



RESPONSE ACTIVITY REVIEW PANEL

Petitioner: City of Cedar Springs

Facility: City of Cedar Springs, MI Former Wastewater Treatment Lagoons Site

730 West Street, Cedar Springs, Michigan 49319

Site ID: 41000010

Meeting Summary and Recommendation

1. MEETING DATE <ul style="list-style-type: none">Thursday, April 14, 2022
2. MEETING LOCATION <ul style="list-style-type: none">Lee Walker Conference Room, Atrium Level, North Tower, Constitution Hall, 525 West Allegan Street, Lansing, Michigan
3. PETITIONER <ul style="list-style-type: none">Mike Womack, City of Cedar SpringsTim Patterson, Fishbeck (Representative)
4. RESPONSE ACTIVITY REVIEW PANEL MEMBERS <ol style="list-style-type: none">Joseph BerlinMichael HebertDuncan MeinSuzi RosenBradley Venman
5. EGLE STAFF <p><u>Representing Department Regarding Petition:</u></p> <ul style="list-style-type: none">Sydney Ruhala, Water Resources DivisionEric Chattersson, Water Resources Division <p><u>Panel Staff:</u></p> <ul style="list-style-type: none">Michael Gurnee, Environmental Support DivisionKevin Schrems, Remediation and Redevelopment Division
6. DOCUMENTS SUBMITTED TO THE PANEL <p><u>For the City of Cedar Springs</u></p> <ul style="list-style-type: none">Response Activity Review Panel Petition <p><u>For EGLE</u></p> <ul style="list-style-type: none">EGLE Response Document
7. SUMMARY OF DISCUSSION <p>Fishbeck, on behalf of the Petitioner (City of Cedar Springs) presented the dispute which is the City's disagreement with EGLE's determination that the City has not submitted sufficient information to EGLE to demonstrate delineation of the nature and extent of per- and polyfluoroalkyl substances ("PFAS") under Part 201 in groundwater at and in the vicinity of the Former City Wastewater Lagoon Site. Fishbeck then summarized their petition related to using residential well logs and historical borings at the Site, groundwater flow in the upper and lower aquifer, using drinking water wells as viable data points, the analytical results in the unconfined shallow aquifer, and the lateral and vertical delineation of PFAS. Fishbeck, on behalf of the City, concluded that:</p>

1. The financial hardships to pursue additional remedial investigative activities present a burden to the City,
2. Multiple lines of evidence suggest that the horizontal and vertical extents of PFAS impacts to the groundwater have been defined, and
3. On behalf of the City, we respectfully request that EGLE reconsider these data and the recommendation in the Remedial Investigation Report that delineation has been completed.

Questions after Fishbeck's presentation from the Panel focused on delineation to the north of the site, who has been collecting groundwater flow data, interpreting well records, and a specific residential well downgradient.

Representatives from EGLE's Water Resources Division discussed their Response document in a presentation. EGLE's presentation highlighted the PFAS criteria, site history, PFAS sampling history, the City of Cedar Springs' petition, and then focused on the technical disputes and EGLE's response. Specifically, EGLE described the statutory requirements under Part 201 regarding determining the nature and extent of contamination. EGLE then described the three deficiencies it identified in the RI Report, including:

1. Reliance on residential drinking water wells in lieu of environmental monitoring wells,
2. Reliance on limited groundwater flow data in lieu of installing or sampling environmental monitoring wells, and
3. Failure to investigate deeper aquifer for either contaminants of concern or hydrogeologic properties.

EGLE staff concluded their presentation by offering a path forward for the City to implement the approved Supplemental Remedial Investigation (RI) Work Plan submitted on December 30, 2021 and approved on January 26, 2022.

Questions after EGLE's presentation from the Panel focused on driller well records, noting differences in well records with different drillers, and considering why the conceptual site model is or is not accurate.

After each party had the opportunity to present, the Panel asked scientific and technical questions to both parties related to the dispute. These questions focused on data available in the shallow and deep aquifers, well installation information, the use of data from residential drinking water wells, conceptual site models and its use in investigations and defining the nature and extent of contamination, and the geology and hydrogeology characteristics at and around the Site.

8. PANEL RECOMMENDATION

The written recommendation must include the specific scientific or technical rationale for the recommendation. The panel's recommendation regarding the petition may be to adopt, modify, or reverse, in whole or in part, the department's decision that is the subject of the petition.

The Panel recommends that the EGLE Director adopt the Department's decision in the November 22, 2021 Disapproval Letter (Disapproval Letter). Specifically, the Panel adopts the three points listed in the Disapproval Letter and provided below, with the modification that the City of Cedar Springs incorporate ASTM E1689-20 Standard Guide for Developing Conceptual Site Models for Contaminated Sites.

1. The horizontal extent of contamination in the upper unconfined aquifer has not been properly delineated to the south. As described in the RI report, shallow residential wells were sampled for Per- and Polyfluoroalkyl Substances (PFAS) and used to delineate the extent of contamination south of the Facility. The use of residential wells in delineation of contamination in groundwater is not acceptable. The installation of groundwater monitoring wells, designed and screened for the purpose of the investigation, is required.

The Panel reviewed the documents, and based upon data presented, finds that using domestic water wells is inconsistent with industry best practices and established guidance and the investigative protocols used in support of the RI do not demonstrate the horizontal and vertical distribution of PFAS has been defined.

In summary, the domestic water sampling provides limited receptor exposure data only. The use of monitoring wells and quality groundwater sampling data will provide geological data, quality lab data, and aquifer characteristic data to define the actual distribution of the PFAS in the saturated regime.

It is recommended that the upper aquifer be sampled through the use of monitoring wells and established sampling procedures.

2. The horizontal extent of contamination in the upper unconfined aquifer has not been properly delineated to the north. The RI report states that, “Based on the groundwater flow direction in the shallow aquifer, there does not appear to be a northern flow component at the Site and groundwater impacted with PFAS exceeding Part 201 Cleanup Criteria would not be expected to migrate in a northerly direction.” However, groundwater to the north has not been actively investigated for PFAS and therefore, the City cannot state with certainty that contamination is not present in groundwater to the north. The City acknowledges this point in Figure 1, as an inferred exceedance contour is shown on the north side of the plume.

The Panel reviewed the documents/data (limited static groundwater data) and based upon known detections of PFAS to the Northwest within the aquifer, finds that the horizontal and vertical distribution of PFAS to the North has not been defined.

3. The RI report states that “three (3) hydrostratigraphic units have been identified beneath the Site,” which includes an upper and lower aquifer. The vertical and horizontal extent of PFAS contamination in the lower aquifer has not been properly delineated. The RI report uses multiple lines of reasoning to infer that the lower aquifer has not been contaminated with PFAS, including residential well boring logs that show a 40- to 70-foot-thick clay unit, residential well sampling results from a limited number of wells installed in the lower aquifer, and estimated groundwater flow direction in the lower aquifer from Wellhead Protection Area information. While these lines of reasoning support the City’s position that the lower aquifer has not been impacted, the City cannot state with certainty that PFAS contamination is not present in the lower aquifer. To do so, an active investigation that includes the installation of groundwater monitoring wells, designed and screened for the purpose of the investigation, is required to verify the groundwater flow direction and presence or absence of contaminants.

The use of well driller logs provides some support that a clay layer may exist to separate the aquifers; however, those same logs illustrate that the clay layer is not consistent across the extent of contamination. As such, the Panel does not agree that the lower potable aquifer does not have to be evaluated (horizontally and vertically).

The delineation of PFAS in this aquifer needs to be defined to ensure the protection of the receptors.