



July 7, 2020

CON 12-15
DOC# 37322CHI HEALTH
HAROLD HOLLINS
12809 WEST DODGE RD
OMAHA NE 68154

Subject: Review of Site Assessment– CHI Health at 3105 & 3135 West Broadway in Council Bluffs, Iowa

Dear Mr. Hollins,

Thank you for the submittal of the Site Assessment Report received by the Iowa Department of Natural Resources (Iowa DNR) on April 29, 2020. The site assessment was required under 567 IAC 133. The report outlines results of groundwater, soil, soil gas, sub-slab, indoor air, and outdoor ambient air sampling events. Chlorinated solvents were found above applicable standards in groundwater, soil gas, sub-slab, and indoor air samples. The main pathways of concern at this site are vapor intrusion and groundwater.

Groundwater

Groundwater site assessment was conducted incrementally from March 2019 through September 2019 and included shallow, intermediate, and deep wells. The onsite well MW-2S had the majority of the chlorinated contamination documented during the assessment. This well had the maximum concentration of Trichloroethylene (TCE) (5,860 ug/L), 1,1-Dichloroethane (5,580 ug/L), 1,1-Dichloroethene (8,500 ug/L), cis-1,2 Dichloroethene (2,420 ug/L), and Vinyl Chloride (7 ug/L).

The following issues were noted in review of the groundwater assessment. Please continue to monitor groundwater on a semi-annual basis as noted below.

- 1) Please include information on receptor information/updates in the area surrounding the site. This information should be updated annually to ensure human health is protected.
- 2) The property directly to the west of the clinic was not investigated during this assessment. Considering the contaminant concentrations found at MW-2, a well should be installed to the west of the clinic to document if the plume extends onto this property.

Vapor Intrusion

Indoor air sampling indicates that consistent use of the Energy Recovery Ventilator (ERV) mixes the air in the building and has a positive effect on indoor air concentrations. While the ERV was in operation there were no indoor air exceedances. However, exceedances were observed while the ERV was shut down, indicating vapor intrusion is an issue at this building. As noted in previous correspondence from the Iowa DNR, the 2015 EPA OSWER technical guidance for assessing vapor intrusion was referenced during this review. The EPA recommends using ventilation as a quick way to address harmful vapors. However, in section 8.2.1 they go on to explain this option requires monitoring to ensure it's remaining protective and is not meant to be a long-term solution. With that in mind, two options have been developed to address the vapor intrusion pathway at this site.

- 1) You may continue to run the air exchanger at all times and record this requirement in an Environmental Covenant (EC) to ensure human health is protected. Annual vapor sampling would be required to ensure this remains protective of the population within the building. As the building ages, the ERV may not be

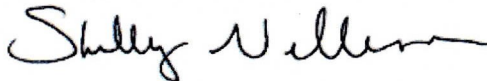
as effective at maintaining acceptable indoor air concentrations and other remedial efforts may be required. This option would not close the vapor intrusion pathway and ongoing sampling would be required.

- 2) You may install a remedial system that will address vapor issues. Once installed, the Operation and Maintenance (O&M) plan would become part of an EC on the site (along with any other restrictions that may be appropriate for site). This path would require installation, approval of the O&M plan, confirmation sampling showing vapor intrusion had been addressed, and an EC documenting the site's restrictions. However, if completed successfully, the site's vapor pathways could be closed.

Please consider these options and submit a letter by October 1, 2020 that outlines future actions and timelines to address vapor intrusion at this site. In the meantime, ensure the ERV is run continuously to ensure vapor intrusion does not impact human health.

As noted above, groundwater and indoor air monitoring are required until site closure. You may want to discuss the merits of an EC with your consultant. Many times an EC can assist in bringing a site to closure more quickly by restricting site usage. Some examples of restrictions for this site could be: future site work (soil and groundwater management or restrictions on soil disturbance), restrictions on well installation, residential use prohibition, and system operation and maintenance. Until such a time that risks are addressed and the site can be closed, semi-annual groundwater monitoring will be required for all available wells and reported to the Iowa DNR on an annual basis. The first annual groundwater monitoring report will be due **April 15, 2021**. Additionally, the vapor intrusion letter (noted above) is due by **October 1, 2020**. If you have questions or comments please contact me at (515)725-8372 or shelly.nellesen@dnr.iowa.gov.

Sincerely,



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Iowa Department of Natural Resources

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