SUBJECT
Ford Livonia Transmission Plant - Quarterly Residential Mitigation Update Letter
36200 Plymouth Road, Livonia,
Wayne County, Michigan
EGLE Site ID No. 82002970

TO
Jeanne Schlaufman
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DATE
October 31, 2023

PROJECT NUMBER
30167538

DEPARTMENT
Environment

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On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this quarterly update letter 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 July through September 2023.

As of September 30, 2023, 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.

Jeanne Schlaufman
EGLE Warren District Office
October 31, 2023

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.

During the third quarter of 2023 there were multiple neighborhood wide power outages. The first power outage occurred on July 26, 2023, and power was restored on July 27, 2023. The second power outage occurred on August 24, 2023, and power was restored on August 27, 2023. The third power outage occurred on September 27, 2023, and power was restored on September 28, 2023. Spikes in vacuum trends correspond to these outages and vacuum levels were restored to normal levels once power was restored.

Details are provided below for all 33 locations.

Interim Preemptive Mitigation Systems Currently Operating

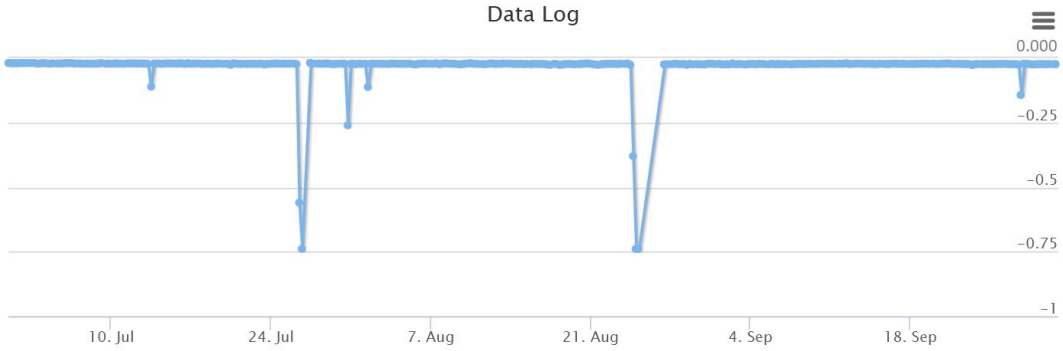
- **34380 Beacon –** The system is currently in operation and is being maintained and monitored. On August 7, 2023, through August 11, 2023, Arcadis applied a non-slip coating to the garage floor Retro-coat ® application to address concerns from the homeowner that the flooring was slippery. The non-slip coating was reviewed with the manufacture of the Retro-coat ® and no concerns were identified as the product is compatible.
- **34424 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34450 Beacon –** The system is currently in operation and is being maintained and monitored.

  On August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements 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.

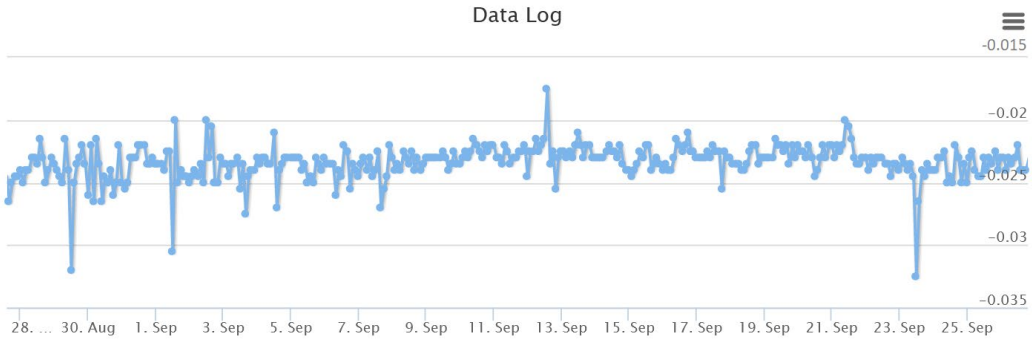
  On August 9, 2023, Arcadis responded to a low vacuum alarm on the garage fan and inspected the system. Arcadis observed the mitigation fan was powered on and operating, however the tubing connected to the vacuum switch was cracked. The tubing was replaced, and the low vacuum alarm reset.
- **34591 Beacon –** The system is currently in operation and is being maintained and monitored.

  On August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements 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 SSMP-1 is presented below.

