

US EPA ARCHIVE DOCUMENT

TECHNICAL MEMORANDUM

Date: April 7, 2005

To: Cathy Pickrel, Ashland Inc.

From: Pei-Fung Hurst, URS Corporation

Re: Air Modeling
Ashland Facility, Glenrose, Michigan

This memorandum presents the results of an air modeling performed for the subject facility for estimating concentrations of volatile organic compounds (VOCs) in ambient air emitted from the stack as part of the permitted on-site groundwater treatment system.

The modeling was performed based on relatively flat terrain and the following facility-specific information:

- Exit height above grade: 15 ft
 - Stack is vertical and is partially obscured by a "Tee" on top.)
 - Stack is on top of a building (20 ft L x 20 ft W x 12 ft H)
- Exit inside diameter: 1 ft
- Exit temperature: ambient

Table 1 presents estimated 1-hour maximum concentrations, calculated based on the maximum emission rate over the 12-month sampling period. Table 2 shows a comparison of 1-hour maximum concentrations to health-based air criteria established by the American Conference of Governmental Industrial Hygienists (ACGIH) and Occupational Safety and Health Agency (OSHA) for worker protection and the preliminary remediation goals (PRGs) conservatively derived by the USEPA Region 9 for the purpose of identifying potential chemicals of concern in ambient air.

The results of this modeling suggest that estimated 1-hour maximum concentrations of VOCs in ambient air are all below relevant health-based criteria. Therefore, VOCs emitted from the stack are not likely to pose any adverse impacts to human health.

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