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

November 28, 1989

MEMORANDUM

SUBJECT: Utah PM-10 Secondary Sulfate and Nitrate Calculations

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

TO: Marius Gedgaudas, Chief
Compliance Section and Utah PM-10, Region VIII (8AT-AP)

In response to your request to Dean Wilson, my staff previously concurred generally with the procedures described in your memorandum for apportioning source culpability for observed sulfate/nitrate concentrations in Utah and Salt Lake counties. As they indicated, we do have some comments/suggestions on the details of the procedure; these are provided below.

1. For each of the four up/down scenarios, a number of samples sufficient to support a conclusion should be analyzed.

2. Regarding the need to consider meteorological conditions under which each ambient sample was taken, we believe that such considerations should include an analyis of whether the wind direction/wind speed were such that sulfates/nitrates or their precursors could logically have been expected to be transported from Kennecott or Salt Lake City to the monitor. Given that these pollutants would either have been emitted at some height above the ground or would have had to traverse over some moderate terrain enroute to the Provo area, you may wish to consider the use of low level winds from radiosondes taken twice daily at the Salt Lake City airport in such analysis.

3. For your "continental" background values, in order to avoid double counting, we suggest that such data be derived from samples taken outside of the Salt Lake/Provo area. We understand that the National Park Service has a program for PM-10 sampling; some data from such sampling may exist for Utah or Nevada parks.

4. My understanding, based on discussions between our staffs, is that Kennecott will be found to be an insignifcant contributor to ambient concentrations in Utah County. However, if this turns out not to be the case, a Kennecott source profile should be developed and the CMB analysis should be reanalyzed for those up/down samples that involve a contribution from Kennecott.

If you have any questions please contact Dean Wilson (FTS-629-5683) or Quang Nguyen (FTS-629-0832) of my staff.

cc: N. Frank
L. Hanley
Q. Nguyen
M. Smith
D. Wells

FY 90 MODEL CLEARINGHOUSE MEMORANDA

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