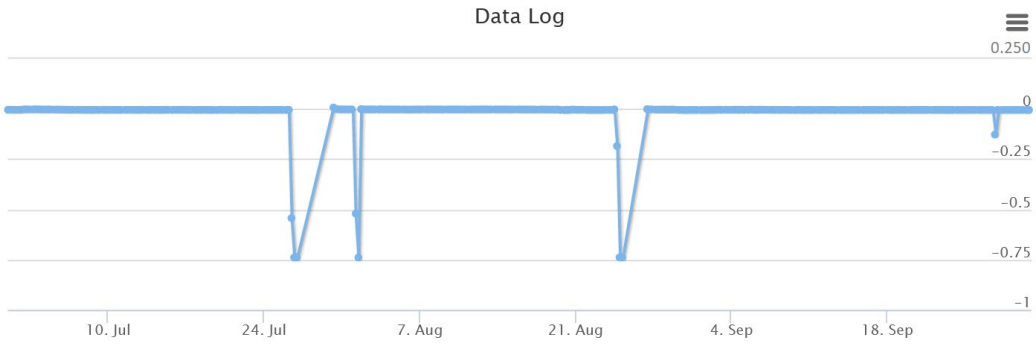


A zoomed in portion of the data logged shows the system continued to operate effectively.

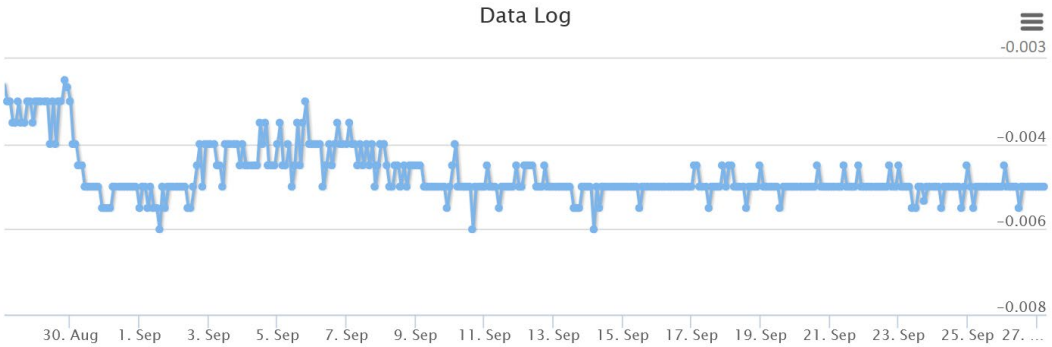


- **34600 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34644 Beacon –** The system is currently in operation and is being maintained and monitored.
- **34682 Beacon –** The system is currently in operation and is being maintained and monitored.

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



A zoomed in portion of the data logged shows the system continued to operate effectively.



Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Third quarter 2023 groundwater sampling results for vinyl chloride were non detect at MW-115S, 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.

  On August 9, 2023, Arcadis responded to a low vacuum alarm and inspected the system. Arcadis observed the mitigation fan was powered on and operating, however the tubing connected to the vacuum switch was cracked. The tubing was replaced, and the low vacuum alarm reset.

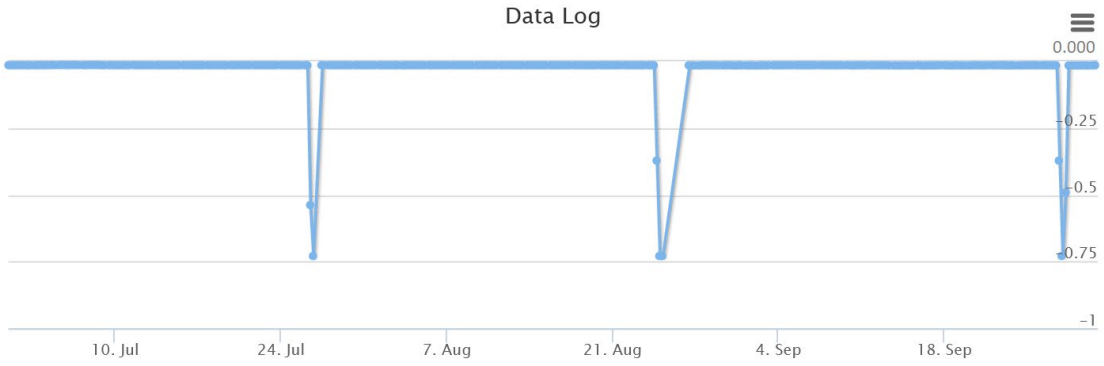
- **34940 Beacon –** The system is currently in operation and is being maintained and monitored.

