TRANSMITTAL LETTER

ARCADIS

To:
Jeanne Schlaufman
Michigan Department of Environment, Great Lakes & Energy
27700 Donald Court
Warren, MI 48092

From:
Kris Hinskey

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Copies:

Date:
April 28, 2023

Subject:
Livonia Transmission Plant
EGLE Site ID No. 82002970
Offsite Interim Preemptive Mitigation Installation Quarterly Update

Arcadis Project No.:
30167538

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☐ Prints ☐ Samples ☐ Copy of Letter ☒ Reports
☒ Other: CD And Hardcopy

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1	04/28/2023			1Q 2023 Offsite Interim Preemptive Mitigation Installation Quarterly Update	

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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
Jeanne Schlaufman
Environmental Quality Specialist
27700 Donald Court
Warren, Michigan 48092-2793
Schlaufmanj1@michigan.gov

DATE
April 28, 2023

PROJECT NUMBER
30167538

DEPARTMENT
Environment

NAME
Kris Hinskey
Kris.Hinskey@arcadis.com

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 January through March 2023.

As of March 31, 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. Arcadis continues to work with the residents, new and existing, to assist them with the paperwork (W-9) needed to process as required by the federal tax laws. Electrical reimbursements will continue to be processed and distributed on a quarterly basis.

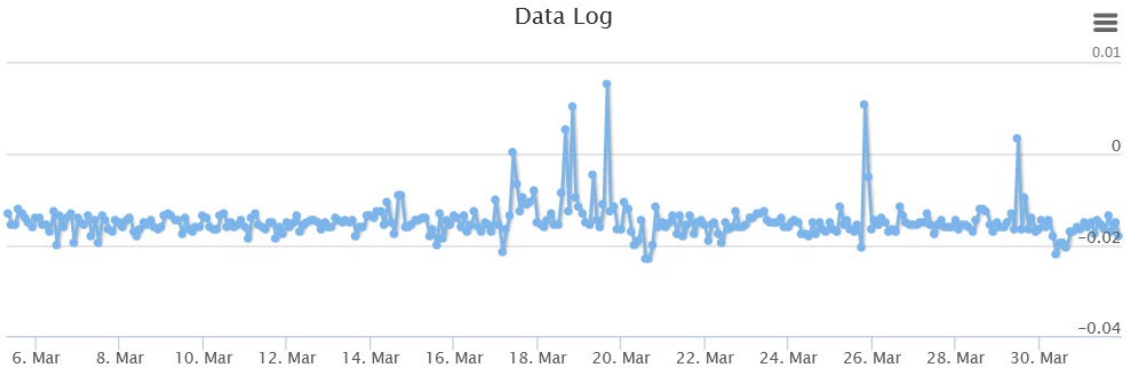
Jeanne Schlaufman
EGLE Warren District Office
April 28, 2023

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.

Details are provided below for all 33 locations.

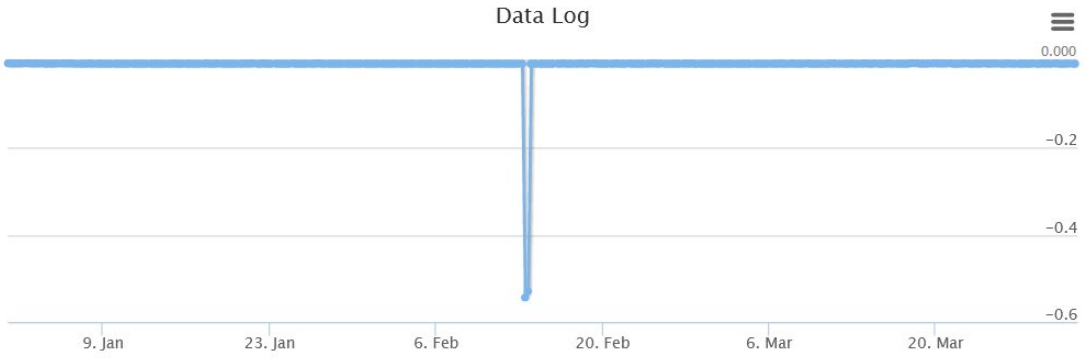
Interim Preemptive Mitigation Systems Currently Operating

