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FAIRFAX



COMMONWEALTH of VIRGINIA

Department of Air Pollution Control

ROOM 801, NINTH STREET OFFICE BUILDING
POST OFFICE BOX 10080
RICHMOND, VIRGINIA 23240
(804) 786-2378
FAX # (804) 225-3933
TDD # (804) 371-8471

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WALLACE N. DAVIS
EXECUTIVE DIRECTOR

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Air Programs Branch

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EPA, REGION III

Ms. Marcia Spink, Chief
Air Programs Branch (3AM10)
USEPA Region III
841 Chestnut Building
Philadelphia, PA 19107

Dear Ms. Spink:

As some of your staff are aware, we have a permitting/modeling dilemma in Virginia involving a proposed cogeneration facility, Hadson Power-14 Buena Vista, and incidental predicted increment violations in the Shenandoah National Park, a Class I area. The increment violations from the cumulative air quality analysis are attributable to Coors Brewery, Elkton, Virginia and PEPCO Station H, Dickerson, Maryland. The proposed Buena Vista facility contributes to some of these predicted violations as a result of modeling with the on-site meteorological data collected at Buena Vista. The contribution is small, but not zero, which could be interpreted to be significant (significance is not yet defined for the Class I case within guidance for PSD air quality impact analysis). The locations of these sources in relationship to each other and the Shenandoah National Park (SNP) do not appear to be conducive to interaction of plumes especially on a short term averaging period. Yet, that is the situation when modeling is accomplished using the Buena Vista on-site meteorological data. Attached is graphic representation of locations in question. Also included are the various documents and correspondence describing the analyses and results of the Hadson modeling as well as the violations analyses performed by this Department.

In reference to Coors, the Department position was that the correct solution to the increment violation problem was to eliminate the violations. Accordingly, the Department and Coors have signed a consent agreement in which Coors will first determine the emissions and stack parameters which will guarantee that they do not contravene the Class I increments. This analysis will necessarily involve the use of on-site meteorological data collected near the Coors facility. Once developed, the source data will be supplied to Hadson for further modeling. Although this remodeling could resolve the issue, it is conceivable that even with the revised Coors source data the Hadson - Buena Vista analysis using its own on-site meteorological data will still show violations of increments by Coors.

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Additionally, it is quite possible that the proposed facility will be unable to show that it does not contribute to these Class I increment violations.

As you can see, this situation presents itself as a modeling guidance/policy dilemma with respect to the use of the appropriate meteorological data for a specific permitting scenario. We realize that if the two meteorological data sets in question were concurrent it would be somewhat more straightforward, yet non-guideline. Both data sets could then be used in the Class I increments analysis. Since this situation does not exist, we still recommend that the resolution of this modeling dilemma involve some use of the Coors meteorological data and the incorporation of future significance criteria for Class I areas. Specifically, a couple of options could be the following:

- 1) The combination of highest or second-highest impacts from Coors modeled alone with their on-site meteorological data and Hadson - Buena Vista along with its other background sources modeled with the Buena Vista on-site meteorological data at the appropriate receptors is clearly a conservative approach that could be satisfactory for resolution if combination is below the increments.
- 2) The use of different meteorological data sets appropriate for different distinct regions of the Class I area is another approach.

However, we request your guidance realizing that any possible solution at this time is non-guideline.

In the case of PEPCO Station H facility, it was granted a PSD permit last year based on its own on-site meteorological data. Upon modeling PEPCO Station H as a Class I increment-consuming background source for SNP, Hadson showed that PEPCO violated the SO₂ increments. The proposed Buena Vista facility contributed to the violations. In order to further examine this situation, Hadson acquired the PEPCO meteorological data and used it in a modeling analysis. This analysis resulted in violation of the Class I short term increments to which Hadson does contribute. Although Hadson's contribution to the violations are below the significant levels suggested in our November 26, 1990, letter addressed to you; as alluded to above, we are still awaiting EPA's guidance on the issue of Class I significance levels. Since it appeared that the previously permitted PEPCO facility was based on a flawed Class I increment analysis, the Virginia Department of Air Pollution Control initiated communications with Maryland in order to address the situation. It seems apparent that the PEPCO meteorological data must be an integral part of the proposed resolution -- another example of the modeling dilemma described earlier.

Although the proper resolution is to eliminate the increment violations, little headway has been accomplished with Maryland. Therefore, we propose (providing that Hadson's contribution to PEPCO's violations can be determined to be insignificant or some other resolution as suggested previously involving different meteorological data sets for

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appropriate analyses in conjunction with the resolution for the Coors issue) to go ahead with the permitting process for Hadson - Buena Vista and leave the solution to the increment violations due to PEPCO alone in the hands of EPA and Maryland.

Although we are asking for resolution on this specific PSD application which has followed the approved protocol and resulted in this dilemma, it is very apparent that this scenario in the generic sense will prevail if it isn't addressed. As long as proposed PSD applicants follow current procedures in performing cumulative air quality impact analyses involving their own on-site meteorological data, this scenario will continue to persist. Also as long as violations of Class I increments prevail, appropriate procedures for permitting small sources or even PSD sources located up to 100 km away from the Class I areas need be established.

Although the Buena Vista scenario requires resolution quickly via suggested or other appropriate method, we would also be interested in your comments concerning a resolution to the generic situations as will be demonstrated in future applications for Virginia and the rest of the country.

Please contact either me at (804) 786-5481 or Ken McBee at (804) 786-7764 if any additional information or clarification is needed.

Sincerely,



Pamela Faggert
Assistant Executive Director

PF/KM/dh

Attachments

cc: K. McBee, Chief, Modeling Section
S. Morse, Director, Division of Technical Evaluation
D. Shepherd, Director, Region II
D. Salkovitz, Staff Meteorologist

ORIENTATION OF HADSON 14, COORS AND PEPCO SITES

