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November 3, 2003

Mr. Binyoti Amungwafor Wisconsin Department of Natural Resources Remediation and Redevelopment Program 2300 North Dr. Martin Luther King, Jr. Drive Post Office Box 12436 Milwaukee, Wisconsin 53212

Reference:

 Additional Soil Vapor Screening Work Plan Decorah Shopping Center Annex 1011 - 1025 South Main Street West Bend, Wisconsin WDNR FID #: 267161400 WDNR BRRTS #: 02-67-151266

> KEY ENGINEERING GROUP, LTD. File No. 0702007

Dear Mr. Amungwafor:

The purpose of this letter is to provide the Wisconsin Department of Natural Resources (WDNR) with a work plan for screening soil vapors of tetrachloroethylene (PCE) on properties located adjacent to and in the vicinity of the above referenced site and to obtain WDNR approval for the following scope of work. This work scope was prepared in general accordance with WDNR's October 7, 2003 *Soil Vapor Investigation Results* letter (Attachment 1) and subsequent October 21, 2003 telephone conversation. This work plan was prepared by Key Engineering Group, Ltd. (KEY), on behalf of Continental VI Fund, LLP.

## SCOPE OF WORK

The purpose of this work plan is to address the potential PCE vapor pathway to residential basements in the vicinity of the Decorah Shopping Center Annex. The results of KEY's June 2003 soil vapor investigation, conducted pursuant to WDNR's April 8, 2003 letter and subsequent communication and KEY's April 8, 2003 *Soil Vapor Screening Work Plan* letter, indicated that there is not a complete vapor intrusion pathway from the source to the nearby residences located within the boundaries of the groundwater contaminant plume. It is KEY's understanding that the WDNR and the Wisconsin Department of Health and Family Services did not require sub-slab floor sampling in the adjacent residences during preparation and planning of the April 2003 work scope without direct evidence of a complete vapor intrusion pathway. It is also KEY's understanding, due to the lack of evidence of a complete vapor intrusion pathway, that sub-slab floor sampling is not required at this time.

For purposes of the soil screening activities, KEY will evaluate the soil vapor sample analytical results utilizing the *Johnson & Ettinger (1991) Model for Subsurface Vapor Intrusion into Buildings* (JE Model). The JE Model results will then be compared to the WDNR's established acceptable risk factor of  $1 \times 10^{-6}$ . The acceptable risk factor is calculated based on established lifetime residential exposure risk criteria.

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## Task 1 – Additional Sample Collection and Analysis

- Collect additional soil vapor samples in previously constructed soil vapor wells GP-23, GP-24 and GP-25. The soil vapor samples will be collected with a Summa canister utilizing United States Environmental Protection Agency sample collection methods.
- Obtain documentation regarding the underground utility corridor and laterals adjacent to the site from the City of West Bend Engineering Department to determine if the utility corridor services any residential properties/facilities.
- Collect one additional soil vapor sample by advancing a soil probe (GP-26) to a depth of 4 to 6 feet below ground surface along the underground utility corridor north of soil vapor well GP-23. The soil vapor sample will be collected utilizing a Summa canister.
- Collect one background outdoor air sample using a Summa canister.
- Analyze all vapor samples pursuant to United States Environmental Protection Agency Method TO-15 for PCE and it's degradation products.

The soil vapor sample locations are depicted on Figure 1.

### Task 2 - Data Evaluation and Report Preparation

- KEY will document the information obtained from the City of West Bend Engineering Department. KEY will depict which buildings, if any, are serviced by the sanitary sewer line (underground utility corridor) north of soil vapor sample location GP-23.
- The soil vapor analytical results will be tabulated and compared to the WDNR's human health risk standard and the results of the June 2003 soil vapor analytical results. The soil vapor testing methodology and results as well as the most recent groundwater sample analytical results will be documented in a letter report to the WDNR and Wisconsin Department of Health and Family Services for review and comment.

### Schedule

The above scope of work will be completed on schedule as summarized in the following table.

Task	Date	Duration
Additional Sample Collection and Analysis	January 2004	2 to 3 Weeks
Data Evaluation and Report Preparation	February 2004	1 to 2 Weeks

Please call (262) 375-4750 with questions or comments. KEY will proceed with the above scope of work following authorization from the WDNR.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Kristopher T. King

Project Scientist

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D'Arcy J. Gravelle Senior Project Manager

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Attachments:

Figure 1 Attachment 1 Site Vicinity Layout with Proposed Soil Vapor Sample Collection Locations Wisconsin Department of Natural Resources' October 7, 2003 Letter

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