- **34380 Beacon –** The system is currently in operation and is being maintained and monitored (OM&M). The homeowner has not been available to conduct the annual monitoring event. Arcadis will continue to contact the homeowner to schedule the annual OM&M event.
- **34424 Beacon –** The system is currently in operation and is being maintained and monitored. The homeowner has not been available to conduct the annual monitoring event. Arcadis will continue to contact the homeowner to schedule the annual OM&M event.
- **34450 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on February 28, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34550 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 7, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34591 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 3, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc, except sub slab monitoring point SSMP-1 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-1 is presented below following calibration of the transmitter. The six spikes in vacuum above 0.0 iwc. are brief outliers and vacuum levels return to the normal range below 0.0 iwc.

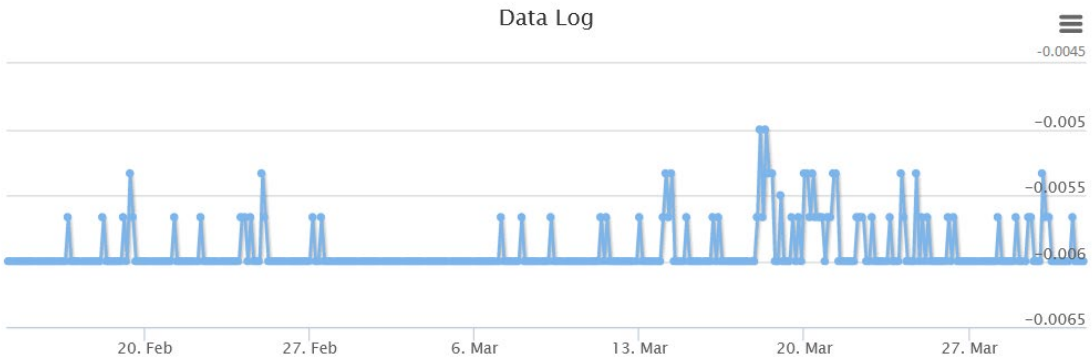


- **34600 Beacon –** The system is currently in operation and is being maintained and monitored. The homeowner was not available until April for the OM&M event. Arcadis has scheduled the monitoring event with the homeowner.
- **34644 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 7, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34682 Beacon –** 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 continuously monitored vacuum transmitter connected to sub-membrane monitoring point MP-5 is presented below indicating that the system continues to operate effectively. The transmitter data provided within previous monthly updates has also shown that vacuum in the area being monitored by the transmitter has been maintained.



  On February 13, 2023, there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.



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.

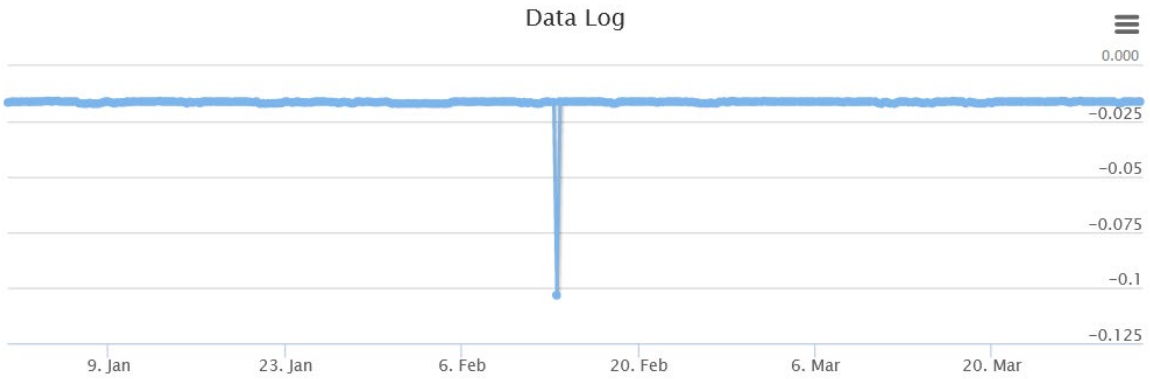
- **34920 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 6, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34940 Beacon –** The system is currently in operation and is being maintained and monitored. On February 1, 2022, Arcadis inspected the Retro-Coat™ in the basement and no damage was observed on the basement walls, but damage was observed on the basement floor. The Retro-Coat on the floor had several large cracks and appeared to be coming up off the floor. Arcadis offered the property owner an air purifying unit, but the property owner declined. The following summarizes next steps taken since February 2022:
    - On March 28, 2022, Arcadis deployed two concrete moisture tests on the exposed concrete basement floor where the Retro-Coat™ was removed for the test.
    - On March 31, 2022, Arcadis collected the two moisture tests and provided results to the manufacturer to determine the root cause.
    - On January 6, 2023, Arcadis deployed an air purifier in the basement and inspected the condition of the Retro-Coat™ on the basement floor.
    - An additional air purifier was deployed on January 24, 2023 for the first floor of the home after the homeowner approved the additional deployment on January 24, 2023.
    - On February 7, 2023, Arcadis deployed five concrete moisture tests on the exposed concrete basement floor where the Retro-Coat™ was removed for the test.
    - On February 10, 2023, Arcadis collected the five moisture tests and provided results to the manufacturer to finalize the Retro-Coat™ product for repairs.