  On September 21, 2023, the homeowner reached out to Arcadis providing photographs of the basement floor showing dried red-brown deposits forming on the Retro-coat ®. Arcadis scheduled an inspection with the homeowner on September 25, 2023. Arcadis inspected the dried deposits on the Retro-coat ® floor, gently scraped away the deposits, and noted there was a depression under the dried deposit. The eleven deposits and depressions are located in the north-west corner of the basement. Arcadis collected photographs and took measurements of the deposits and depressions in the Retro-coat ®. The information was provided to the installation contractor. The installation contractor engaged Land Science and discussed the root cause and repair procedures.

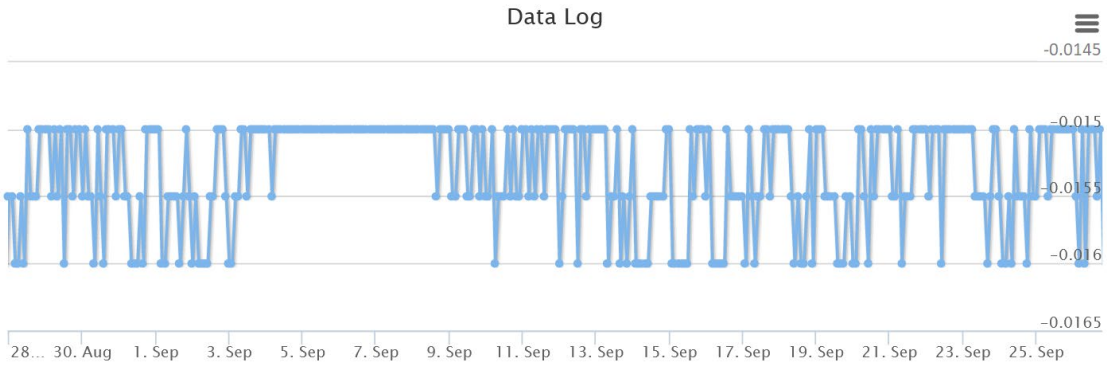
  On October 24, 2023, the installation contractor contacted Arcadis with the remedy to repair the issues in the Retro-coat ®. The areas where the deposits and depressions were observed are proposed to be grinded down to concrete, followed by Primer MV (high moisture primer) and Retro-coat ® reapplication. Arcadis is scheduling this repair work with the homeowner and contractor.

Picture 1 – Deposits and depressions on the Retro-coat®.

- **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.



A zoomed in portion of the data logged shows the system continued to operate effectively.



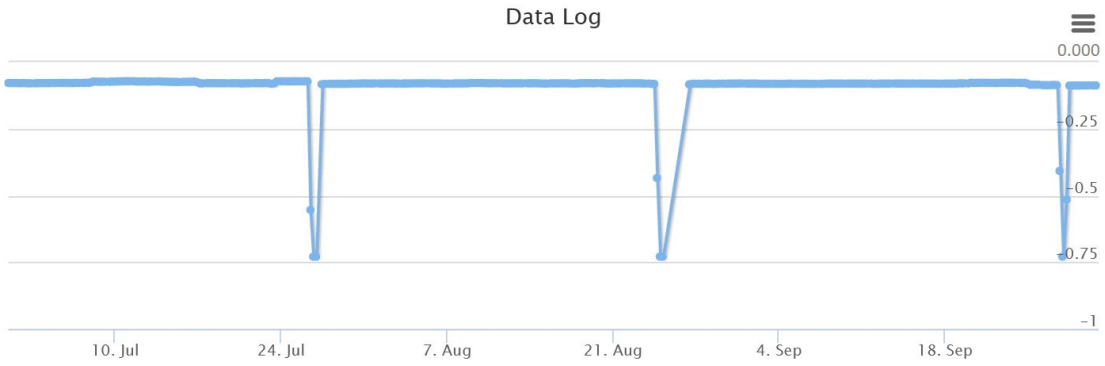
- **12066 Boston Post –** The system is currently in operation and is being maintained and monitored.

  On August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements and readings exceeded the performance metric established by EGLE of -0.02 iwc.

