# Memo

**SUBJECT**
Livonia Transmission Plant
36200 Plymouth Road, Livonia,
EGLE Warren District Office
Wayne County, Michigan
EGLE Site ID No. 82002970
Offsite Interim Preemptive Mitigation
Installation Quarterly Update

**TO**
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**DATE**
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**PROJECT NUMBER**
30167538

**DEPARTMENT**
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On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this quarterly update to the interim preemptive mitigation (IPM) system installation for the Livonia Transmission Plant (LTP) site (the site) as requested by Michigan Department of Environment, Great Lakes, and Energy (EGLE) via email on May 26, 2019 and on July 26, 2019. As discussed during the meeting with EGLE on October 22, 2020 and documented in the November 30, 2020 letter from EGLE, Ford is providing the mitigation updates on a quarterly basis, with this quarterly update covering the quarter of April through June 2023.

As of June 30, 2022, the following progress has been made at 33 residential properties in the Alden Village subdivision:

- 33 of 33 IPM systems are designed. 31 of 33 are installed and operating. The status of the remaining 2 are described below:
    - Arcadis is in discussion with EGLE regarding an alternative monitoring plan for 12124 Boston Post and 12121 Boston Post in lieu of mitigation.
- 10 of 10 sheds where Retro-Coat™ has been proposed have had it applied to the floor. One shed was removed from the proposed list during the second quarter of 2021 as described below:
    - Arcadis requested an alternative monitoring plan for the remaining shed at 12100 Boston Post which was approved and documented in a letter from EGLE dated April 14, 2021.
- 10 of 10 garages have had Retro-Coat™ applied to the floor.
    - Arcadis requested an alternative monitoring plan for the 3 garages located at 34424 Capitol, 34450 Capitol, and 12091 Brewster which was approved and documented in a letter from EGLE dated April 14, 2021.

Ford has established an Electrical Reimbursement Program to reimburse residents for the electrical costs associated with the operation of interim preemptive mitigation systems. The Electrical Reimbursement Program is administrated by Arcadis on behalf of Ford. Electrical reimbursements will continue to be processed and distributed on a quarterly basis.

As described in the EGLE letter dated February 1, 2019, EGLE required for the entirety of the residential structure floor to be depressurized to a minimum of -0.02 inches of water column (iwc) for the residential interim preemptive

mitigation system. Due to various reasons such as competency of the slab and subgrade obstructions, -0.02 iwc could not be met for select homes. The issue was discussed with EGLE who ultimately recommended the installation of vacuum transmitters at these structures. The transmitters continuously monitor the presence of vacuum below the slab to confirm that a negative differential pressure is being maintained which may be less than -0.02 iwc. The graphs of the continuously monitored differential pressure at these structures are depicted below. Arcadis continues to work diligently to maintain the interim preemptive mitigation systems.

Details are provided below for all 33 locations.

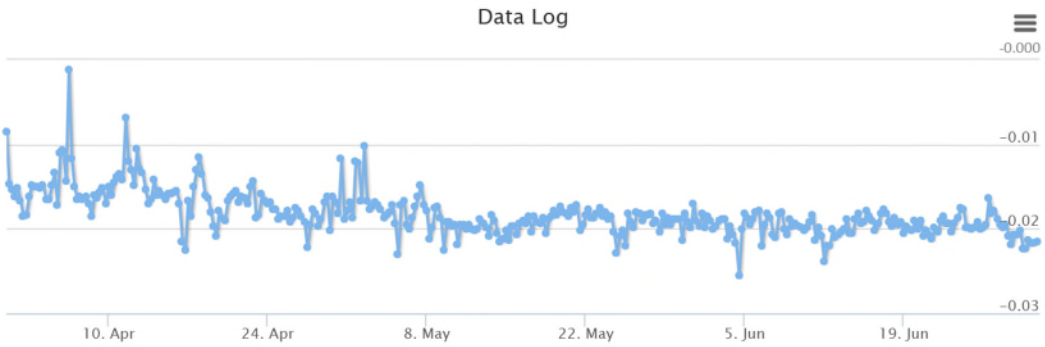
**Interim Preemptive Mitigation Systems Currently Operating**

- **34380 Beacon –** The system is currently in operation and is being maintained and monitored (OM&M). The third annual OM&M event was completed on May 23, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34424 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on May 12, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34450 Beacon –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and removed approximately twenty-five gallons of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Vacuum influence measurements were collected following the rain inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.
- **34550 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34591 Beacon –** The system is currently in operation and is being maintained and monitored.