The manufacturer made their recommendation for applying Primer MV and Retro-Coat™**.** The application contractor placed an order for Primer MV and Retro-Coat™. The application contractor is waiting for delivery of the products. Application of the Primer MV and Retro-Coat™ is planned for 2Q2023.

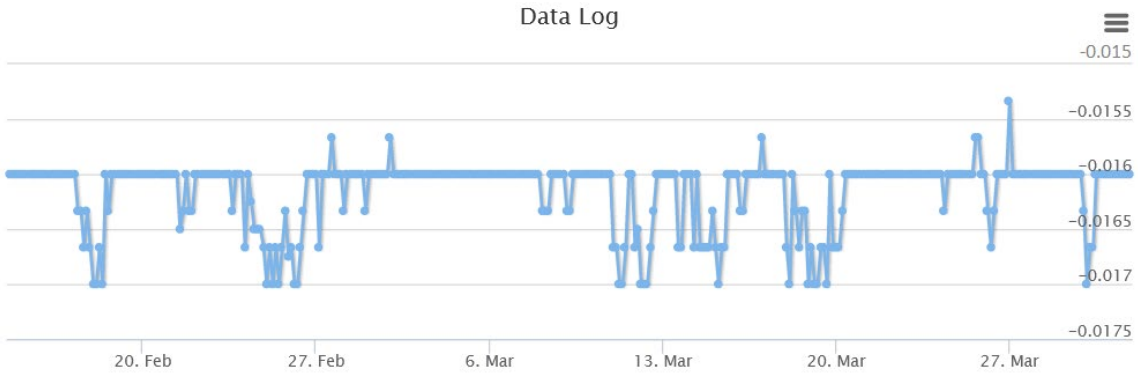
Jeanne Schlaufman
EGLE Warren District Office
April 28, 2023

The third annual OM&M event will be conducted following the completion of the Retro-Coat™ repairs.

- **34950 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 7, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34990 Beacon –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 21, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc, except for MP-7 which is continuously monitored by a vacuum transmitter. 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.



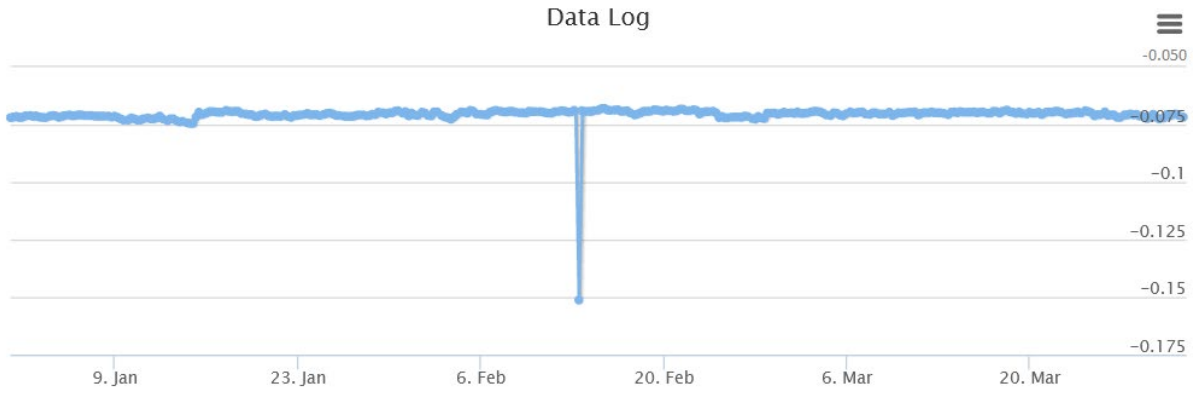
On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.



