



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:  
WU-16J

OCT 20 2008

**CERTIFIED MAIL 7001 0320 0006 0198 6870**  
**RETURN RECEIPT REQUESTED**

Ms. Victoria Peacey  
Environmental Affairs Manager  
Kennecott Minerals – Eagle  
504 Spruce Street  
Ishpeming, MI 49849

**Subject: Request for Additional Information in support of the UIC Permit Application  
Number MI-103-5W20-0002**

Dear Ms. Peacey:

The Underground Injection Control (UIC) Branch and contracted hydrogeologists with The Cadmus Group, Inc. have reviewed your response to our Request for Information dated July 18, 2008. While the response addressed several of our concerns, three primary issues have not yet been resolved.


1. Proper characterization of the infiltration rate is dependant on the continuity and permeability of the clay layer. However, the continuity of the clay layer in the immediate area of the Treated Water Infiltration System (TWIS) has not been established. If the clay layer is continuous, the flow would be dominated by the lower-permeability clay-rich units, and therefore a design infiltration rate of only two orders of magnitude less than the average measured rate (62 ft/d) may not be conservative enough. Submit additional information to support the degree of discontinuity and permeability that you have asserted.
2. The impacts of introducing the effluent to the native groundwater may be anticipated by fully characterizing the quality of the native groundwater. The water quality data provided were collected at sites nearly a mile or more distant from the infiltration site. The understanding of the groundwater quality in the area of the TWIS would be greatly strengthened by including data from the closest existing monitoring wells. Submit these data and discuss the groundwater quality in the immediate area of the TWIS.
3. The possibility of mobilization of heavy metals from the aquifer soils is dependant on both the presence of those metals and the characteristics of the introduced water. The results of the mineralogical analyses you provided cannot exclude this possibility because much of the fines content, those particles most likely to have the greatest concentration of elements of concern, were lost during the washing of the samples. This is especially true

of the two samples from the immediate area of the TWIS for which mineralogical analyses were provided. Provide information on the fines content of these samples and discuss whether there can be potential release from these sediments.

Please provide additional information that addresses the three concerns described above within 30 days of receipt of this letter. I have enclosed a report entitled *Comments on Responses to Request for Additional Information (Class V Treated Water Infiltration System Application): Final Report*, prepared by The Cadmus Group, Inc. This document provides additional detail on the three outstanding issues.

Inquiries concerning this matter may be directed to Ross Micham of my staff by telephone at (312) 886-4237 or by email to [micham.ross@epa.gov](mailto:micham.ross@epa.gov).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Rebecca L. Harvey". The signature is fluid and cursive, with the first name being the most prominent.

Rebecca L. Harvey, Chief  
Underground Injection Control Branch

Enclosure