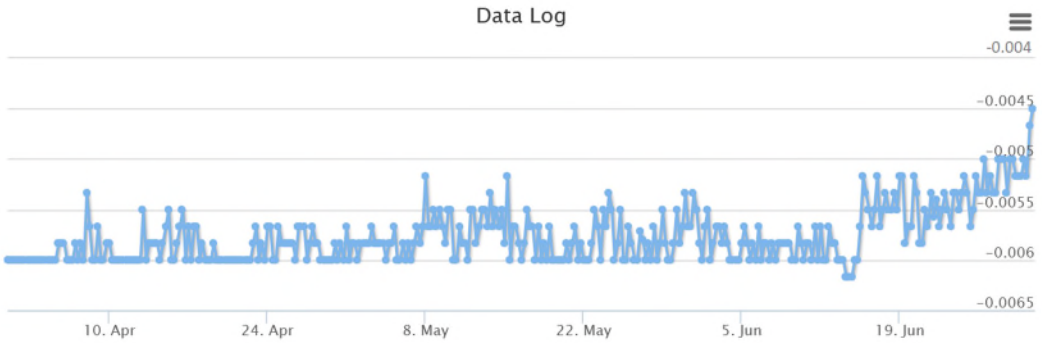
  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and removed approximately five gallons of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Vacuum influence measurements were collected following the inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc except for SSMP-1 which is continuously monitored by a vacuum transmitter.

  An update of the data logged by the vacuum transmitter connected to SSMP-1 is presented below indicating that the system continues to operate effectively.




- **34600 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on April 26, 2023. No damage was observed to the Retro-Coat™ in the basement and a crack in the garage is pending repair.
- **34644 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34682 Beacon –** The system is currently in operation and is being maintained and monitored.

  An update of the data logged by the continuously monitored vacuum transmitter connected to sub-membrane monitoring point MP-5 is presented below indicating that the system continues to operate effectively.




  Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Recent quarterly groundwater sampling results for vinyl chloride at MW-115S have not exceeded the historic high of 3.9 µg/L observed in November 2019 and have not exceeded the groundwater screening level of 1.0 µg/L at MW-154S and MW-155S. Therefore, additional sub-slab sampling was not required.

- **34920 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34940 Beacon –** The system is currently in operation and is being maintained and monitored. Arcadis had previously observed damage to the Retro-Coat™ on the basement floor and conducted moisture testing on the concrete floor and worked with the manufacturer and applicator to provide a recommendation for applying Primer MV and Retro-Coat™ to replace the floor application.

  On May 9, 2023, the application contractor began work in the basement to replace the Retro-Coat™ coating on the basement floor. Following manufacture installation instructions, the damaged Retro-Coat™ was removed from the floor and the surface prepared with a grinding machine. The Primer MV was applied in two

layers, followed by two layers of a minimum of 10 mils of Retro-Coat™**.** The Retro-Coat™ installation was completed on May 17, 2023. A photo of the finished work is provided below.