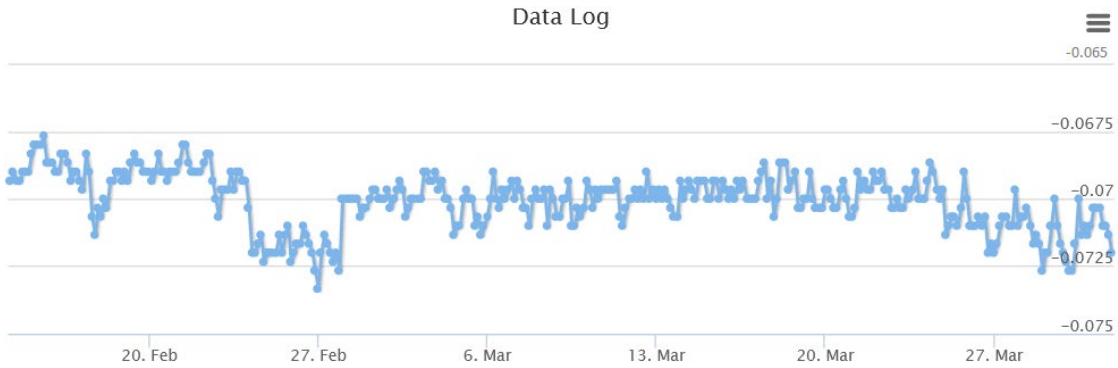
This home was sold in June of 2021 and the new owner provided access to the property on July 27, 2021. The previous property owner had denied the application of Retro-Coat™ in the detached garage since the floor has an existing epoxy coating and imbedded tubing for radiant heat. Arcadis is in discussions with EGLE to develop a monitoring program to assess vapor intrusion potential associated with the slab at this property.

- **12066 Boston Post –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on February 28, 2023. All monitoring points achieved 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. The third annual OM&M event was completed on March 3, 2023. All monitoring points achieved 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.

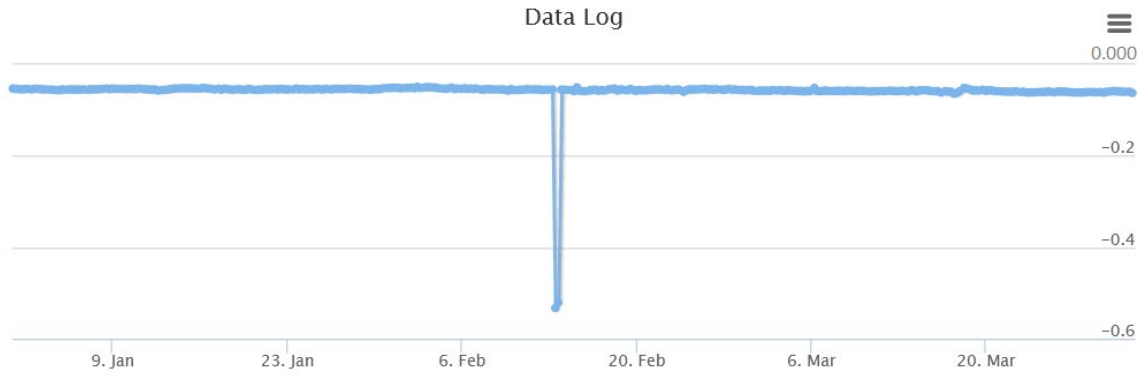


On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.

