



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

18 NOV 1993

MEMORANDUM

SUBJECT: Building Wake Effects on Volume Sources at FMC Corporation

FROM: Joseph A. Tikvart, Chief *J. Tikvart*  
Source Receptor Analysis Branch, TSD (MD-14)

TO: Robert B. Wilson, Regional Meteorologist  
Region X (ES-097)

In response to your request, the Model Clearinghouse has reviewed your proposal for treating building wake effects on volume sources. We concur with your proposed approach for modeling the FMC facility.

Your application of area of influence considerations of buildings for volume sources seems quite reasonable. We note, also, that your recommended procedure is equivalent to the recommended formula for cases when the volume source is larger than the building. However, for cases when the volume source is much smaller than the building, the initial sigmas do not approach values that would be calculated by the building downwash algorithm in the Industrial Source Complex (ISC2) model. For this reason, I would be concerned about the use of your procedure when the size of the source is substantially smaller than the size of the obstruction (building). Fortunately, this does not occur at the FMC facility.

As you are aware, before this or any other procedure can be recommended for generic use, it must undergo a more intensive technical review, as well as both peer and public reviews.

cc: D. Wilson

FY-94 MODEL CLEARINGHOUSE MEMORANDA

Date

Region

Subject

11/18/93

X

Building Wake Effects on Volume  
Sources at FMC Corporation