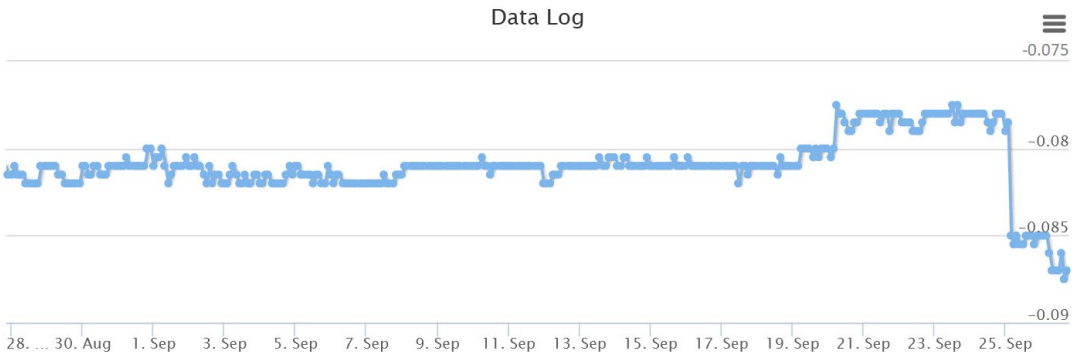
- **12067 Boston Post –** The system is currently in operation and is being maintained and monitored.

  On August 25, 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 sixty gallon of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Due to a multiple day neighborhood wide power outage resulting from the storm. vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements and readings exceeded the performance metric established by EGLE of -0.02 iwc.

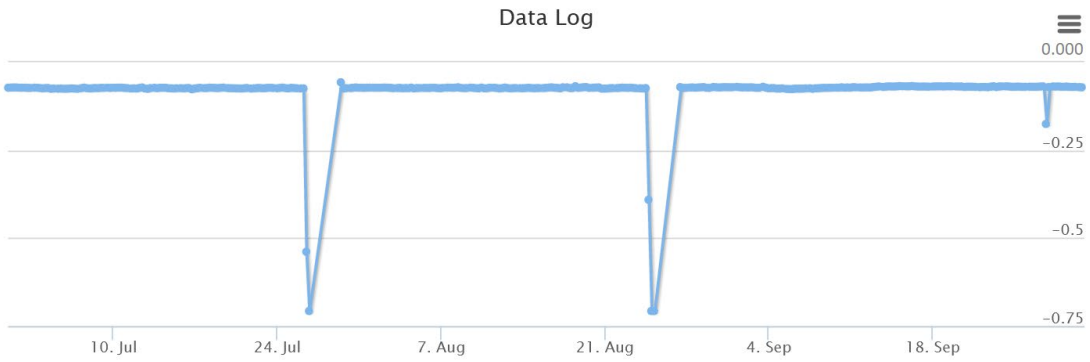
  An update of the data logged by the vacuum transmitter connected to MP-1 is presented below.



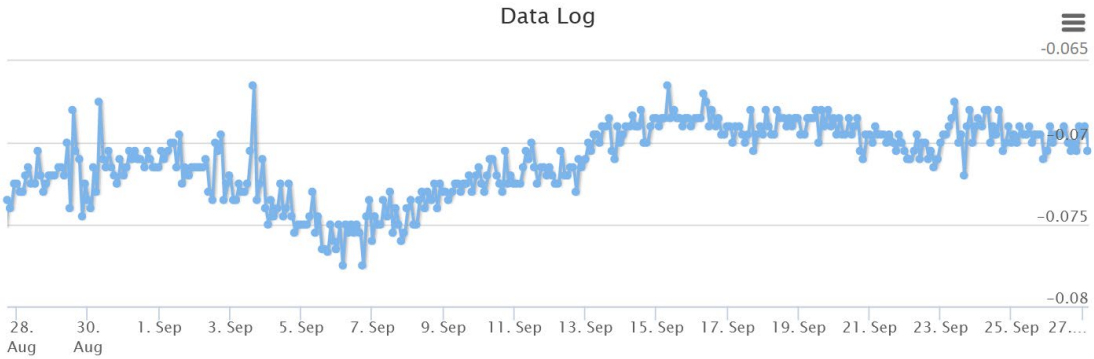
A zoomed in portion of the data logged shows the system continued to operate effectively.



- **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.

