September 25, 2023

MARY BLEL
5500 CENEX DRIVE
MS 628
INVER GROVE HEIGHTS MN 55077

Re: Former Thermogas Facility/Farmer's Cooperative Elevator (833 South Phillips St., Algona, IA)
Contaminated Sites Database Site ID No. 554
Review of Request for Closure Report

Dear Ms. Blel:

The Iowa Department of Natural Resources (DNR) received the Request for Closure Report dated August 14, 2023 on August 17, 2023. Thank you for the submission. The report summarizes additional sampling completed in May 2023 to better analyze recent Nitrate-Nitrite (N-N) and Ammonia as Nitrogen spikes at Site wells in addition to a comprehensive contaminant trend analysis.

Following initial assessment completed in 2007, Nitrate-Nitrite, Ammonia as Nitrogen, and pesticide (Acetochlor, Alachlor, Atrazine, and Metolachlor) concentrations were found to be over EPA Maximum Contaminant Levels (MCL) and/or EPA Health Advisory Levels (HAL) at the Site. Semi-annual groundwater sampling has been completed at the Site following the initial assessment and has continued until the most recent sampling event in May 2023. CHS, Inc. requested Site closure in their 2021 Annual Site Monitoring Report which was denied at the time due to a significant spike of N-N and/or Ammonia as Nitrogen concentrations at MW5 and MW9. Continued groundwater monitoring was required. In 2022, the DNR allowed for cessation of pesticide sampling as decreasing concentrations and plume stability had been documented.

The 8/14/23 Request for Closure Report outlined the 2021 N-N and Ammonia as Nitrogen increases noted at MW5. It is believed that no Nitrogen has been stored at the Site since 2019, with the Site now only used for propane storage and distribution. It is therefore assumed a one-time spill/release of Nitrogen took place sometime in 2021, prior to the November 2021 N-N and Ammonia as Nitrogen spike. The DNR agrees this appears to be the most likely cause for the noted increases. Following the November 2021 sampling event, three additional samples have been collected at the well, and while concentrations continue to be over historic values and MCL/HAL target levels, they have reduced by approximately half of the November 2021 concentrations. Additionally, both N-N and Ammonia as Nitrogen concentrations show a decreasing trend following the 2021 event.

Monitoring well MW9 has also recently shown an increase in N-N concentrations. Although a less dramatic increase, the highest N-N levels recorded to date have been found after the November 2021 sampling event, with the highest concentration recorded during the most recent May 2023 event. Despite the increase, concentration trend analysis shows little to no trend. As the increase is believed to be attributed to a one-time release/spill, it is expected concentrations to stabilize and decrease at the well as seen at MW5. All other wells were shown to have decreasing trends utilizing trend analysis (MW5 analysis utilized the four most recent events).

In addition to the trend analysis, N-N and Ammonia as Nitrogen plume stability was demonstrated utilizing the Groundwater Contaminant Plume Stability Analysis created by Ricker (2008). Trends in overall contaminant plume area and average concentration were calculated and found to be decreasing or have no trend. Furthermore, mass and center of mass analysis was completed and found to display a decreasing mass trend along with a center of mass location that migrated away from the Site groundwater flow direction for both chemicals.

The city of Algona has a DNR approved ordinance in effect that prohibits the installation of wells within the corporate city limits. In 2021 the City of Algona and Kossuth County signed letters stating that as permitting authorities, no wells will likely be permitted in the area of concern as indicated in the contaminant plume maps provided by GeoTek. Existing municipal wells and private wells are not believed to be at risk due to their relative distance and location form the site. Plume stability and overall decreasing contaminant concentrations have been demonstrated at the Site.

Based on the information presented above, no further action is necessary on the site at this time. Please note that this judgement is based on information available to the Department at this time and is subject to revision, if additional information indicates such a change is warranted.

Monitoring wells should be plugged in accordance with Iowa Administrative Code (IAC) 567-39. An Abandoned Water Well Plugging Record (Iowa DNR Form 542-1226) should be completed for each monitoring well. If you choose to keep the monitoring wells, they should be fitted with lockable protective devices, clearly labeled and maintained properly.

Thank you for your cooperation with this project. Feel free to contact me with any questions at (515) 721-7024 or by email at andrew.carver@dnr.iowa.gov.

Sincerely,

Digitally signed by Andrew Carver
Date: 2023.09.25 15:27:10 -05'00'

Andrew Carver, CGP# 2106
Environmental Specialist
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