



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7**

11201 Renner Boulevard  
Lenexa, Kansas 66219

Mr. Scott Hemesath  
Lead Environmental Engineer  
John Deere Des Moines Work – 06-368  
825 SW Irvinedale Drive  
Ankeny, Iowa 50023

RE: Remedy Evaluation Report  
John Deere Des Moines Works, Ankeny, Iowa  
EPA ID # IAD069624500

Dear Mr. Hemesath:

The U.S. Environmental Protection Agency Region 7 has reviewed the Remedy Evaluation Report prepared by GHD on your behalf and dated September 15, 2021. The referenced report was submitted in accordance with the 1998 facility Administrative Order on Consent (Docket Number VII-98-H-0002) and all applicable EPA guidance. Based on a review of the above-referenced document, the EPA is providing the following comments which must be addressed prior to approval of the report.

- 1. Section 5.2, Technical Approach, Point of Compliance.** As stated within this section, groundwater at the facility is classified as a Class II groundwater use regime meaning groundwater at the facility and surrounding region is considered a potentially available source of drinking water based on its potential to supply a sufficient yield to meet the minimum need of an average household. Because of this, the point of compliance for groundwater contamination must be throughout the groundwater plume, and not merely the property boundary. According to the EPA's April 2004 *Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action*, where groundwater is deemed to be a potential drinking water source, the final cleanup goals should be selected to return usable groundwater to its maximum beneficial use. For cleanups where this is the corrective action objective for groundwater, the EPA sets the point of compliance throughout the area of contaminated groundwater or where waste is left in place.
- 2. Page 11, Co-located AOC C/AOC B24/AOC B25/Other Unit 2/Other Unit 3 table.** For groundwater, propylene glycol, acetone and 1,1,2-trichloroethane should be retained in the list of contaminants of concern for the human health corrective action objective.
- 3. Page 13, Other DOD Area PH – Former DOD Powerhouse (Former Building 15) table.** Lead in soil should be retained in the list of COCs for the human health corrective action objective.
- 4. Section 7.1, Site-Wide Groundwater, Alternative 1.** The EPA does not consider remedy evaluations based on no action such as in Alternative 1 of this section; however, because this



section implies that local controls are in place restricting the installation of water wells on a case-by-case basis, please provide the documentation (e.g., copy of City or County ordinance) as an attachment to the report.

5. **Section 7.1, Site-Wide Groundwater, Alternative 2.** Within this section, an additional three years of groundwater monitoring is proposed at Co-located AOC C to confirm that groundwater conditions are stable in groundwater over time. This section goes on to state that after at least two years of the proposed sampling, the groundwater concentrations remain stable, termination of sampling will be proposed. The timeframes for groundwater sampling within this section appears to be inconsistent; please clarify.

Also, as stated in Comment #1 above, the CAO for COCs in groundwater is to return it to its maximum beneficial use as a drinking water source where federal Maximum Contaminant Levels, or where MCLs do not exist, the EPA Regional Screening Levels apply. To confirm that this CAO has been achieved, continued groundwater monitoring is typical until it can be confirmed that COC concentrations throughout the plume have decreased and remain below these final cleanup goals for a sustained period. In the case of AOC C, it is understood that ongoing groundwater monitoring throughout the plume in this area of the facility is not preferred where business activities pose an even greater risk to further contaminating the groundwater through open conduits such as installed monitoring wells. The EPA agrees that the best course of action at this area is to monitor at the boundary of AOC C where there are existing wells that do not pose a threat to groundwater. However, if this area becomes accessible or amenable to active groundwater monitoring in the future, the EPA will require ongoing and periodic groundwater monitoring throughout the contaminant plume to confirm that COC concentrations have decreased below these final cleanup goals.

6. **Section 7.4, SWMU No. 25 – Stormwater Runoff Ditch and Catch Basin.**
  - a. Should perimeter fencing be retained as an engineering control to help mitigate the risk of potential exposure to residual contamination at the surface within SWMU 25?
  - b. Please clarify how the potential complete exposure pathway for site visitors/trespassers to ingestion/dermal contact of residual contamination in surface water and sediment at the SWMU 25 North Drainage ditch will be addressed if outside of the fenced perimeter?
7. **Page 12, AOC E – Former Underground Storage Tanks 14, 15, and 16 table.** Please revise the table to note that the tapwater RSL value for naphthalene of 0.61 µg/L is based on a non-cancer hazard quotient of 0.1, rather than a target cancer risk of 1E-05.
8. **Page 13, Other DOD Area PH – Former DOD Powerhouse (Former Building 15 table).** Please revise the table to note that the industrial soil RSL value for naphthalene of 59 mg/kg is based on a non-cancer hazard quotient of 0.1, rather than a target cancer risk of 1E-05.
9. **Appendix F, Risk Based Remedy Evaluation, Attachment 1, Table 1.** Please confirm the cancer risk for dibenz[a,h]anthracene. The cancer risk presented in the table is 1E-04; however, the EPA calculated a cancer risk of 8E-06, which also changes the total cancer risk to 1E-04.
10. **Appendix F, Risk Based Remedy Evaluation, Attachment 2, Table 2.** Please confirm the cancer risk for dibenz[a,h]anthracene. The cancer risk presented in the table is 1E-05; however, the EPA calculated a cancer risk of 8E-07, which also changes the total cancer risk to 1E-05.



**11. Figures.** Please include a figure depicting the historical groundwater exceedances of COCs at the areas of Co-located AOC C/AOC B24/AOC B25/Other Unit 2/Other Unit 3 from all sampling locations similar to Figure 7-10, *AOC E – Groundwater Exceedances of CAOs*.

**12. Appendix C, Excavation Cost Estimate, Co-Located AOC C – Groundwater Monitoring for Chromium and Hexavalent Chromium.** The cost estimate for groundwater monitoring at this area was calculated based on annual periodic sampling for three years. It is assumed that this cost estimate also only includes laboratory analysis of total and hexavalent chromium as the title implies. Please know that to confirm stabilization, the EPA will likely require both quantitative or statistical and qualitative trend analysis of the data obtained which will likely require more than the limited dataset proposed here. At a minimum, the EPA will want to ensure that seasonal variations in groundwater concentrations are identified and evaluated as part of this trend analysis which typically requires quarterly sampling. Additionally, statistical evaluations typically require more than three datasets for proper analysis as referenced in the EPA's March 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance*. Please reference this guidance when developing an appropriate groundwater monitoring program to identify trends and confirm stability of COCs in groundwater.

Also, to ensure that the isolated detections of COCs noted in Comment #2 above are not migrating in groundwater to unaffected areas, groundwater monitoring at this area should include the analysis and reporting for these COCs as well.

**13. Appendix G, Groundwater Monitoring Wells Proposed for Abandonment.** The EPA accepts the facility's proposal to abandon those wells listed in Appendix G; however, please know that if ongoing groundwater monitoring indicates that COCs are migrating to previously unaffected areas or new information becomes available that requires an expanded monitoring well network, the EPA may request the re-installation of monitoring wells in the future.

Please submit a response to these comments within 30 days from the date of receipt of this letter. If you have any questions about the information in this letter, please contact me at (913) 551-7403 or by email at [messinger.lisa@epa.gov](mailto:messinger.lisa@epa.gov). The EPA appreciates your continued cooperation in this matter.

Sincerely,

Lisa Messinger, PG  
Project Manager  
RCRA Oversight, Authorization Grants  
& PCB Branch  
Land Chemical & Redevelopment Division

cc: Melanie Gotto, Deere  
Amie Davidson, IDNR  
Brian Broderick, GHD