



November 28, 2022

RON WOESTE  
LINN COOPERATIVE OIL COMPANY  
PO BOX 406  
MARION IA 52302

**Re: Linn Cooperative Oil Company Bulk Storage Facility, East 5<sup>th</sup> Ave, Lisbon, Iowa  
Review of September 2022 Groundwater Monitoring and Vapor Intrusion Report**

Dear Mr. Woeste,

The Iowa Department of Natural Resources (Iowa DNR) has completed review of the site monitoring report received on September 22, 2022. Although semi-annual sampling has been required for years, only one sampling event occurred this year. During the August 2022 sampling event, groundwater monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6 were sampled. MW-5 was unable to be sampled due to parked equipment onsite. One soil gas sample was collected in October 2021 as a confirmation sample for SV-1.

In addition to groundwater, soil gas and waterline samples were also collected and analyzed. Samples were analyzed for Benzene, Toluene, Ethylbenzene, Xylene, Total Extractable Hydrocarbon as Diesel (TEH-D), Total Extractable Hydrocarbons as Waste Oil (TEH-WO) and MTBE. In future reports, please include a table with all groundwater sampling data (although absent in this report, this has been labeled Table 2 in past reports).

MW-3 continues to exhibit the highest benzene concentrations (8,200 ug/L). Toluene, ethylbenzene, xylene and TEH-D concentrations at this location remain below the non-protected groundwater standard. The waterline sample obtained on August 29, 2022 at 202 E 5<sup>th</sup> St. did not show detections of chemicals of concern.

Previously, soil gas concentrations at SV-2, SV-3, and SV-4 were compared to EPA's Vapor Intrusion Screening Levels (VISL) and found to be below action levels. The SV-1 soil gas location included both a sample and a duplicate sample from the May 2021 sampling event. The benzene concentrations found in the duplicate (61.6 ug/m<sup>3</sup>) was much lower than that found in the sample (237 ug/m<sup>3</sup>). A confirmation sample was needed at this location to better establish anticipated risks. A confirmation sample was collected in October 2021. Concentrations reported were found to be uncharacteristic for this site in both chemical composition and concentrations. As such, the validity of this sample is questioned. Please collect another soil gas sample from this location (+/- 5 ft.) using a new vapor well for sample collection. The results should be submitted to the Iowa DNR within 90 days of receipt of this letter.

Benzene concentrations at MW-3 continue to remain elevated and present risk to nearby receptors. As part of the steps being taken towards closure, a 90 ft. water line replacement has been recommended. This is acceptable. Please continue to sample the waterline annually until the corrective action is taken. Groundwater sampling must also continue until site closure.

Linn County Ordinance 10-1431 has been reviewed and found acceptable by Iowa DNR. This submittal includes letters from both City and County permitting authorities stating they have reviewed maps and relevant materials

for the site and that no wells will be permitted in this area of concern. These letters were presented on letterhead and signed.

A draft Environmental Covenant (EC) has been submitted by your consultant and has gone through technical review. Once all corrective action measures are completed and approved, the draft EC can be submitted to the Legal Section of Iowa DNR for a formal legal review before being finalized, signed, and recorded with the County.

As noted in the submittal, the site remains a risk to groundwater ingestion, vapor to enclosed space and water lines. Annual groundwater monitoring of MW-1 through MW-6 has been recommended moving forward. This is acceptable. The next annual groundwater monitoring report is due **August 15, 2023**. However, please note the soil gas should be reported to the DNR **within 90 days** of receipt of this letter. If you have questions or if I may be of further assistance please contact me at [shelly.nellesen@dnr.iowa.gov](mailto:shelly.nellesen@dnr.iowa.gov) or [\(515\)669-5494](tel:5156695494).

Sincerely,

Shelly Nellesen  
Environmental Specialist Senior  
Land Quality Bureau

Cc: James Goodrich, Impact 7G, 310 2<sup>nd</sup> St., Coralville, IA 52241  
Iowa DNR Field Office 1, Manchester  
Michael Sullivan, Iowa DNR Solid Waste and Contaminated Sites Supervisor