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

2 3 JUN 1992

MEMORANDUM

SUBJECT: Ozone Modeling Requirements for the Lewiston-Auburn and Knox-Lincoln Counties' Moderate Ozone Nonattainment Areas in Maine

FROM: Edwin L. Meyer, Acting Chief
Source Receptor Analysis Branch, TSD (MD-14)

TO: David B. Conroy, Acting Chief
State Air Programs Branch, Region I

In response to your request, the Model Clearinghouse has reviewed your proposal to clarify modeling requirements for the subject areas. We agree with position number (4) stating that existing Urban Airshed Modeling (UAM) planned for eastern Massachusetts can be used to satisfy attainment demonstration requirements for Lewiston-Auburn counties. The ozone monitor location used to set the design value for Lewiston-Auburn counties is located within the proposed eastern New England domain. Thus, the domain clearly is sufficient for attainment demonstration purposes.

Modeling requirements for Knox-Lincoln counties are less clear. Those counties would likely qualify as a rural transport area under section 182(h) of the Clean Air Act. However, Maine is not pursuing rural transport status in the interest of achieving emissions reduction benefits imposed by the current nonattainment designation. Furthermore, portions of the contiguous Knox-Lincoln counties are located within the eastern New England boundary. As you have pointed out, emissions from these counties are minimal relative to other areas of the eastern New England UAM domain. All trajectories leading from the boundaries of the eastern New England UAM domain to the nonattainment monitor located on Isle au Haut do not cross significant emission sources. Consequently, the probability that ozone would increase on any trajectory leading from the domain boundary to the Isle au Haut location is near zero. Furthermore, historical UAM modeling conducted on the eastern New England domain shows a decreasing ozone concentration gradient near the downwind boundaries of the domain. Therefore, a demonstration of attainment based on the eastern New England UAM domain is sufficient for demonstrating attainment for Knox and Lincoln counties.

Your memorandum mentions the use of Regional Oxidant Model (ROM) simulations as a basis for demonstrating attainment. An explicit use of ROM results for demonstrating attainment is not acceptable. The eastern New England UAM application, as discussed above, is acceptable for demonstrating attainment for the subject nonattainment areas.

If you have any questions, please contact me at 919-541-5562.

cc: I. Cohen, Region I
D. Grano, MD-15
R. Scheffe, MD-14
D. Wilson, MD-14

bcc: Regional Modeling and Ozone Modeling Contacts, Regions I-X (with copy of incoming memorandum and list of FY-91 Clearinghouse memoranda)

FY-92 MODEL CLEARINGHOUSE MEMORANDA

Date	Region	Subject
10/16/91	IV	Dade County, Florida, Stack Height Increase
11/7/91	VI	Phelps Dodge--Hidalgo Modeling Protocol
11/15/91	VIII	ASARCO E. Helena Lead State Implementation Plan (SIP)
12/04/91	I	Proposal to Use a Non-Guideline Model to Satisfy Intermediate Terrain Policy in New Source Permitting (Pine State Power; Jay, Maine)
12/23/91	VIII	East Helena Lead SIP - Protocols for Design Value Determination, and Model "Verification"
12/26/91	VI	Information Copy of El Paso-Juarez PM-10 Modeling
01/13/92	I	NHARD Modeling Guideline
01/27/92	VIII	East Helena Lead SIP - Protocols for Design Value Determination and Model "Verification"; Clarification of Model Clearinghouse Memorandum of December 23, 1991
03/06/92	I	Modeling Credits for Stack Height Increases and Merging Flue Gases at Taunton Municipal Light Plant
04/06/92	V	Proposal for Resolving the SO_2 State Implementation Plan Revision for Rhinelander, Wisconsin
06/23/92	I	Ozone Modeling Requirements for the Lewiston-Auburn and Knox-Lincoln Counties' Moderate Ozone Nonattainment Areas in Maine