

Ackerman, Jeffrey A - DNR

From: Ackerman, Jeffrey A - DNR
Sent: Friday, October 15, 2021 12:14 PM
To: 'aselle@fortatkinsonwi.net'
Cc: Welch, Tim
Subject: Comments on Terracon's Workplan for the Loeb Lorman Properties in Fort Atkinson # 02-28-588371
Attachments: loeb LSI and WP comments and questions.docx

Hello Andy,

I am providing overview comments on the sampling plan in the body of this email, and detailed questions and comments about the previous work and the current workplan in the attached document.

I suggest a conference call to discuss this, and then preparation of a revised workplan to refocus the sampling (if desired) and to address the administrative issues raised in the attached document.

I understand this project is time-critical. As such, I am not requiring changes to the proposed sampling locations or analytes, I am recommending you consider changes that I believe will expedite the project. Many of the questions and comments in the attached document address administrative code requirements. I did not reference the code provisions, as to get you my comments as quickly as possible. If you or Terracon would like code references or would like to discuss the need for addressing each and every item, we can discuss that at our conference call.

Thanks, Jeff

Based on my analysis of the Limited Site Investigation report, I see four primary areas of concern.

1. PCBs in soil at the Lorman Street parcel.
2. Lead (and also arsenic and mercury) in soil at the Oak Street parcel.
3. Chlorinated volatile organic chemicals (CVOCs) at the Hake Street parcel.
4. Potential future vapor intrusion issues, especially at the Hake Street parcel.

My comments on the proposed sampling plan follow:

1. The PCB soil sampling strategy will likely not delineate the extent of PCBs sufficient for planning a remedial action. The borings seem too far apart and there will be a large data gap between GP-16 and GP-17. Extensive PCB sampling of groundwater seem unwarranted; perhaps one sample in the worst location would suffice to show this is not an issue.
 - The sampling rationale would benefit from a conceptual model. Is there one or many sources? Are the PCBs in the fill or were they discharged into the fill? Is there a correlation between the high DRO concentrations and the elevated PCBs, perhaps indicating a waste oil source for the PCBs?
2. The relatively high density sampling for many different contaminants on the Oak Street parcel seems more than is needed. My understanding is the RECs here were coal storage and historic fill. If this parcel was its own cleanup case, you would probably not be required to sample further for VOCs or PAHs. My review of the data show the main contaminant of concern is lead along with arsenic and mercury, which seems consistent with coal storage.
3. The high levels of trichloroethene (TCE) detected in groundwater at the Hake Street parcel can't yet be attributed to a source at the neighboring DB Oak site. Terracon presents no support for their assertion of an off-site source. Arguments against an off-site source:

- The hydraulic conductivity given by Terracon suggest a minimum travel time from the DB Oak source is about 300 years.
- Groundwater contamination at DB Oak has moved downward from the fine-grained materials into a lower outwash sand unit.
- Neighboring groundwater samples at P-2 and P-5 did not show similar impacts.
- The data are not from code-compliant monitoring wells.

Further evaluation of the extent and likely source of the groundwater CVOC contamination is needed. Even if the off-site source is confirmed, the extent of the CVOC contamination needs to be known to address the vapor concern (below).

4. Terracon states the site is vacant so there is no vapor risk. While this is true, there will be a requirement for vapor assessment prior to redevelopment or any change in use, even if the site closes. Additional evaluation and/or more data should be collected to assess future vapor risk.

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Comments on Terracon's Submittals for the Loeb Lorman Properties in Fort Atkinson
#02-28-588371
Jeff Ackerman 10-15-2021

Limited Site Investigation (LSI)

1. Did the LSI look at any of the 10 on-site USTs or draw any conclusions about the RECs, including the bulk plant next door at 624 oak street?
2. Did Terracon identify areas of foundry sand fill? Is that the lower fill at P-12, P-13, and P-15?
3. How much water was purged from the temporary wells prior to sampling? What was done with the purge water?
4. Where is boring P-6 in relation to past case source areas? Is it in a tank basin, or what is the explanation for the thick fill?
5. There are shortcomings in the boring logs. P-3, P-4 – clayey sand is SC not SP. There are other USCS classification issues, such as the use of “sorting”. The logs should include the origin, where possible.
6. The boring logs do not seem to show two distinct types of fill. The narrative seems more definitive, Terracon should explain the designation or certainty.

Workplan

7. The rationale for the proposed sampling would be easier to understand if the workplan provided more context. For example:
 - a. The recognized environmental conditions (REC) and areas of significant contamination should be shown on the map or maps.
 - b. A discussion of suspected source(s) for the known contamination should be included.
 - c. Significant issues needing attention for redevelopment and case closure should be more thoroughly called out.
 - d. The proposed sample locations for each analysis could be shown in relation to the existing data.
 - e. A parcel-by-parcel data tabulation of would be also helpful. As the tables stand it is very difficult to discern the issues at individual parcels.
8. Are there errors at the end of paragraph 2 of the site investigation scoping statement? (page 7) It appears redundant with the prior paragraph.
9. Page 8 states, “TCE was detected in groundwater samples from two of the monitoring wells during the initial sampling event, but the results were not reproduced during the subsequent sampling event.” When did this second round occur and where are the data presented?
10. Page 8 incorrectly states, “1,1,1-trichloroethane, associated with 1,4 dioxane, was not detected within the soil or groundwater, thus 1,4-dioxane is not considered to be an issue.” 1,1,1-trichloroethane was detected in both soil and groundwater.

11. Page 9. Data from the 07-28-558330 UNCLE JOSH BAIT COMPANY SITE (not mentioned) is also relevant to this workplan. Publicly available documents show an extensive chlorinated volatile organic chemical groundwater plume.
12. Page 9, middle. “The LSI identified PAHs and metals in this fill material.” Should one infer the source of the metals and PAHs is the fill itself, and not a secondary discharge after fill placement? Does Terracon have a hypothesis in this regard?
13. Page 10, hydraulic conductivity. This should be a discussion of the need to gather data to determine the hydraulic conductivity of materials where contaminated groundwater is found. The relatively low estimated hydraulic conductivity does support an off-site CVOC source.
14. Page 11, section 4.3. Consider changing the boring names to decrease the likelihood of confusion with the LSI borings. Consider adding a parcel identifier to the sample names.
15. Page 11 and 12. At least 4” ID hollow stem augers are needed for NR141 compliant wells. The sections are silent on auger size.
16. Page 12. Well and borehole documentation must follow the requirements of NR 716.15, which includes soil boring logging according to USCS methods and classifications. See comments on LSI boring logs; bullet 5.
17. Page 12. Soil samples should be discrete and represent a no more than 1-foot interval.
18. Page 12. What is the utility of the photoionization detector in screening for PCBs?
19. Page 12, section 4.4. surveying. What methods will be used to locate the horizontal and vertical coordinates for the wells and the boring? How will the borings be placed in the field, relative to prior borings, and the suspected source areas?
20. Page 12, section 4.5. Flush-mounted monitoring wells in low hydraulic conductivity units may need time for the water level to equilibrate after opening. How will Terracon account for this?
21. Page 12. What is the minimum monitoring well purge volume for the low-flow sampling?
22. Page 14, Section 4.7. The Site Investigation Report must meet the requirements of NR 716.15.
23. Exhibit 1 - Proposed boring figure. The DB Oak monitoring wells appear imprecisely mapped. The scale appears to be off by about 10%.
24. I did not see the required ch. NR 712, Wis. Adm. Code professional certifications.