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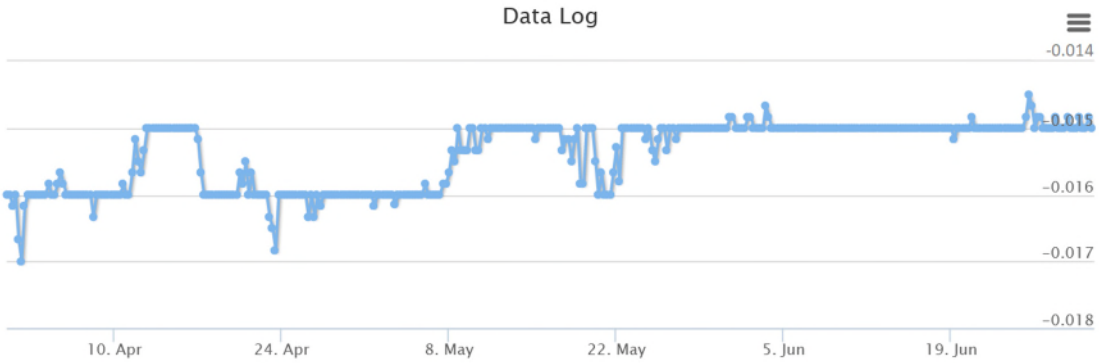
The third annual OM&M event was completed on May 17, 2023 after repairs to the Retro-Coat™ were completed. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.

- **34950 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34990 Beacon –** The system is currently in operation and is being maintained and monitored. An update of the data logged by the vacuum transmitter connected to MP-7 is presented below demonstrating that the system continues to operate effectively.




This home was sold in June of 2021 and the new owner provided access to the property on July 27, 2021. The previous property owner had denied the application of Retro-Coat™ in the detached garage since the floor has an existing epoxy coating and imbedded tubing for radiant heat.

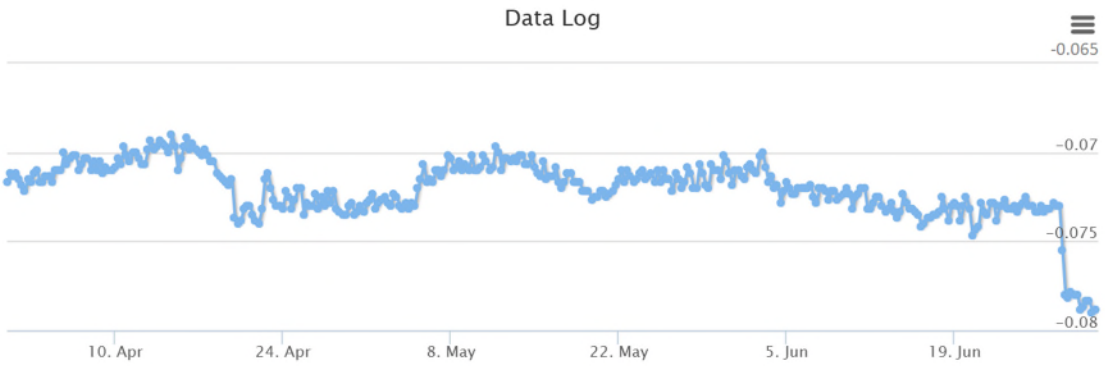
- **12066 Boston Post –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and removed approximately five gallons of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Vacuum influence measurements were collected following the inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

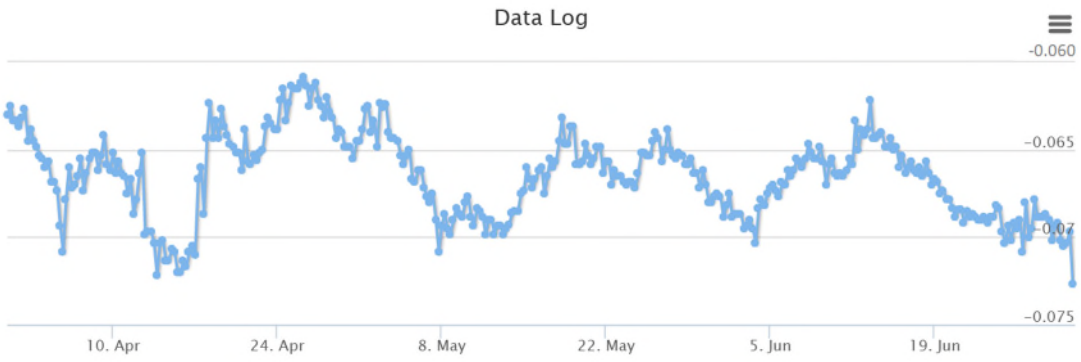
- **12067 Boston Post –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and removed approximately half a gallon of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Vacuum influence measurements were collected following the inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

  An update of the data logged by the vacuum transmitter connected to MP-1 is presented below demonstrating that the system continues to operate effectively.