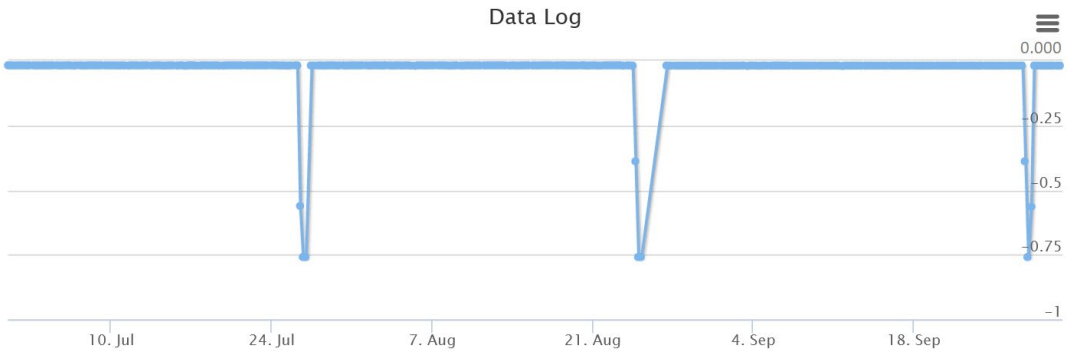


A zoomed in portion of the data logged shows the system continued to operate effectively.

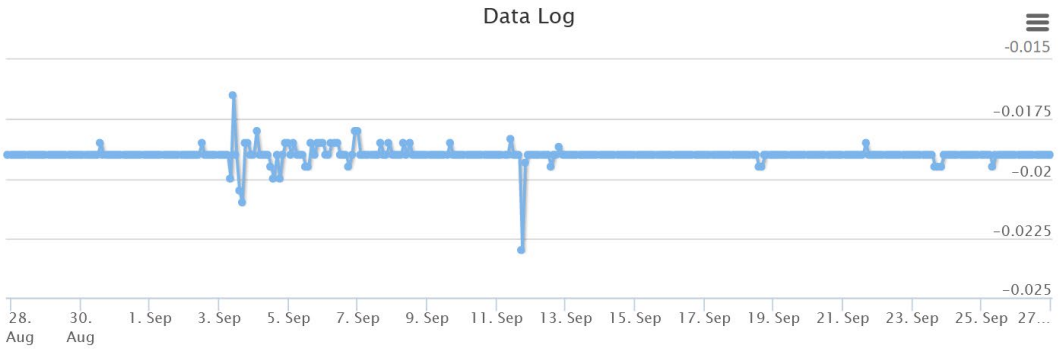


Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Third quarter 2023 groundwater sampling results for vinyl chloride were non-detect at MW-79SR, MW-115S,and MW-156S. Therefore, additional sub-slab sampling was not required.

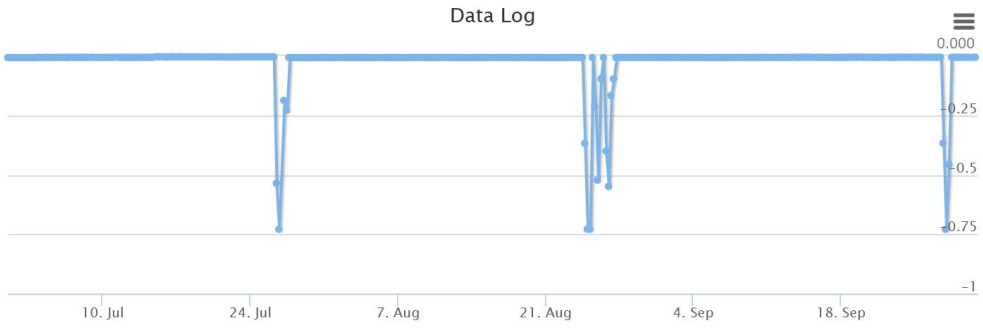
- **12131 Boston Post** – The system is currently in operation and is being maintained and monitored. The update of the data logged by the vacuum transmitter connected to MP-4 is presented below.



