

September 10, 1991

MEMORANDUM

SUBJECT: Class I Area Significant Impact Levels

FROM: John Calcagni, Director
Air Quality Management Division (MD-15)

TO: Thomas J. Maslany, Director
Air, Radiation & Toxics Division (3AT00)

This is in response to the January 7, 1991 memorandum from Marcia Spink to Ed Lillis requesting guidance to address issues raised by Mr. John Daniel, Assistant Executive Director of the Virginia Department of Air Pollution Control (VDAPC), concerning Class I area significant impact levels for Class I increments. Specifically, Mr. Daniel requested that the Environmental Protection Agency (EPA) develop a national policy for determining whether a source will have a significant impact on the increments applicable to Class I areas. As part of his request, Mr. Daniel also asked that EPA define these significant impact levels.

It is EPA's longstanding policy under the prevention of significant deterioration (PSD) program to allow the use of significant impact levels to determine whether a proposed new or modified stationary source will cause or contribute to a violation of the national ambient air quality standards (NAAQS) or PSD increments. However, the significant impact levels originally set forth by EPA, and still in general use for such purpose, were never intended to be used for evaluating impacts on the Class I increments (43 FR 26380, June 19, 1978). Mr. Daniel is correct, therefore, in stating that EPA does not have a national policy defining air quality significant impact levels for Class I increments.¹ I see no reason, however, why the concept of significant impact should not also be applied to Class I increments provided the significant impact levels are determined in a reasonable manner.²

¹However, the PSD regulations do require that a proposed emissions increase (not otherwise considered significant based on prescribed significant emissions rates) from a source located within 10 kilometers of a Class I area be considered significant (and therefore subject to PSD review) if such increase will have an air quality impact equal to or greater than $1 \mu\text{g}/\text{m}^3$ (24-hour average) in the Class I area [see 40 CFR 52.21(b)(23)(iii)]. The purpose of this provision is to establish the need to subject a relatively small emissions increase to PSD review if such increase occurs near a Class I area--not to define a significant impact on a NAAQS or increment violation.

²In the EPA guideline document entitled "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," (EPA-450/4-80-012, November 1980) a note to the table providing significant ambient air quality impacts stated that the table did not apply to Class I areas, but that a source impact of $1 \mu\text{g}/\text{m}^3$ (24-hour average) in a Class I area constitutes a significant ambient impact for particulate matter and SO_2 . However, this appears to have been an erroneous extension of EPA's PSD policy on significant emissions increases and does not constitute current EPA policy for Class I area impacts.

The Office of Air Quality Planning and Standards recently initiated action that will lead to rulemaking to address the general need for Class I significant impact levels. The action is part of EPA's efforts to implement the new PSD/new source review provisions in the 1990 Clean Air Act Amendments. However, because the process of developing the implementing regulations will be a lengthy one, more immediate guidance concerning Class I significant impact levels is appropriate in order to assist the VDAPC in implementing its PSD permit program.

In his January 7, 1991 letter, Mr. Daniel proposed to establish significant impact levels for the Class I increments based on a ratio derived from the current significant impact levels and the Class II PSD increments. Given the status of EPA's regulatory efforts, as well as the fact that the VDAPC is the delegated PSD permitting agency, I concur in the methodology proposed by Mr. Daniel as a reasonable interpretation of the relevant statutory and regulatory requirements in this instance. The VDAPC's methodology and the resulting significant impact levels for sulfur dioxide (SO₂), particulate matter, and nitrogen dioxide (NO₂) are included as an attachment to this memorandum.

It should be understood, however, that VDAPC's position and this concurrence are not binding on other States. Moreover, this concurrence in the use of such significant impact levels for the purpose of Class I increment analyses does not include their use for determining whether a source should conduct an adverse impact analysis for any air quality-related value (AQRV) in a Class I area, or whether a source would have an adverse impact on an AQRV.

A determination concerning the need for a full assessment of an AQRV is made by the Federal Land Manager based on an analysis of the proposed source's (and other cumulative) potential impacts on an AQRV for that particular Class I area. This analysis is independent of the inquiry into whether a proposed source would have a significant impact on any applicable Class I increment.

I trust that this response will assist the VDAPC in proceeding with its PSD permitting in an expeditious and reasonable manner. Further questions can be directed to either Gary McCutchen or Dan deRoeck of my staff at FTS 629-5592 and 629-5593, respectively.

Attachment

ATTACHMENT

CLASS II AREAS

POLLUTANT	AVERAGE TIME PERIOD	PSD CLASS II INCREMENT	MINIMUM SIGNIFICANCE LEVEL	RATIO MSL/ INCREMENT
Sulfur dioxide	Annual	20	1	0.05
	24-hour	91	5	0.055
	3-hour	512	25	0.049
Partic- ulates(TSP)	Annual	19	1	0.053
	24-hour	37	5	0.135
Nitrogen dioxide	Annual	25	1	0.04

CLASS I AREAS

POLLUTANT	AVERAGE TIME PERIOD	PSD CLASS I INCREMENT	RATIO MSL/ INCREMENT	MINIMUM SIGNIFICANCE LEVEL
Sulfur dioxide	Annual	2	0.05	0.1
	24-hour	5	0.055	0.275
	3-hour	25	0.049	1.23
Partic- ulates(TSP)	Annual	5	0.053	0.27
	24-hour	10	0.135	1.35
Nitrogen dioxide	Annual	2.5	0.04	0.1