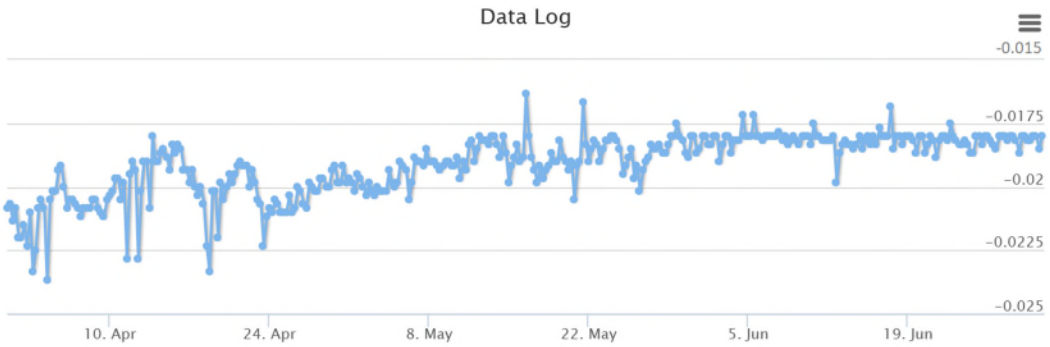



- **12070 Boston Post –** The system is currently in operation and is being maintained and monitored.
- **12089 Boston Post –** The system is currently in operation and is being maintained and monitored.
- **12100 Boston Post –** The system is currently in operation and is being maintained and monitored. An update of the data logged by the vacuum transmitter connected to sub-slab monitoring point SSMP-4 is presented below demonstrating the system continues to operate effectively.

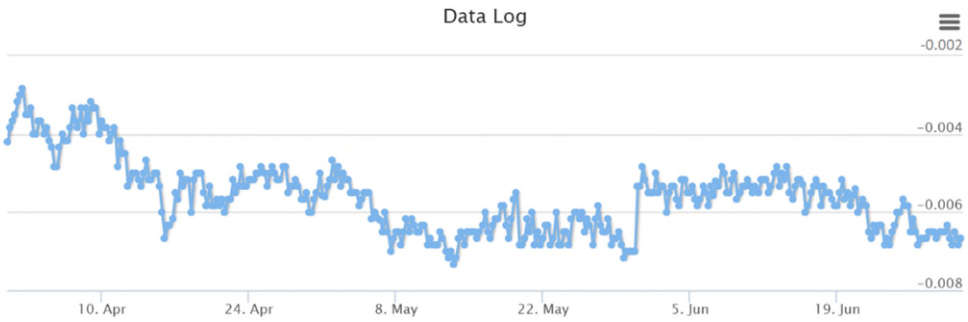



Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Recent quarterly groundwater sampling results for vinyl chloride at MW-115S have not exceeded the historic high of 3.9 µg/L observed in November 2019. Groundwater vinyl chloride concentrations at MW-156S have not exceeded the groundwater screening level of 1.0 µg/L. The groundwater sample collected at MW-79SR on May 11, 2023 had a vinyl chloride concentration which was non-detect and less than the historical high of 1.2 µg/L. Therefore, additional sub-slab sampling was not required.

