State of Wisconsin

CORRESPONDENCE/MEMORANDUM

DATE: January 28, 2015 9:30am-11:30am FILE REF: 02-36-000268

TO: File

FROM: Tauren Beggs – DNR Project Manager

SUBJECT: Phone Log: Peer Review Discussion of Site with Patrick Collins

Patrick Collins, Tauren Beggs, and Keld Lauridsen (all DNR Project Managers) had a phone discussion regarding future actions at the Manitowoc City / Former Newton Tn Gravel Pit site. Collins has extensive experience with other sites in Wisconsin with chlorinated solvent contamination in bedrock. Per his peer review, Collins had the following comments/responses to Beggs' questions:

Beggs: Can the potable wells be used to sufficiently define degree and extent of groundwater contamination in the unconsolidated materials (soil) and bedrock or do additional monitoring (non-potable) wells/well nests need to be installed at different depths throughout the area for more accurate definition of the contaminant plume?

Collins: The potable wells in the area can be used to assess the impact on drinking water in the area and generally where the chlorinated solvent contamination is located, but cannot be solely relied upon to define horizontal and vertical extent of groundwater contamination migrating from the source area.

- Collins agreed with Beggs that with the most recent installation of multi-level well nests on properties to the southeast of the site in November 2014, vertical and horizontal extent in the area west of Hecker Road is pretty well defined.
- However, east of Hecker Road and east of I-43, at a minimum, transects of multi-level monitoring well nests should be installed to define horizontal and vertical extent of groundwater contamination in unconsolidated materials (soil) and bedrock. Collins recommended at a minimum 3-4 multi-level monitoring well nests in a North-South transect and 3-4 in a West-East transect.

Beggs: To define degree and extent to the north and northeast of Viebahn St, would it be better to have monitoring (non-potable wells) wells installed at multiple depths in those directions or to see if any high capacity or municipal wells are in that area to sample?

Collins: Multi-level monitoring well nests should be installed north and northeast of the areas with Potable Wells that have Enforcement Standard exceedances instead of utilizing high capacity or municipal wells that may be in the area.

Beggs: What would be the RP's best option for potentially bringing in additional RP's?

Collins: Since there is supporting documentation to use as evidence for the Manitowoc industrial companies that dumped waste at the site, the RP's best option would be to pursue the causers. The RP should take the lead on going after the causers.

Based on the peer review, Collins provided additional knowledge about the following topics:

Collins: Remediation of Source Area (On-site) and Off-Site

Now that the potable well investigation is nearing completion, the focus should be placed back on conducting aggressive remediation of the source area and off-site contaminated groundwater. At the source area, a remedial system (potentially an SVE system) should be installed to remove residual soil contamination. The remaining free product should be removed as well. Off-site, the highest chlorinated solvent concentrations are currently located at WT-12/PZ-12 and WT-16/PZ-16 locations. A remedial system (potentially pump and treat) should be installed in this area to remove contaminants from groundwater. The remedial systems need to be able to either remove and treat/dispose or effectively cause a breakdown in chlorinated solvents from TCE to cis-1,2-Dichloroethene to Vinyl Chloride to ethene and carbon dioxide. Prior to installing remedial systems, a Remedial Investigation Feasibility Study (RIFS) needs to be submitted. This will include establishment of baseline monitoring points.

Collins: Public Health Risk-Drinking Water - Potable Well Replacement vs. Municipal System Hookup

The best option for providing clean drinking water is extension of municipal water instead of potable well replacement. Things to consider when weighing these options:

- If potable wells continue to have to be replaced due to public health risk from chlorinated solvent contamination, the cost may eventually exceed that of what a municipal water hookup would have cost.
- If potable wells continue to have to be replaced to deeper depths and if more properties in the Town of Newton are developed with more potable wells installed in the future, this could cause larger cones of depression, which in turn could potentially cause changes in groundwater flow direction and the dragging down of contaminated groundwater.
    - In some cases, RP(s) of sites have purchased surrounding properties to prevent new development in the contaminated area. The RP of this site would likely want to employ better cleanup and clean drinking water tactics so as not to hinder development that may benefit Manitowoc/Town of Newton areas in the future.
- Installing carbon filter systems on potable wells is not effective at removing chlorinated solvents and cannot be used as a permanent solution for providing clean drinking water. This is based on other sites that have tried employing this method.
- Collins and Lauridsen agreed that the remedial cleanup level/goal for the site would not be as strict if a municipal water hookup was used, since contamination would essentially not have an effect on the pathway to drinking water in the Town of Newton versus the much higher susceptibility of contaminated groundwater migrating into the potable well supply aquifer.

Collins: While this site is regulated by the DNR (state), RP(s) of similar sites have voluntarily followed more closely with the way EPA's National Priority List (NPL) process is implemented. This site could potentially follow NPL process guidelines if the RP thinks this process is something they may be interested in following closer. Collins project manages the New Richmond City Landfill Site and had worked with Dan Koski in the past. Collins told Beggs to say hello to Dan for him.

Collins finished the discussion by providing Beggs with two similar sites:

- New Richmond City LF #2492, BRRTS # 02-56-000097
- Hydrite Chemical, BRRTS # 02-13-000843