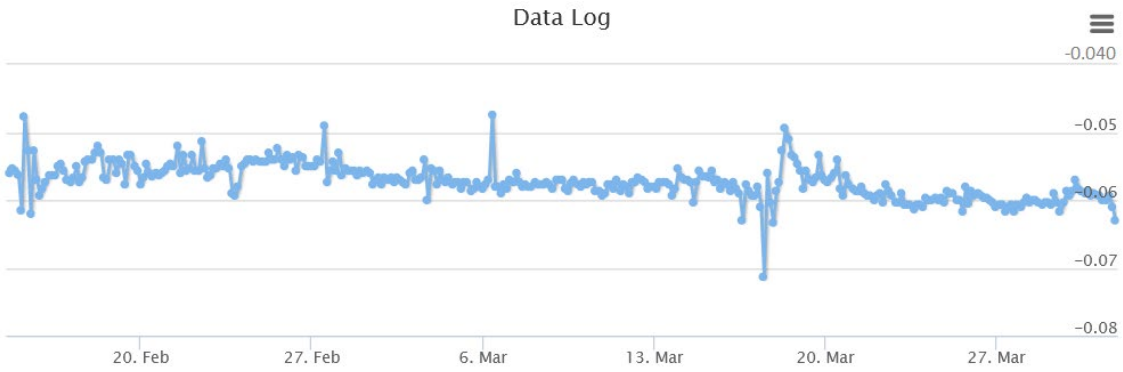


- **12070 Boston Post –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 6, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **12089 Boston Post –** The system is currently in operation and is being maintained and monitored. he third annual OM&M event was completed on March 21, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **12100 Boston Post –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 6, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.

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.



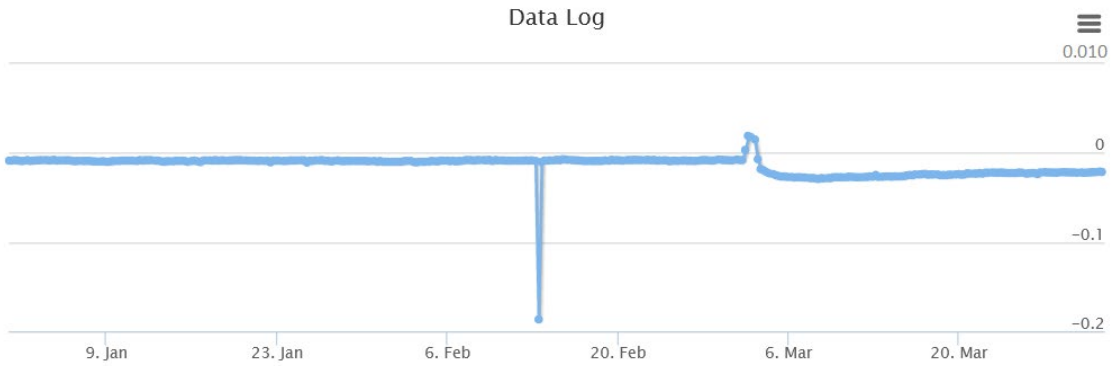
On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.



