US EPA RECORDS CENTER REGION 5
577905

Allied Landfill Groundwater Investigation Status Call August 11, 2014 7:00 AM — 9:30 AM Meeting Minutes

ATTENDEES:

Mike Wetzel/City of Kalamazoo
John Paquin/City of Kalamazoo
Bruce Merchant/Consultant
Michael Berkoff/USEPA
Paul Bucholtz/MDEQ
Rick Burns/NTH
Jeff Keiser/CH2M HILL
Cindi Nemke/CH2M HILL
Beth Rohde/CH2M HILL

PREPARED BY: CH2M HILL

DATE: August 15, 2014

PROJECT NUMBER: 419665.FI.01

Clarifications

The following clarifications were made at the start of the call prior to discussions on placement of well screen depths.

- Arcadis made an error in the Supplemental Groundwater Investigation with the identification of the City well field north of Allied Landfill as the Central Well Field. The well names and construction information are believed to be correct, but the wells are located in Well Fields 3 and 7.
- The City felt the description of the different goals for the groundwater investigation in the August 4 meeting minutes was incorrect and divisive. The City indicated their goal is also to evaluate if contamination is leaving the Allied Landfill site.

Discussion Summary

The meeting minutes for the August 4 call were transmitted by CH2M HILL on August 7 along with four cross-sections showing potential geologic conditions that may be encountered during drilling. Each cross-section included examples of the corresponding screen depth placement for intermediate and deep wells. The City also provided on August 7 a cross-section showing their assumptions on the subsurface geology and definition of shallow, intermediate and deep water-bearing units.

The following is a summary of the August 11 discussion:

1. Cindi presented 4 potential subsurface conditions that may be encountered during drilling:
   a. Figure A—If three silt/clay aquitards are encountered during drilling, the well screens would be set above the two nearest the Allied Landfill. The dashed line at the bottom of the borehole indicates additional drilling depth the City had requested to tag bedrock. The City feels this well screen placement represents two intermediate wells.
   b. Figure B—If no silt/clay layers are encountered during drilling, the well screens would be set at the approximate depths originally estimated.
   c. Figure C—This is the closest to what the City presented in their cross-section for subsurface geology. If two silt/clay aquitards are encountered during drilling and the depth of 630 feet AMSL is reached within the second aquitard, the deep well screen would be placed above the second aquitard.
   d. Figure D—If only one silt/clay aquitard is encountered during drilling, the intermediate well screen would be placed above and the deep well screen would be placed below at the bottom of the boring.

2. The City asked why we had selected the depth of 630 feet AMSL for the bottom of the borings. While this depth is above some of the well screens of the City well fields, it is within the same interval as others. An assumption had to be made to move the investigation forward and it was carried between the situations presented by CH2M HILL for continuity.

3. The City presented the cross-section showing the anticipated geology that will be encountered during drilling. Cindi noted that because of the large distance between deep borings (more than 2 miles) with no information near the site, actual conditions may differ from what is shown.

4. If multiple water-bearing units are encountered, it is the EPA's intent to set the well screens in the shallower water-bearing units where something would be more likely to be attributable to the Allied Landfill if encountered.

5. It was clarified that these wells are not being installed as a part of the long-term monitoring program (LTMP). Data from these wells will be used to develop the LTMP during the remedial action (RA). Further investigation is required to delineate excavation extents, but these wells are expected to be abandoned during the RA. Although some locations may be outside of areas planned for excavation, there is still potential for damage to the wells from other construction activities. It is preferred that the wells be properly abandoned to minimize future risks. This also allows for the placement of well screens to be revisited during the RA using the information gathered during this investigation.

6. Rick asked if diffusion had been considered in selection of well screen depths. If NAPL was present, the NAPL would move along confining layers or bedrock. CH2M HILL identified that diffusion was not considered in the RI or in our placement of the well screens. The evaluation of sediment transport in the RI was limited to PCB, the risk driver at the site. There have never been concentrations detected of any analyte at the Allied Landfill or other data that would suggest the presence of NAPL at the site. Groundwater impacts are limited to inorganics, primarily arsenic, iron and manganese.

7. If questioned during a public meeting, Michael is comfortable being able to say that we have adequately investigated potential groundwater impacts from the Allied Landfill following our intended approach. The City may be asked a different question as to if the City's water supply is safe. There are other potential sources of groundwater contamination in the vicinity of City well fields 3 and 7. The USGS or NOAA may be able to provide assistance to the City to evaluate potential threats to the City water supply.

8. The City asked what would happen if additional impacts were identified at Panelyte during the pullback of materials from the Western Disposal Area. If drums or indications of other contamination were identified with the residuals in the pullback area, work would have to stop in this area and it would need further evaluation.