UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

DATE: February 28, 1992

SUBJ: Modeling Credits for Stack Height Increases and Merging Flue Gases at Taunton Municipal Light Plant

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TO: Dean Wilson, Meteorologist
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In Richard Field's January 15, 1992 letter, enclosed, Massachusetts DEP requests that EPA confirm that the Model Clearinghouse's October 16, 1991 memorandum on the Dade County Resource Recovery Facility also applies to a plant in Taunton, Massachusetts. Taunton Energy Center (TEC) seeks dispersion credits for a physical stack height increase and plume merging proposed for the adjacent Taunton Municipal Light Plant (TMLP). TMLP has existed in its present configuration since 1971 and consumes no increment at present, but the NAAQS demonstration in TEC's permit application must address the existing plant's maximum allowable emissions - 2700 T SO_2/Y, 700 T NO_2/Y, and 220 T PM/Y.

The situation for TMLP differs from the Dade County case in the following particulars:

(1) TMLP would merge flue gases.

(2) Air flow obstructions, created by the new facility TEC proposes, motivate TMLP's physical stack height increase. The increase does not necessarily address an existing problem.

(3) The reconfigured source does not need the PSD permit. TMLP's a bystander in TEC's PSD permit application

Based on discussions with your staffs regarding the above considerations, we understand that your position in the TMLP situation is as follows:

(1) TMLP (or a sponsor) must use fluid modeling to justify dispersion credits for increases in its physical stack height above a height of 65 m.

(2) With maximum allowable emissions below 5000 T SO_2/Y, modelers may credit TMLP with enhanced SO_2 dispersion from merged flue gases. If the plant merges flue gas streams, it may be modeled as such for SO_2.

(3) For other pollutants, EPA's regulations provide sources no similar exclusion from the general prohibition on taking dispersion credits for plume rise manipulation. Therefore, unless TMLP installs controls and reduces NO_2 and PM emissions (See 40 CFR 51.100(hh)(2)(ii)(B).), TEC must model TMLP's NO_2 and PM impacts with unmerged flue gases.

We understand that you believe the above points are consistent with the Dade County FL memorandum and with current EPA guidance and memorandums.

Although unaccompanied by emission changes, creditable reconfigurations at TMLP will affect available PSD increment.

We request your concurrence in these conclusions.

Enclosure

cc: Dennis Atkinson
Techniques Evaluation Section