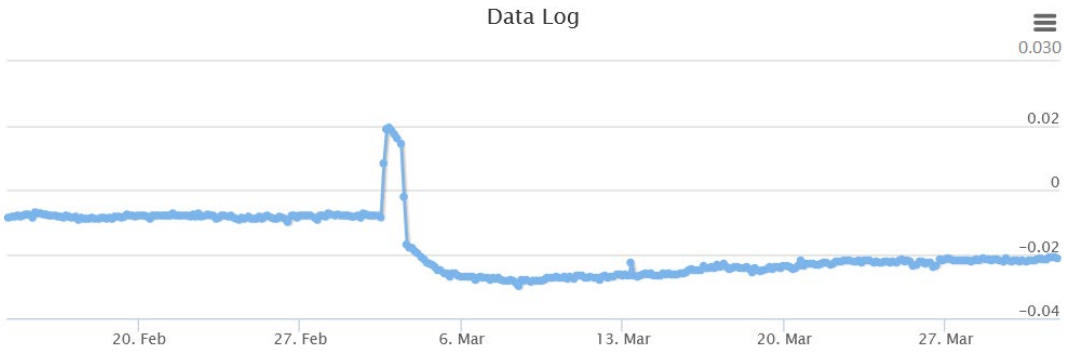
Monitoring in accordance with the EGLE approved property specific monitoring program is underway. Recent quarterly groundwater sampling results for vinyl chloride at MW-115S have not exceeded the historic high of 3.9 µg/L observed in November 2019. Groundwater vinyl chloride concentrations at MW-156S have not exceeded the groundwater screening level of 1.0 µg/L, and the well was dry in the fourth quarter 2022 sampling event. The groundwater sample collected at MW-79SR on November 1, 2022 had a vinyl chloride concentration of 1.2 µg/L which exceeds the groundwater screening level of 1.0 µg/L at MW-79SR. In accordance with the property specific monitoring program for this property, sub-slab sampling at SSMP-2 was conducted. Arcadis conducted sub-slab sampling at SSMP-2 on February 8, 2023 and the results for vinyl chloride were non detect. The groundwater sample collected at MW-79SR on February 24, 2023 had a vinyl chloride concentration which was non detect and <1.0 µg/L, so sub slab sampling was discontinued in accordance with the property specific monitoring program.

- **12131 Boston Post** – The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 2, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc, except MP-4 which is being continuously monitored by a vacuum transmitter. During the monitoring event, Arcadis recalibrated the vacuum transmitter. The spike above 0.0

iwc seen on March 2, 2023 was due to a recalibration of the vacuum transmitter and cleaning of the tubing connected to the vacuum transmitter. Following the cleaning and recalibration, the vacuum levels returned to normal levels. 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. The area being monitored by the transmitter is located beneath a small breezeway between the attached garage and the home. The transmitter data provided within previous quarterly updates has also shown that vacuum in the area being monitored by the transmitter has been maintained.

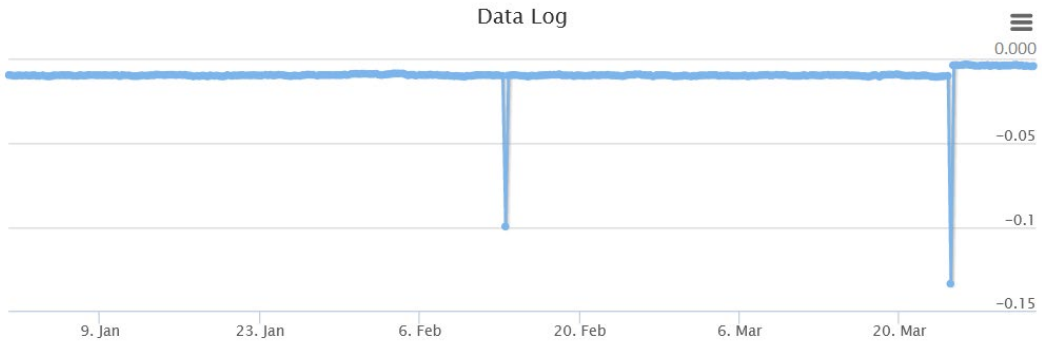


On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.

