix A or 40 CFR Part 51, Appendix M where appropriate; and*
- (d) Be no less stringent than any federally applicable requirement to which the source is subject; and*

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- (e) *Be contained in a permit first issued as a draft or proposed action with an opportunity for public comment under rule 3745-47-05 of the Administrative Code with concurrent notice and opportunity for comment given to the administrator of the United States environmental protection agency region five. During the public comment period, if the administrator objects that the terms and conditions of the permit are not federally enforceable, the director shall not issue the permit until such objection has been resolved.*

It is recommended that the remarks in the "Federal Rule Requirements" section of this correspondence be considered regarding long term plans for the current boilers.

Please submit a compliance plan for each of the three boilers to comply with the NO_x emissions limit requirements in OAC rule 3745-110-03. Submittal of the compliance schedules is requested by **6/02/11**. If you are unable to respond to any part of this request within the time frame(s) discussed above, please inform this Agency. The compliance plans shall include the following items:

- a. Submit final compliance plan by 6/02/11.
- b. Provide a brief description of the complete control plan or strategy by 6/02/11.
- c. Award contracts for process modifications; or, issue orders for the purchase of component parts to accomplish emission control or process modification by _____.
- d. Initiate on-site construction or installation of equipment or process change by _____.
- e. Complete on-site construction or installation of equipment or process change by _____.
- f. Achieve final compliance by _____.

Failure to respond to this notice in the time frame specified may result in further enforcement action up to and including a referral to the Central Office of Ohio EPA for appropriate action. Also note that this Notice of Violations in no way waives the right of the Ohio EPA or U.S. EPA to pursue additional enforcement action regarding the violations discussed in this notice, and/or any additional violations that may be found.

Federal Rule Requirements

The following information is being provided as a courtesy and does not require a response at this time. A revised final Maximum Achievement Control Technology (MACT) rule for industrial boilers, 40 CFR Part 63, Subpart DDDDD (Boiler MACT) rule was approved on 2/21/11 and became official upon the 3/21/11 publication in the Federal Register. OEPA encourages Oberlin College to study this new revision; see <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>. Also note that U.S. EPA will be reconsidering a number of issues relevant to Oberlin College and that will eventually lead to another rule revision. OEPA's MACT coordinator has prepared a brief interpretation of the Boiler MACT requirements; see attachment "Boiler MACT, GACT & CISWI Rules Guidance.doc."

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1. Initial Notifications must be submitted to OEPA and U.S. EPA no later than 120 days after the affected source is subject to the rule, which is 120 days from 5/20/11 or **9/17/11**. The initial notification shall provide the following information:
 - a. The name and address of the owner or operator;
 - b. The address (i.e., physical location) of the affected source;
 - c. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
 - d. A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and
 - e. A statement of whether the affected source is a major source or an area source.

OEPA's brief overview of the 3/21/11 rule finds a few items that will need to be addressed in the future when the Title V Operating permit renewal application is processed, such as continuous opacity monitoring, record keeping of the secondary voltage and secondary amperage data to determine ESP power input, and what type of emissions testing would need to be performed for the initial compliance requirements. In addition to the initial compliance demonstration tests, the coal boilers would be subject to annual emissions tests for all pollutants listed in Table 5 of the rule, except for dioxin/furans as specified in 40 CFR 63.7515.

Should you have any comments or questions about this correspondence, please do not hesitate to contact me at (330) 963-1205, or via e-mail at christine.mcphee@epa.state.oh.us. Specific questions about the NO_x RACT limit requirements should be addressed to Mr. Alan Harness who may be contacted at (614) 644-4838, or via e-mail at Alan.Harness@epa.state.oh.us.

Sincerely,



Christine McPhee
Environmental Specialist
Division of Air Pollution Control

CM:bo

pc: Tim Fischer, Ohio EPA, NEDO, DAPC
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