

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SUBJECT: Technical Support Document for the February 20, 2009
Interpollutant Trading Ratio for York County,
Pennsylvania

FROM: Gerallyn Duke, Environmental Protection Specialist *Gerallyn Duke*
Air Permits Branch

TO: File

THRU: Kathleen Anderson, Chief *Ka*
Air Permits Branch

Background

On January 9, 2009, Conectiv Mid-Merit, LLC (Conectiv) submitted an application to the Pennsylvania Department of Environmental Protection (PADEP) for a permit that would allow the transfer of emission reduction credits (ERCs) from another facility to offset emission increases associated with the construction and operation of new natural gas-fired power plant to be located in Peach Bottom Township, York County, PA. The new facility is to be located in a nonattainment area for fine particulate matter (PM_{2.5}). The company has requested approval to use credits generated in an adjacent PM_{2.5} nonattainment area through the 1999 shut down of the PPL Holtwood Plant located in the Lancaster County, PA. The shutdown facility and the proposed power plant will be located approximately five miles apart across the Susquehanna River. In addition to requesting the use of credits located in an adjacent non-attainment area, the company has requested approval to satisfy the PM_{2.5} offset requirement by using 33.75 tons per year (tpy) of direct PM_{2.5} ERCs and 13,241.3 tpy of sulfur dioxide (SO₂) ERCs at an interpollutant trading ratio of 40 tons of SO₂ to one ton of PM_{2.5}. The company also has requested approval for using 2992.09 tpy of NO_x ERCs at a ratio of 200 tons of NO_x for one ton of direct PM_{2.5} emissions.

On January 20, 2009, the PADEP submitted a request that the Environmental Protection Agency (EPA) approve Conectiv's request for using PM_{2.5} offset credits generated in an adjacent nonattainment area at the interpollutant offset ratios for PM_{2.5} noted above.

Regulatory Authority

EPA published a final rule on May 16, 2008, titled "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM_{2.5})". (73 FR 28321). This rule became effective for all areas designated nonattainment for PM_{2.5} upon the effective date of the rule (July 15, 2008). [This Technical Support Document does not address the provisions of the rule implementing the Prevention of Significant Deterioration (PSD) program. For information on those provisions, please refer to the rule itself]. Among other things, this rule enables states that do not yet have the authority to implement NSR for PM_{2.5} to do so in PM_{2.5} nonattainment areas during the period from the effective date of EPA's new rules for PM_{2.5} to the date when a final revision to the state's implementation plan (SIP) satisfying the new nonattainment area NSR requirements for PM_{2.5} is approved by EPA. These procedures are set forth under Appendix S to 40 CFR Part 51. Pennsylvania is

one such state that must rely on Appendix S for implementing NSR in PM_{2.5} nonattainment areas.

The May 16, 2008 rule allows limited interpollutant (precursor) trading for the purpose of PM_{2.5} offsets based on pollutant-specific trading ratios established in a state's SIP as part of their nonattainment area NSR rule. The state may elect to use a set of specific trading ratios developed by EPA and recommended for general use on a nationwide basis. Alternatively, the state may choose to independently define different ratios for applicable precursors and submit those different ratios to EPA for approval along with the technical demonstration supporting the state's ratios. In the absence of an approved SIP, Appendix S at section IV.G.5 states that:

"The offset requirements... for direct PM_{2.5} emissions or emissions of precursors of PM_{2.5} may be satisfied by offsetting reductions of direct PM_{2.5} emissions or emissions of any PM_{2.5} precursor... if such offsets comply with an interprecursor trading hierarchy and ratio approved by the Administrator."

PADEP has a well established, SIP-approved banking and trading program for criteria pollutants. The banking and registry system mandates how ERCs can be generated, mandates how, where and when ERCs can be used, and mandates the use of the state's permit program to effect trades. Since this program is approved into the SIP, EPA approval is not required for individual trades involving most criteria pollutants. However, since Pennsylvania's SIP has not been modified to include requirements for PM_{2.5}, Appendix S must be relied upon to determine the extent to which emission reductions of PM_{2.5} and its precursors can be used as offsets.

Analysis

EPA is approving PADEP's request to allow the use of direct PM_{2.5} ERCs and the interpollutant trading, under section IV.G.5 of Appendix S, of SO₂ reductions to offset direct emissions of PM_{2.5} for the proposed Conectiv project in the York County PM_{2.5} nonattainment area. More specifically, EPA is approving PADEP's request to use a trading ratio of 40 tons of SO₂ to offset one ton of direct PM_{2.5} emissions

EPA previously conducted a technical assessment to develop preferred interpollutant trading ratios to be used for the purposes of PM_{2.5} offsets. The 40:1 ratio of SO₂ reductions to offset PM_{2.5} emissions proposed by PADEP for York County is the preferred ratio of SO₂ to PM_{2.5} nationwide. The modeling used to derive the preferred ratio is described in a technical memo to the docket for the final rule titled "Details on Technical Assessment to Develop Interpollutant Trading ratios for PM_{2.5} Offsets" and is available at http://www.epa.gov/scram001/reports/pmnaaqs_tsd_rsm_all_021606.pdf as well as in the docket for the final rule, Docket ID No. EPA-HQ-OAR-2003-0062. EPA has recommended that states use this trading ratio for interpollutant trading to provide consistency and to streamline the trading process. As noted in the preamble:

"If States elect to use EPA's recommended trading ratios, they may rely on EPA's technical work and a presumption that such ratios will be approvable by EPA absent a credible showing that EPA's trading ratios are not appropriate for that location." (73 FR 28339).

The letter submitted by PADEP on January 20, 2009 also requested approval of a trading ratio of 200 tons of NO_x for one ton of direct PM_{2.5} emissions. EPA

is not approving this interpollutant trade, since NOx is not regulated as a PM_{2.5} precursor under Appendix S.

Conclusion

EPA should approve PADEP's request to allow interpollutant trading of SO₂ to offset emissions of PM_{2.5} at the EPA-recommended ratio of 40:1 for the proposed Conectiv project in the York County PM_{2.5} nonattainment area.

