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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

DEC 1 1986

MEMORANDUM

SUBJECT: Need for Emission Cap on Complex Netting Sources

FROM: Darryl D. Tyler, Director
Control Programs Development Division (MD-15)

TO: David Kee, Director
Air Management Division, Region V (5AR-26)

This is in response to your correspondence dated November 4, 1986, concerning a request from a State to provide further guidance on: (1) the appropriate context for defining an emissions decrease for prevention of significant deterioration (PSD), and (2) the level of administrative effort appropriate to make an emissions decrease permanent and enforceable. Your example involves an applicant proposing to modify a source and wanting to net out of PSD review by taking federally enforceable restrictions on existing units.

The PSD rules at 40 CFR 52.21(b)(2)(i) define a major modification as

... any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Net emissions increase is defined as:

... the amount by which the sum of the following exceeds zero:
(a) Any increase in actual emissions from a particular physical change or change in method of operation at a stationary source;
and (b) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

Major modifications are, therefore, determined by examining changes in actual emission levels at the source. Actual emissions are defined as:

...the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with paragraphs(b)(21)(ii) through (iv). . .

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(ii) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Administrator shall allow the use of a different

time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored or combusted during the selected time period.

(iii) The Administrator may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(iv) For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

From subparagraph (iv), it is clear that a new unit's actual rate of emissions is equal to its potential to emit. Any federally enforceable physical and operational limitations which an applicant is willing to accept on the new emissions unit is considered in evaluating the new unit's potential to emit.

To determine the actual emissions decrease from the shutdown emissions unit, the reviewing agency applies the method defined in subparagraph (ii). Specifically, the average rate, in tons per year, at which the unit actually emitted during a 2-year period prior to shutdown. Furthermore, for the emissions decrease from the shutdown to creditable, the requirement to shut down must be made federally enforceable.

After the new unit's potential to emit and the creditable emissions decrease have been quantified, the reviewing agency should then evaluate the extent to which the modification to the source will affect changes to actual emissions levels at other emissions units. Of particular concern (as you have pointed out in your example) is where existing emissions units, historically operated at less than their full capacity or allowable level, will increase operational levels for the sole purpose of compensating for the shutdown unit. If the emissions units in question do not have source-specific allowable emissions, actual emissions are determined as set forth in subparagraph (ii). If the reviewing agency determines that an increase in actual emissions at the existing emissions units will be directly attributable to the startup of the new unit, then the agency can act (via an emissions cap) to limit the increase so as to ensure no net emissions increase at the source.

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Suppose, however, as specified in subparagraph (iii), actual emissions (for the purpose of performing a "net emissions increase" calculation) are presumed to be source-specific allowable emissions for these units; in such a case, there is probably no increase in "actual" emissions. This results from the fact that, though in reality emissions may increase at these units, their actual emissions have been presumed to be equivalent to their allowable emissions and their allowable emissions have not changed. In such a case, after the modification, the atmosphere may in reality experience an increase in emissions. For example, emissions at the source after modification could equal the source's previous emissions level (three units operating at 67 percent rather than four Units at 50 percent) plus the additional emissions from the new emissions unit. In effect, a significant emissions increase occurs at the source without PSD review.

Although the regulations provide a presumption for the use of allowable emissions when source-specific limits are established, the preamble at 45 FR 52718 (August 7, 1980) states that:

The presumption that federally enforceable source-specific requirements correctly reflect actual operating conditions should be rejected by EPA or a state, if reliable evidence is available which shows that actual emissions differ from the level established in the SIP or the permit.

Further along that section of the preamble states that:

EPA, a state, or source remains free to rebut the presumption by demonstrating that the source-specific requirement is not representative of actual emissions. If this occurs, however, EPA would encourage states to revise the permits or the SIP to reflect actual source emissions.

Therefore, a State may act to revise source-specific requirements if such a revision in the State's view is needed to establish allowable emissions limits consistent with historical actual emissions. Accordingly, in the modification scenario you describe, a State may act to place a federally enforceable emissions cap, based on historical actual emissions, on the source. It can do this on the knowledge (or presumption) that the three remaining boilers will (or would logically be expected to) operate at a higher capacity in the future to make up for the shutdown unit. Simply shifting the load like this should not result in a "credit" that can be used to net a new emissions unit out of review. The emissions cap would prevent such an occurrence.

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If the modification is a direct replacement, then an emissions cap is required on the new unit's production capacity to ensure that its potential to emit, when balanced against the shutdown credit, does not result in a significant emissions increase. Depending on the available shutdown credit, this may result in a limit in production capacity at the source.

For a major source to net out of PSD review, a permit agency must take all administrative measures necessary to ensure that the requirements to decrease emissions are explicit and meet the criteria for being considered "federally enforceable." The credits may come from any emissions unit within the source as long as the emissions unit meets the criteria for being a part of that "major source."

If you have any questions regarding this matter, please have your staff contact David Solomon of the New Source Review Section at 629-5697.