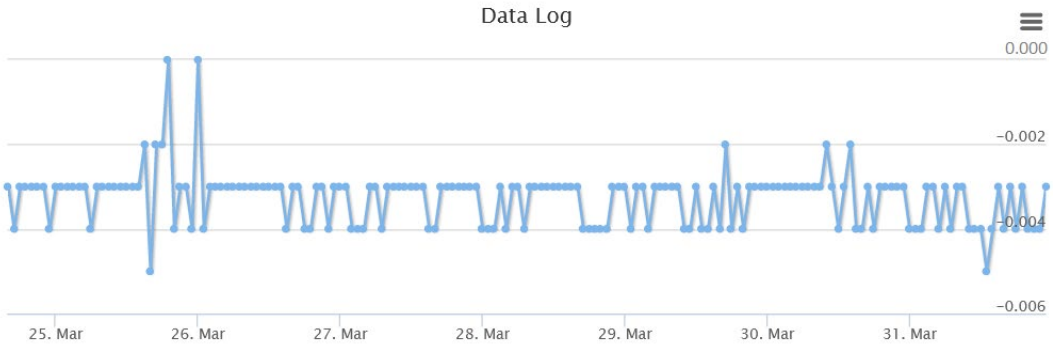


- **12141 Boston Post –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 24, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc, except MP-4 which is being continuously monitored by a vacuum transmitter. During the monitoring event, Arcadis attempted to recalibrate the vacuum transmitter. Positive vacuum readings were recorded by the vacuum transmitter after recalibration. Additional recalibration attempts did not resolve the readings and the vacuum transmitter was replaced. The new vacuum transmitter was calibrated, and it recorded readings in the normal range.

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. The transmitter data provided within previous quarterly updates has also shown that vacuum in the area being monitored by the transmitter has been maintained.

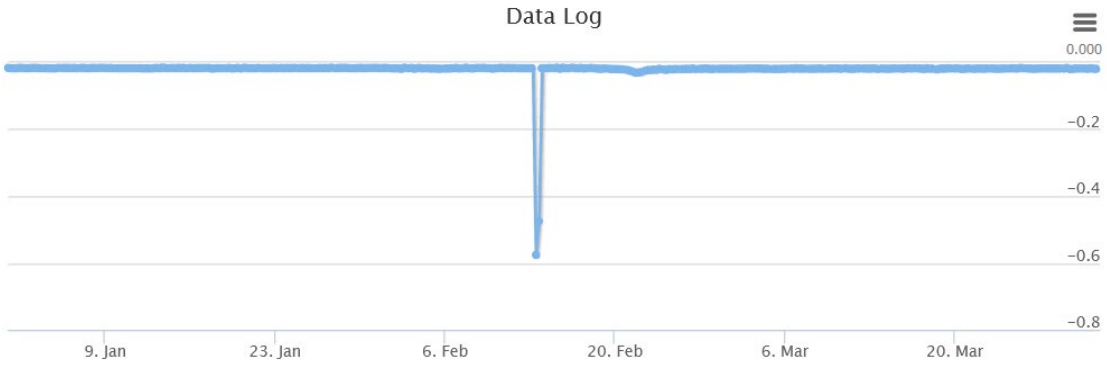


On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on March 24, 2023 after recalibration of the vacuum transmitter showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.



- **12017 Brewster –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 21, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **12036 Brewster –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on February 27, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.

  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.



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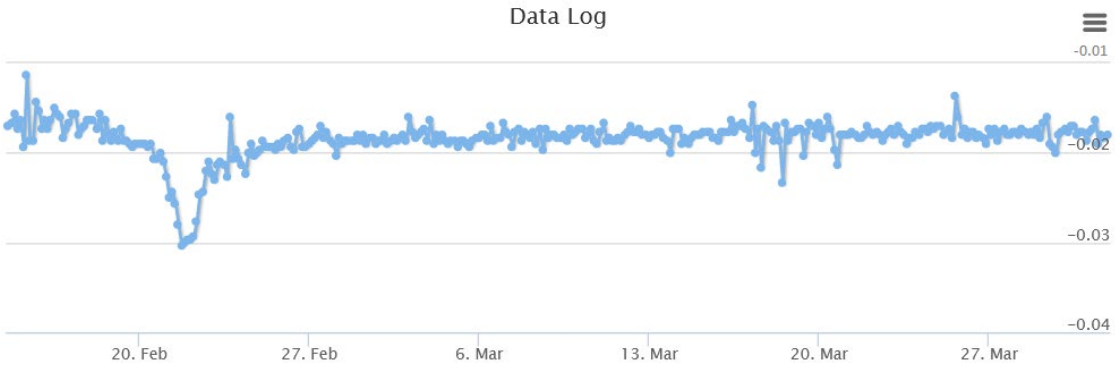


- **12075 Brewster –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 22, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **12088 Brewster** – The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 8, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **12091 Brewster –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on February 28, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc. 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. The third annual OM&M event was completed on March 6, 2023. All monitoring points achieved 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. The third annual OM&M event was completed on March 2, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.
- **34380 Capitol Avenue –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 1, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc.

