

Mustonen, Kevin

From: Mustonen, Kevin
Sent: Thursday, May 17, 2007 7:52 AM
To: Larsen, Sarah
Subject: Leak #3534, Junction F-n-F, Hermantown - AMR review

RE: hydro review of Twin Ports Testing's 2-20-07 "2006 Annual Report" recommending continued groundwater monitoring and soil vapor monitoring.

Sarah,

I have reviewed the aforementioned report and the leak file for this site. I have the following comments and recommendations:

COMMENTS

- 1) This report contains new information from the following activities:
 - a. Five rounds of quarterly groundwater sampling.
 - b. The installation of a sub-slab vapor monitoring point and subsequent sampling.

TPT also made reference to the unused, unsealed well near the site and to the unused diesel tanks on the site; however, they did not make a commitment to dealing with either issue.

- 2) On 5-15-07 Laura Novitzki emailed me the results from a round of indoor air testing. I have added this information to the correspondence file. I also verified that copies of the emails you gave me a few weeks ago are already in the correspondence file (that work was done by Paul Stock).
- 3) During the last five monitoring events the groundwater samples exceeded the HRLs for benzene (10,000 ug/L) and ethylbenzene (1,200 ug/L). Elevated levels of GRO (21,000 ug/L) were also detected.
- 4) The contaminant levels in most of the monitoring wells appear to be fluctuating in direct response to changes in the groundwater levels and are following an overall stable or decreasing trend. The two exceptions to this trend are MW-5 and MW-8. Linear regression analysis indicates a mild upward trend for both wells. This is a concern since MW-8 acts as the discharge compliance point for the adjacent wetlands and MW-5 monitors the eastern section of the site somewhat near the onsite water supply well. If this trend continues we may need to initiate a corrective action.
- 5) Sub-slab soil vapor sample JFNF.IND001 had 19 compounds detected above their reporting limits. Two of these compounds were detected above their action levels. This included 1,2,4-TMB at 134 ug/m³ and 1,3,5-TMB at 43.2 ug/m³. Even though the detections are above the action levels they are still fairly low.

Indoor air sample IA-1 had 15 compounds detected above their reporting limits. Two compounds were detected above their action levels. They were 1,2,4-TMB at 119 ug/m³ and 1,3,5-TMB at 48.1 ug/m³. The level of 1,3,5-TMB detected in the indoor air was higher than the level detected in the soil vapor and the indoor air sample had detections of cyclohexane, chloromethane, and styrene, which were not detected in the soil vapor. However, the samples were collected six months apart so no definitive conclusion can be drawn from them.

- 6) I spoke with Mark Malmanger at the MDH's Well Management Section regarding the unused, unsealed well located near the western edge of the Food-n-Fuel site. Mark told me that Sandy Beck (MDH-Duluth) was able to determine who the owner of the well is and they will be sending the owner a letter (hopefully in the near future) detailing their options for the well. The MPCA will be cc'ed on any MDH correspondence relating to this issue.
- 7) TPT mentions that the two "recently" discovered fuel oil tanks had applications submitted to the Petrofund's Abandoned Tanks Program. Based on Figure 2 from TPT's 4-16-97 *RI Report Addendum*, it

appears as if the location of the former fuel oil dispenser was known prior to the December 1998 tank upgrade deadline. I think it is reasonable for the property owner to have known or suspected that there were tanks associated with the dispenser and therefore the tanks should have been addressed prior to December 1998.

RECOMMENDATIONS

Consultant's Recommendations (condensed):

Continued groundwater and soil vapor monitoring.

Kevin's Recommendations:

(Suggested language to be included in a Request for Additional Work letter. Please review for clarity and grammar.)

- 1) Continue to collect quarterly groundwater samples from the monitoring wells associated with this site. The samples must be analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl-tertiary-butyl-ether (MTBE), and gasoline range organics (GRO).
- 2) Collect annual groundwater samples from water supply wells PW-5492, PW-5506A, and PW-5506B. Collect semi-annual groundwater samples from water supply wells PW-2 and PW-5497. Collect quarterly groundwater samples from water supply well PW-4621. The water supply well samples must be analyzed for volatile organic compounds (VOCs) and GRO.
- 3) Continue to inspect the ditch and the wetlands located along the north side of the site for the presence of a sheen. If a sheen is noted on the wetland or the ditch, contact site hydrologist Kevin Mustonen **immediately** at 218/529-6274.
- 4) Collected semi-annual indoor air samples at Casa Latte. Collect semi-annual soil vapor samples from the sub-slab sampling point installed at Casa Latte. In order to minimize cross contamination, the indoor air samples should be collected prior to the collection of the soil vapor samples. The samples should be collected no more than a few days apart so valid comparisons can be drawn. The soil vapor and indoor air samples must be analyzed for volatile organic compounds (VOCs) using EPA Test Method TO-15.
- 5) Conduct an Indoor Air Quality Building Survey at the Casa Latte building as described in Appendix C of Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*. Pay particular attention to the building use, occupancy, and the heating and ventilation systems that are present.
- 6) The following is a list of errors that were noted during the review of this report.
 - a. Groundwater elevation data for the January 2007 sampling event was not included in Table 2.
 - b. The groundwater elevations shown on the groundwater flow maps for wells MW-7 and MW-2b do not correspond with the data listed in Table 3 for these wells.
 - c. The relative groundwater elevations listed in Table 2 for most of MW-2b's entries and some of entries for MW-5 and MW-6 are shown as having readings accurate to a thousandth of a foot.
 - d. Some of the analytical results shown in Table 3 are given in mg/l instead of ug/L. All of the entries should be listed in ug/L.
 - e. The GRO result listed for MW-1 on 12-27-04 does not correspond with the result shown on the lab report. Subsequently, the corresponding MW-1 GRO Graph does not correspond with the laboratory data.
 - f. Table 6 does not follow MPCA guidance. The data must be presented using Table 17 from MPCA Guidance Document 4-06 Investigation Report Form. Analytical results that are below the method's reporting limits must be listed as such. Spaces should not be left blank.
- 7) After completing four rounds of quarterly groundwater sampling along with the other work outlined above, complete and submit MPCA Guidance Document 4-08 *Annual Monitoring Report* detailing the

results. This report is due by February 28, 2008.

