



Required course: College's boiler upgrade triggers air pollution control permit

CHALLENGE

Vermont's Middlebury College is updating its central heating plant, which provides electricity in addition to space and hot water heat to the college's main campus. The upgrade, scheduled for fall 2008, involves replacing an older, oil-fired boiler with both a new, cleaner oil-fired boiler and a new wood-fired boiler. The wood-fired boiler will displace about 1 million gal. of heating oil per year. Consequently, the college is required to meet increasingly stringent air pollution regulations as part of its air pollution control permit for the upgrade.

INITIATIVE

To provide air quality analysis and air pollution permitting services to support Middlebury College, RSG:

- Estimated changes in facility-wide emissions resulting from the new boilers and fuels burned in the central heating plant
- Conducted a Best Available Control Technology (BACT) analysis for the new boilers by working closely with Middlebury College, the Vermont Agency of Natural Resources, and equipment vendors to identify appropriate technologies for controlling emissions from the new boilers
- Conducted air pollution dispersion modeling to demonstrate compliance with National Ambient Air Quality Standards and Prevention of Significant Deterioration Requirements and visibility standards
- Prepared air pollution permit application for the new boilers and all existing heating plant activities.

RESULTS

We identified state-of-the-art, cost-effective emission controls for the boilers. Dispersion modeling demonstrated all pertinent air quality standards would be met. The permit application developed allowed Middlebury to meet existing and future steam demand with limited operational restrictions.



RSG provided Middlebury College with a range of air quality analysis services as the college upgrades the boilers in its central heating plant.

Contact Information

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