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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
726 MINNESOTA AVENUE  
KANSAS CITY, KANSAS 66101

September 9, 1985

MEMORANDUM

SUBJECT: Omaha Lead SIP  
FROM: William A. Spratlin, Director *WAS*  
Air and Toxics Division  
TO: Gerald A. Emison, Director (MD-10)  
Office of Air Quality Planning and Standards

As promised in my August 26, 1985, memorandum to you, we have completed the evaluation and verification of the modeling performed by ASARCO for their Omaha lead refinery. This modeling and the control strategy developed by using the results of the modeling, form the basis of the lead SIP revision proposed by Nebraska. A public hearing will be held on this proposal on September 27, 1985. The Nebraska Department of Environmental Quality has recommended that the Nebraska Environmental Control Council approve the SIP revision.

Region VII has questioned some of the assumptions used by ASARCO in their modeling. These assumptions include the following:

1. Plume enhancement - ASARCO assumed that the plume rise from multiple baghouse stacks would be enhanced because interaction of the exit gases. Region VII does not think that plume enhancement is justified because the stacks are small and the gas temperatures are not much above ambient. Also, ASARCO claims enhancement for all wind directions, not just directions which parallel the orientation of the stacks.
2. ASARCO assumed that the release height for volume sources is the height of adjacent buildings rather than the actual release height.
3. The height of area sources as assumed to be three meters. Region VII thinks a one meter height is more realistic.
4. ASARCO used urban mode 1 dispersion coefficients in the ISC long term model. Region VII thinks the McElroy-Pooler dispersion coefficients are technically more correct for use in Omaha.

Because of the above questions and others, Region VII questions the adequacy of the control strategy for ASARCO. We would appreciate your comments on the above items. We would like your response by September 13, 1985, so we can prepare a response to Nebraska. We have forwarded by express mail a copy of the computer output and detailed comments from our Regional Meteorologist directly to Dean Wilson for his review.

Please call me if you have questions on this matter.

cc: Darryl Tyler, CPDD  
Richard Rhoads, MDAD