



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

October 8, 1992

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MEMORANDUM

REGULATION DEVELOPMENT BRANCH
U.S. EPA, REGION V

SUBJECT: Response to Proposal to Allow Credit for a Stack Height Increase at the Dade County Resource Recovery Facility, Dade County, Florida

FROM: Gary Blais, Environmental Protection Specialist
SO₂/Particulate Matter Programs Branch (MD-15)

Gary Blais

TO: Lewis Nagler, Regional Meteorologist
Air Enforcement Branch, Region IV

Background

The Dade County Resource Recovery Facility has submitted a prevention of significant deterioration (PSD) application to add two new boilers and to modify the existing four boilers. The existing boilers (units 1-4) vent through two 150-foot stacks. Two new 250-foot stacks will be built with dual liners (one per liner). The current stacks must be removed in order to replace the existing control equipment with more stringent control devices. In addition to the modifications to units 1-4, two new boilers will be added which will vent through a third 250-foot dual liner stack. The building dimensions of the new boiler building will be 146 feet high by 141 feet long by 136 feet wide. All stacks are within the influence of this building. The existing boiler building for units 1-4 is 118 feet high and good engineering practice (GEP) for the existing stacks is 295 feet. The GEP for the new stacks will be 354 feet. Total SO₂ emissions for the facility will be reduced by 117.4 tons per year after modifications and additions are made.

Response

In light of the June 29, 1992 memorandum from John Calcagni on credit for stack height increases due to the siting of new nearby structures, you have taken the position that the facility can be given credit for the proposed increase up to 250 feet. Before deciding to concur with your position or not, we discussed this matter via a conference call with Eric Ginsburg (Chief, SO₂ Programs Section), Dean Wilson (Model Clearinghouse), and Regional representatives. Regions I-VI, VIII, and IX

participated in the call. Pat Embrey (Office of General Counsel) was unable to participate in the call but had been consulted beforehand.

This was done because there had been some concern raised over the possibility that this change in policy could be seen by sources as an opportunity to erect frivolous structures upwind of their stacks in order to qualify for the exemption from fluid modeling demonstrations possible under the Calcagni memorandum.

While some Regions expressed concern over allowing credit for any stack height increases for sources with short stacks, whatever their justification, all of the Regions that took part in the discussions agree that Region IV's interpretation of the Calcagni memorandum is appropriate. There was a consensus that it is highly unlikely that sources will attempt to qualify for the exemption under the Calcagni memorandum by building frivolous structures. No other objections were raised by any other parties on the call. We too agree that your interpretation is appropriate and we concur with your position. However, protecting the national ambient air quality standards (NAAQS) and PSD increments is still of paramount importance. Therefore, the facility must be modeled using the downwash option of any approved model at the proposed height (250 feet) so that the resulting emission limit is sufficient to ensure that the source will not cause or contribute to a violation of the NAAQS or PSD increments. If a violation is predicted by the model, either the emission limit must be lowered or the stacks increased, possibly all the way up to GEP height (354 feet) to eliminate the violation.

Additionally, keep in mind that the facility's emission limit may have to be revisited some time in the future if the remanded merged gas stream issue is resolved.

Finally, it is worth noting that the Calcagni memorandum also allows both States and EPA to require fluid modeling to justify stack height increases in those situations where they feel it is warranted.

If you have any further questions on this or any other stack height issue, please contact me at 919-541-3223 as I have taken over responsibility for this area from Gwen Jacobs, who has left EPA.

cc: D. Atkinson
E. Ginsburg
J. Irwin
J. Tikvart
D. Wilson

bcc: Regional Modeling Contact, Regions I-III, V-X
(with copy of incoming memorandum and list of FY-93
Clearinghouse memoranda)

FY-93 MODEL CLEARINGHOUSE MEMORANDA

<u>Date</u>	<u>Region</u>	<u>Subject</u>
10/7/92	IV	Response to Proposal to Allow Credit for a Stack Height Increase at the Dade County Resource Recovery Facility, Dade County, Florida