DATE: 9 January 1995

SUBJECT: Request for Clarification of Data Inputs for CTDM+ (Merrimack Generating Station, Bow NH)

FROM: Brian Hennessey, Regional Modeling Contact
Air Permits & Assessment Section, Region I EPA

TO: Dennis Doll, Model Clearinghouse Coordinator
Air Quality Modeling Group, EMAD, OAQPS

This is a request for Model Clearinghouse concurrence with the approval of a CTDM+ modeling protocol under the stipulation that a 1-hour averaging time be used for the required σ_θ input.

Public Service Company of New Hampshire (PSNH) must identify design emission/configuration combinations which will protect National Ambient Air Quality Standards from SO_2 emissions of the two cyclone units of its Merrimack Station. PSNH plans to model downwash on simple terrain using ISCST2 and on-site data, and impacts on complex terrain with CTDM+. As the company noted on p. 11 of its meteorological monitoring protocol (enclosure 5), absent final guidance from EPA, σ_θ values on both 15-minute and 1-hour averaging times were archived for possible use in estimating neutral and stable plume spread in CTDM+. Page 13 of the draft modeling protocol (enclosure 3) does not specify which of the two data sets would be used for refined CTDM+ modeling.

Enclosure 1 presents draft comments by Region I and NH Air Resources Division concerning the modeling protocol and other items submitted by PSNH. We ask your concurrence with comment B.(4), which stipulates that PSNH use a 1-hour averaging time for the σ_θ input, not the 15-minute averaging time recommended to select a Pasquill-Gifford curve. Because the protocol marks our first regulatory (as opposed to training) application of CTDM+, we would welcome any other comments you can provide on the technical merits of PSNH's modeling protocol.

Enclosures:

(1) Draft "New Hampshire DAR and U.S. EPA Joint Comments..."

(2) Letter from PSNH regarding "Meteorological Data Gap", 30 September 1994.

(3) "Proposed Modeling Protocol for PSNH's Merrimack Generating Station", 29 April 1994.

(4) "Meteorological Data Comparison Merrimack Station Meteorological Tower vs. Doppler Acoustic Sounder".

(5) "Protocol for On-site Meteorological Monitoring Program at Merrimack Generating Station", Revised 20 August 1993.

FY-95 MODEL CLEARINGHOUSE MEMORANDA

Date	Region	Subject
11/04/94	V	Model Clearinghouse Review of Modeling Approaches in the Stuebenville-Follansbee Area
01/17/95	I	Request for Clarification on CTDMPLUS Model Inputs (Merrimack Generating Station, BOW NH)