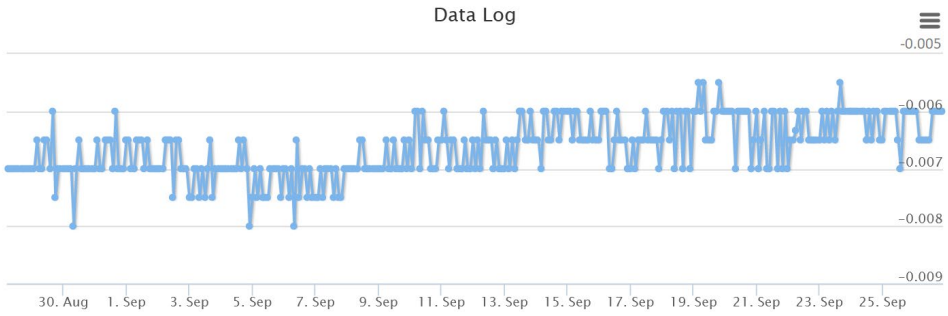
A zoomed in portion of the data logged shows the system continued to operate effectively.



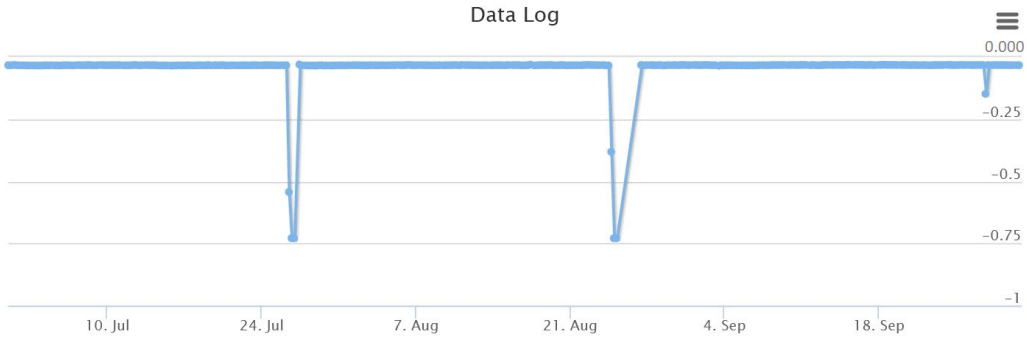
- **12141 Boston Post –** The system is currently in operation and is being maintained and monitored. An update of the data logged by the vacuum transmitter connected to MP-4 is presented below.



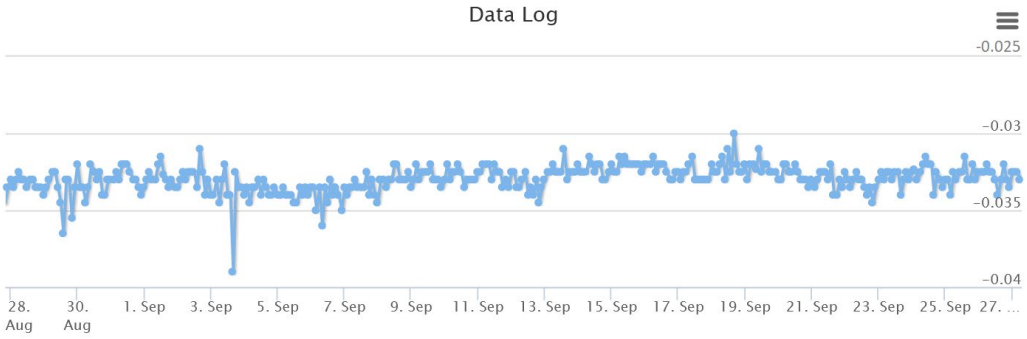
A zoomed in portion of the data logged shows the system continued to operate effectively.



- **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.



A zoomed in portion of the data logged shows the system continued to operate effectively.



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

  On August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements 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 August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements 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. Third quarter 2023 groundwater sampling results for vinyl chloride were 3.1 µg/L at MW-123S and did not exceed the historic high of 4.6 µg/L observed in December 2018. The third quarter 2023 vinyl chloride concentration was 0.97 µg/L at MW-151S and did not exceed the historic high of 2.2 µg/L observed in November 2020. Therefore, additional sub-slab sampling was not required.

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

  On August 25, 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. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements 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.

  On August 9, 2023, Arcadis responded to a low vacuum alarm and inspected the system. Arcadis observed the mitigation fan was powered on and operating, however the tubing connected to the vacuum switch was cracked. The tubing was replaced, and the low vacuum alarm reset.

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

  On August 9, 2023, Arcadis completed an inspection of the basement floor perimeter caulking. Arcadis noted the caulking is in good condition and free of cracks following the repairs made on May 26, 2023.