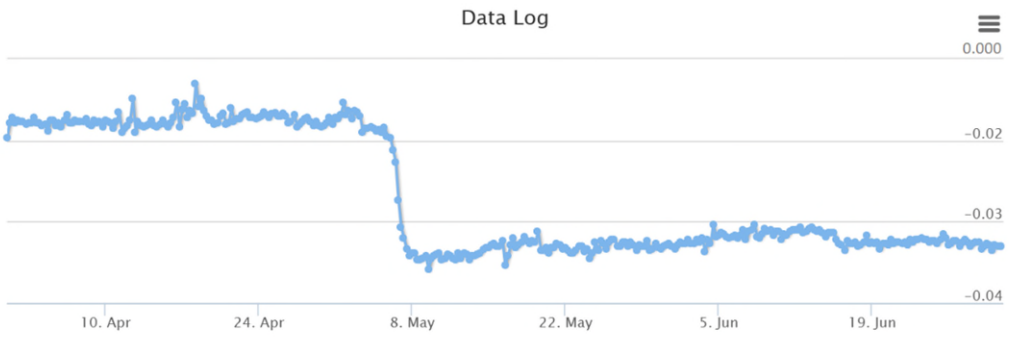
- **12131 Boston Post** – The system is currently in operation and is being maintained and monitored. The update of the data logged by the vacuum transmitter connected to MP-4 is presented below demonstrates that the system continues to operate effectively.




- **12141 Boston Post –** The system is currently in operation and is being maintained and monitored. An update of the data logged by the vacuum transmitter connected to MP-4 is presented below demonstrating that the system continues to operate effectively.




- **12017 Brewster –** The system is currently in operation and is being maintained and monitored.
- **12036 Brewster –** The system is currently in operation and is being maintained and monitored. An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below demonstrating that the system continues to operate effectively.



- **12075 Brewster –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and did not observe any water to remove. Vacuum influence measurements were collected following the rain inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

- **12088 Brewster** – The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and did not observe any water to remove. Vacuum influence measurements were collected following the rain inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

- **12091 Brewster –** The system is currently in operation and is being maintained and monitored. Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway.

  Quarterly groundwater sampling results for vinyl chloride at MW-123S and MW-151S have not exceeded the historic high of 4.6 µg/L observed in December 2018 and 2.2 µg/L observed in November 2020 respectively. Therefore, sub-slab sampling was not required.

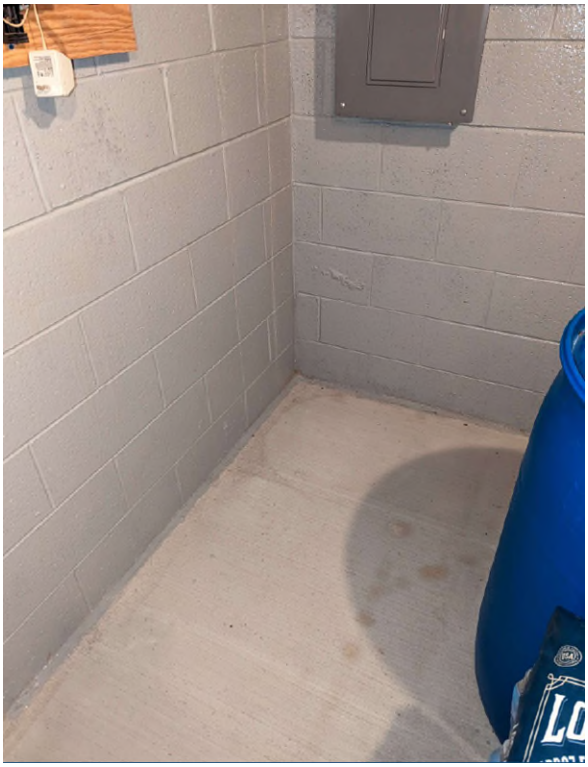
- **12101 Brewster –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and did not observe any water to remove. Vacuum influence measurements were collected following the rain inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

- **34367 Capitol Avenue –** The system is currently in operation and is being maintained and monitored.

- **34380 Capitol Avenue –** The system is currently in operation and is being maintained and monitored.

