

US EPA ARCHIVE DOCUMENT

**PUBLIC NOTICE OF FEDERAL PREVENTION OF SIGNIFICANT DETERIORATION  
PERMIT AND PUBLIC COMMENT PERIOD**

**UNIVERSITY OF MASSACHUSETTS  
CENTRAL HEATING PLANT**

**EPA Region 1 Draft PSD Permit Number  
050-026-MA11**

**United States Environmental Protection Agency - Region 1  
1 Congress Street, Suite 1100  
Boston, MA 02114-2023**

The United States Environmental Protection Agency New England office (EPA Region I) proposes to issue a Prevention of Significant Deterioration (PSD) permit to the University of Massachusetts Building Authority (the Authority). The permit would authorize the Authority to modify a new central heating plant (CHP) at the University of Massachusetts, Amherst, Massachusetts. This action is authorized pursuant to the Clean Air Act (CAA) and Title 40 of the Code of Federal Regulations, section 52.21 (40 CFR § 52.21).

**Description of the Project:**

The Authority is currently permitted to construct and operate a new CHP that included a combustion turbine (CT), a heat recovery steam generator with a duct burner, and four low pressure boilers. The CT and boilers are equipped with selective catalytic reduction (SCR) and oxidation catalyst systems. The Authority was permitted to burn natural gas or distillate fuel oil with a sulfur content of 0.05% by weight.

In March, 2008, the Authority submitted a PSD permit application that requested several design changes to the CHP. In brief, the Authority requested to:

- replace two of the four low-pressure boilers with a single high-pressure boiler;
- increase the heat input of the HRSG's duct burner;
- redesign the configuration of the smoke stacks; and
- limit the use of distillate fuel oil to a sulfur content of 0.0015% by weight or less.

EPA has designated western Massachusetts including Amherst, Massachusetts as a nonattainment area (not attaining the National Ambient Air Quality Standards (NAAQS)) for ground level ozone and attainment for all other criteria pollutants. Under these designations, the project is subject to the Massachusetts Department of Environmental Protection's (DEP) general permitting and nonattainment new source review (NSR) program requirements. The DEP's general permitting requirements at 310 Code of Massachusetts Regulation (CMR) 7.02 Comprehensive Plan Approval (CPA) applies to all emission increases from the project.

EPA Region 1 administers the federal Prevention of Significant Deterioration (PSD) program in

Massachusetts. The PSD program applies to significant emission increases of criteria pollutants for which the area is in attainment. EPA is proposing to issue a PSD permit to the Authority that applies to *particulate matter less than 10 micrometers* (PM<sub>10</sub>). While the Authority must comply with the federal PSD permit and the DEP's CPA permits, EPA has worked closely with the DEP to ensure the permits do not conflict with each other.

### **Control Requirements:**

The PSD program requires that the permit apply best available control technology (BACT) to reduce PM<sub>10</sub> emissions from each emission unit. The majority of PM<sub>10</sub> emissions from this project will result from ammonia emitted from the SCR controls reacting with the sulfur in the fuel oil to form a fine ammonia sulfate particulate. Based upon review of the application, existing BACT determinations and recent federal standards, EPA determined that BACT for this project is to limit ammonia slip from the SCRs and to burn low sulfur distillate fuel oil.

### **Air Quality Impacts:**

The PSD program requires that the permit prohibit the CHP project from emitting pollutants that would cause or contribute to a violation of applicable National Ambient Air Quality Standards (NAAQS) or PSD increments. The NAAQS are maximum concentration "ceilings" measured in terms of total concentration of a pollutant in the atmosphere. A PSD increment is a maximum allowable increase in concentration that is allowed to occur above a baseline concentration for a pollutant. The Authority evaluated the impacts from the changes to the CHP using EPA's guideline AERMOD model. EPA reviewed the evaluation and determined that the impacts would not violate the NAAQS or any PSD increments.

### **Public Comment Process:**

The public comment period for this proposed action will open on September 24, 2008. Any interested person may submit written comments on the proposed permit during the public comment period. EPA will consider all submitted comments in its final decision making process.

Persons who submit comments to EPA should state:

1. Their interest in the draft PSD permit;
2. The action they wish EPA to take, including specific references to the portions of the draft permit they believe should be changed, if any; and
3. The reasons supporting their position, stated with sufficient specificity as to allow EPA to evaluate the merits of the position.

All comments received during the comment period will be included in the administrative record and will be available to the public. The public comment period for the draft PSD permit ends on October 27, 2008. To be considered, written comments should be postmarked no later than October 27, 2008. EPA will, however, consider requests for extending the public comment period for good cause. Comments should be submitted to:

**Brendan McCahill, Environmental Engineer  
U.S. Environmental Protection Agency - New England  
1 Congress Street  
Suite 1100, Attn. CAP  
Boston, MA 02114-2023**

In addition, on October 27, 2008 at 7:00 pm, EPA will hold a public hearing at the following location:

UMass Amherst, Campus Center, Room 803  
Campus Center Way  
Amherst, MA 01003

Any person may submit oral or written comments at the public hearing.

Within 30 days after the permit has been issued, any person who filed comments on the draft permit or participated in a public hearing may submit a petition to the Environmental Appeals Board (EAB) to review any condition of the permit decision. The petition shall include a statement of the reasons supporting review, including a demonstration that any issues raised were raised during the public comment period or public hearing. Where appropriate, the petition should include a showing that the condition in question is based on:

- (1) A finding of fact or conclusion of law which is clearly erroneous, or
- (2) An exercise of discretion or an important policy consideration which the EAB should, in its discretion, review.

All data submitted by the applicant is available as part of the administrative record. The administrative record, including copies of the draft PSD permit, PSD application, Statement of Basis and other supporting documentation may be viewed between 9:00 a.m. and 4:00 p.m., Monday through Friday, at EPA New England, 1 Congress Street, Suite 1100, Boston, MA 02114-2023 or may be obtained on-line at EPA New England's website at <http://www.epa.gov/NE/communities/nsemissions.html>.

For more information, contact Brendan McCahill at (617) 918-1652 or by e-mail at [McCahill.Brendan@EPA.GOV](mailto:McCahill.Brendan@EPA.GOV).