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

  On August 25, 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 two gallon of water which had entered through vents and openings to the crawlspace due to the rainfall volume. Due to a multiple day neighborhood wide power outage resulting from the storm, vacuum influence readings were not able to be collected. When the power was restored, Arcadis returned on August 29, 2023, to collect vacuum influence measurements and readings exceeded the performance metric established by EGLE of -0.02 iwc.

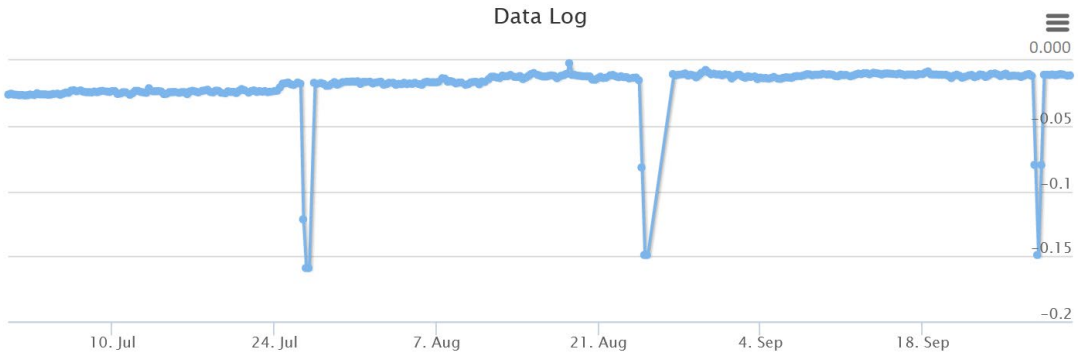
- **34424 Capitol Avenue –** The system is currently in operation and is being maintained and monitored.

  Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Third quarter 2023 groundwater sampling results for vinyl chloride were non-detect at MW-90S, MW-103S, MW-136S, and MW-169S. The vinyl chloride concentration was 1.1 µg/L at MW-148S and did not exceed the historic high of 2.3 µg/L observed in November 2020. Therefore, additional sub-slab sampling was not required.

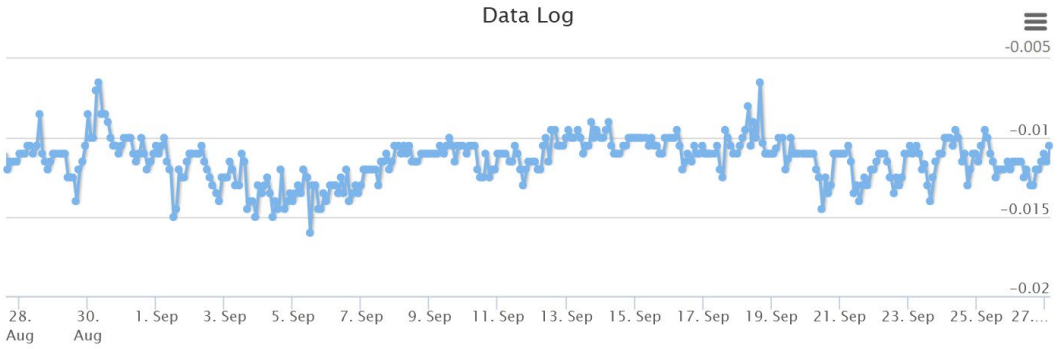
- **34450 Capitol Avenue** – The system is currently in operation and is being maintained and monitored.

  Monitoring in accordance with the EGLE-approved property-specific monitoring program is underway. Third quarter 2023 groundwater sampling results for vinyl chloride were non-detect at MW-108S, MW-168S, and MW-169S. The vinyl chloride concentration was 0.56 µg/L at MW-137S and did not exceed the historic high of 1.2 µg/L observed in August 2022. Therefore, additional sub-slab sampling was not required.

- **34480 Capitol Avenue** – The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on August 11, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc except SSMP-2 which is being continuously monitored by a vacuum transmitter. During the monitoring event, Arcadis recalibrated the vacuum transmitter. An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below.



A zoomed in portion of the data logged shows the system continued 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 indoor air and SS data have been completed. No detections of vinyl chloride were reported in any of the samples. Additionally, all quarterly groundwater samples from monitoring well MW-118S, which is approximately 30 feet upgradient from the residence, continue to be non-detect.

  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.