  Cracks in the perimeter basement floor caulking were observed in March 2023. On May 25 and 26, 2023, Arcadis completed caulking repairs along the perimeter of the basement floor. A photo of the finished work is provided below.



A system inspection was completed on June 7, 2023 following the caulking repair and all monitoring points achieved the performance metric established by EGLE of -0.02 iwc.

- **34401 Capitol Avenue –** The system is currently in operation and is being maintained and monitored.

  On April 4, 2023, following a rain event that produced more than 1 inch of rain in a 24-hour period, Arcadis inspected the barrier and did not observe any water to remove. Vacuum influence measurements were collected following the rain inspection and readings exceeded the performance metric established by EGLE of -0.02 iwc.

- **34424 Capitol Avenue –** The system is currently in operation and is being maintained and monitored. Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway.

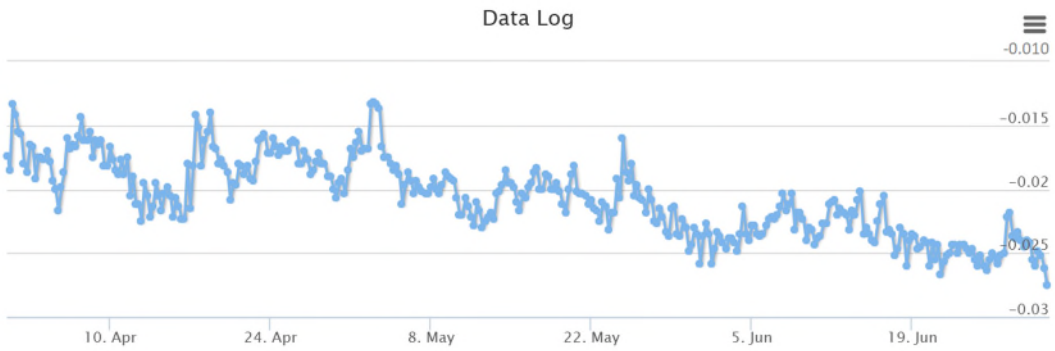
  Quarterly groundwater sampling results for vinyl chloride have not exceeded the groundwater screening level of 1.0 µg/L at MW-90S, MW-103S, and MW-169S. The groundwater samples collected at MW-136S and MW-148S had vinyl chloride concentrations which were non-detect and less than their respective historic highs of 3.2 µg/L and 2.3 µg/L respectively. Therefore, additional sub-slab sampling was not required.

- **34450 Capitol Avenue** – The system is currently in operation and is being maintained and monitored. Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway.

  Quarterly groundwater sampling results for vinyl chloride have not exceeded the groundwater screening level of 1.0 µg/L at MW-108S, MW-168S, and MW-169S. The groundwater sample collected at MW-137S on May 04, 2023, had a vinyl chloride concentration which was non-detect and less than the historic high of 1.2 µg/L. Therefore, additional sub-slab sampling was not required.

- **34480 Capitol Avenue** – The system is currently in operation and is being maintained and monitored. The homeowner has not been available to conduct the monitoring event. Arcadis will continue to contact the homeowner to schedule the annual OM&M event.

An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below demonstrating that the system continues to operate effectively.




**Interim Preemptive Mitigation Systems Not Installed**

- **12124 Boston Post –** The property owner has declined an air purifier unit in the past and continues to decline. On October 6, 2020, the homeowner told Arcadis he really did not want a mitigation system installed in his home and he stated that if there was anything that can be done to prevent the installation, he would be very happy. Three rounds of pre-mitigation IA and SS data have been completed. No detections of vinyl chloride were reported in any of the samples. Additionally, all groundwater samples from the closest upgradient monitoring wells, MW-118S (8 rounds) and MW-79SR (9 rounds) have been below the groundwater screening level of 1.0 µg/L.
- **12121 Boston Post** – Under the supervision of EGLE, Ford is continuing to monitor groundwater proximate to the home to accommodate the homeowners' refusal to grant access to their property for other investigation, characterization, or mitigation activities.