



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

(AR-18J)

JAN 30 1997

Michael J. Sandusky, Acting Manager
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155-4194

Dear Mr. Sandusky:

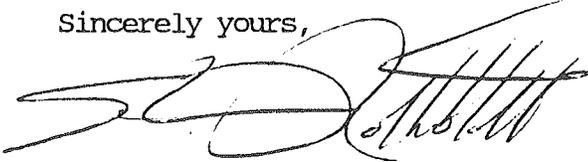
In a letter dated December 13, 1996, the Minnesota Pollution Control Agency (MPCA) requested approval of the model evaluation study which has been documented in a report entitled "Combined Model Evaluation Study for the Northshore Taconite Facility Located at Silver Bay, Minnesota," prepared by W. Gale Biggs Associates and TRC Environmental Corporation, dated October 1996. The United States Environmental Protection Agency (USEPA) Region 5 approves the combined evaluation study with the understanding that it be applied in accordance with the agreed upon conditions stated in the combined model evaluation report identified above.

The study established an air dispersion model for use in regulatory modeling of sulfur dioxide and nitrogen dioxide emissions from pelletizer and power plant sources at the Northshore Taconite Facility. The results were later expanded to include particulate matter less than or equal to 10 microns in diameter. The study compared two versions of the Industrial Source Complex model (ISC2 version 93109). The USEPA reference version of the ISC2 model includes terrain and building downwash. The candidate version of the ISC2 model does not include terrain considerations and limits downwash to only the Huber-Snyder algorithm while ignoring the Schulman-Scire algorithm.

Results from the comparison of the reference and candidate model showed that the candidate model gave more accurate predictions of pollutant concentrations when compared to actual monitored concentrations. However, because the candidate model underpredicted sulfur dioxide and nitrogen oxide concentrations, future modeling results, including results for particulate matter, must be multiplied by the appropriate underprediction factors, as identified in the study document, plus an additional 10 percent safety factor. Your December 13, 1996, letter inadvertently states that underprediction factors will be applied to averaging periods greater than 24 hours. Subsequent discussions between staff from USEPA Region 5 and the MPCA verified that the study did not evaluate annual averaging times and therefore underprediction factors will not be applied in those cases.

Mr. Randy Robinson, of my staff, has been in contact with Mr. Dennis Becker, of your staff, regarding this study. If you have any questions or comments, please contact Randy Robinson at (312) 353-6713.

Sincerely yours,

A handwritten signature in black ink, appearing to read "S. Rothblatt". The signature is stylized with large, sweeping loops and a series of vertical strokes at the end.

Stephen Rothblatt, Chief
Air Programs Branch

cc: Dennis Becker
Minnesota Pollution Control Agency

Dennis Wagner
Northshore Mining Corp.

W. Gale Biggs
W. Gale Biggs and Associates