UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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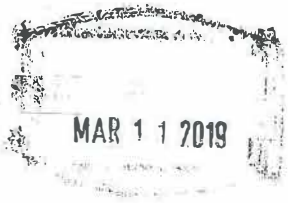

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: Concurrence Request for Approval of Alternative Model: BLP/AERMOD Hybrid as Applied to the Ohio Environmental Protection Agency State Implementation Plan for the Steubenville Ohio/West Virginia Multi-State Nonattainment Area

FROM: Randy Robinson, Meteorologist RSR
Control Strategies Section, Air Programs Branch,
Air and Radiation Division, EPA Region 5

THRU: John Mooney, Chief
Air Programs Branch, Air and Radiation Division,
EPA Region 5

TO: George Bridgers, Director
Model Clearinghouse, Air Quality Modeling Group,
Office of Air Quality Planning and Standards

Background

On August 7, 2018, EPA Region 3 requested concurrence from the Model Clearinghouse on approval of an alternative modeling approach used by the Allegheny County Health Department (ACHD) to model fugitive emissions from coke batteries at the U.S. Steel Mon Valley Works – Clairton Plant located in Clairton, Pennsylvania. The Region 3 request was accompanied by a technical review of the modeling methodology which used a hybrid approach based on information generated by the Buoyant Line and Point Source model (BLP) and the American Meteorological Society/Environmental Protection Agency Model (AERMOD). The technical review described the application, by ACHD, of the EPA recommended approach of using representative ambient air monitors along with theoretical justification, in accordance with Section 3.2.2(b)(2) of the Guideline on Air Quality Models, to determine if the proposed alternative model approach performed better than standard recommendations. Region 3 concluded that the alternative modeling evaluation was done appropriately and that the method proposed for use with the fugitive emissions at the coke oven batteries at the Clairton

Plant was approvable. A memorandum, concurring with Region 3's conclusions, was sent from the Model Clearinghouse to EPA Region 3 on August 10, 2018.

On October 18, 2018, EPA Region 3 requested concurrence from the Model Clearinghouse on approval of a determination that the alternative modeling approach as used in Allegheny, Pennsylvania, was also appropriate for application to the coke battery fugitive emissions at the AK Steel – Mountain State Carbon facility, located in Follansbee, West Virginia. The request was based on unique similarities between emission source characteristics, topography, and meteorological influences. A memorandum, concurring with Region 3's conclusions, was sent from the Model Clearinghouse to EPA Region 3 on October 26, 2018. This alternative modeling approach was used in the greater Steubenville, Ohio-West Virginia nonattainment area State Implementation Plan (SIP) submittals developed by the States of West Virginia and Ohio.

Region 5 Request

Ohio and West Virginia submitted separate SIP modeling analyses, to their respective EPA Regional Offices, using this alternative approach for modeling Mountain State Carbon. Ohio submitted a SIP using the same approach to modeling Mountain State Carbon as West Virginia. Currently, the Ohio Environmental Protection Agency (OEPA) is preparing a new SIP submittal for the Steubenville multi-state nonattainment area with revised limits for the Cardinal Power Plant (Cardinal) and a revised attainment demonstration. The revised modeling will contain an updated characterization of Cardinal's stack emissions and an updated background concentration, as well as a revised emission limit. The remainder of OEPA's modeling analysis will be identical to West Virginia's SIP modeling analysis. It uses the same alternative modeling approach to characterize emissions from the Mountain State Carbon facility and models the other sources in the northern portion of the area the same as West Virginia. The only source for which Ohio will revise inputs is Cardinal, which is the only source located in the southern portion of the nonattainment area. The analysis is expected to demonstrate attainment in the entire Ohio and West Virginia modeling domains.

Ohio's intended revisions will affect only the ambient impacts from Cardinal. The remainder of Ohio's source modeling is identical to that submitted by West Virginia. Consequently, EPA Region 5 believes that no additional technical justification or evaluation of the alternative model approach is needed. Region 5 is requesting concurrence from the Model Clearinghouse that the alternative modeling approach for Mountain State Carbon (as used and submitted by West Virginia and approved by Region 3 and the Model Clearinghouse) is also acceptable as used in OEPA's revised modeling, given that the modeling methodology and model inputs are identical with respect to the source of interest in the alternative approach.

Please feel free to contact me at (312) 353-6713 if you have questions regarding this request.

cc: Tim Leon-Guerrero, EPA Region 3
Jennifer VanVlerah, Ohio Environmental Protection Agency
Chris Beekman, Ohio Environmental Protection Agency