  On March 6, 2023, Arcadis responded to a call from the homeowner about the audible sump alarm. Arcadis found the sump basin full of water and the sump pump not operating. This caused water in some areas to collect on the floor of the basement. Arcadis resolved the stuck float on the sump pump and water was pumped out of the sump basin and the basement. Arcadis further investigated the sump pump and float and decided to replace the sump pump. Arcadis placed fans and dehumidifiers in the basement to dry out the water from the basement floor.

  On March 8, 2023, Arcadis returned to the property to inspect the basement and the progress made drying up water on the basement floor. The fans and dehumidifier had dried up all the water on the floor and the walls. The homeowner also requested that Arcadis inspect the condition of the caulking around the perimeter of the basement floor.

  On March 22, 2023, Arcadis returned to inspect the basement caulking along the perimeter of the basement floor. Arcadis noted the presence of some cracks in the caulking and documented the condition with photographs. Arcadis collected differential pressure readings at the basement monitoring points and all monitoring points achieved the performance metric established by EGLE of -0.02 iwc. Arcadis is preparing for repairs to the caulking and will schedule the work with the homeowner.
- **34401 Capitol Avenue –** The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on February 27, 2023. All monitoring points achieved 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. The third annual OM&M event was completed on March 21, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc. Monitoring in accordance with the EGLE approved property specific monitoring program is underway.

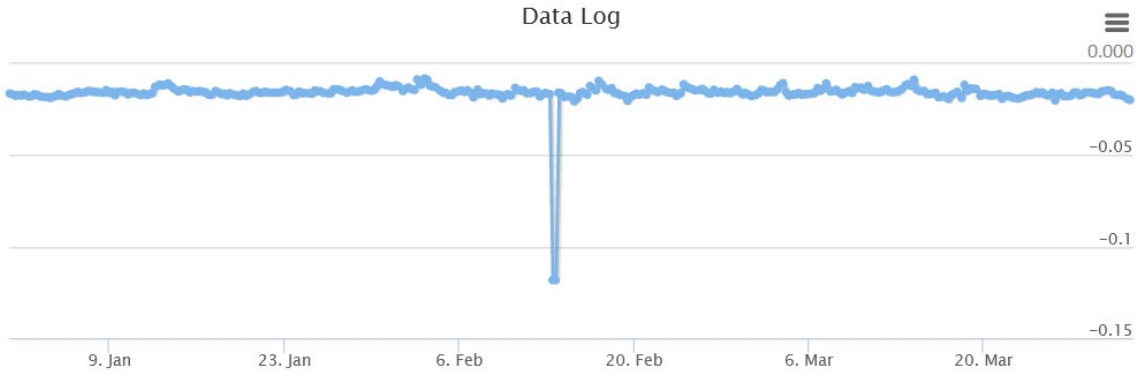
  Quarterly groundwater sampling results for vinyl chloride have not exceeded the groundwater screening level of 1.0 µg/L at MW-90S, MW-103S, and MW-169S. However, the groundwater samples collected at MW-148S on February 23, 2023 had a vinyl chloride concentration of 1.1 µg/L, which was below the historic peak of 2.3 µg/L at MW-148S but above the groundwater screening level of 1.0 µg/L. Sub-slab sampling at SSMP-1 and SSMP-2 was already being implemented as a result of a 4Q 2022 groundwater result of 3.2 µg/L at MW-136S. On February 14, 2023, Arcadis completed SSMP sampling at SSMP-1, SSMP-2, and SSMP-3. Results for all three SSMPs were non-detect for vinyl chloride.

  The groundwater sample collected at MW-136S on February 23, 2023, had a vinyl chloride concentration which was non detect, so sub-slab sampling was discontinued in accordance with the property specific monitoring program.
- **34450 Capitol Avenue** – The system is currently in operation and is being maintained and monitored. The third annual OM&M event was completed on March 24, 2023. All monitoring points achieved the performance metric established by EGLE of -0.02 iwc. Monitoring in accordance with the EGLE approved property specific monitoring program is underway.

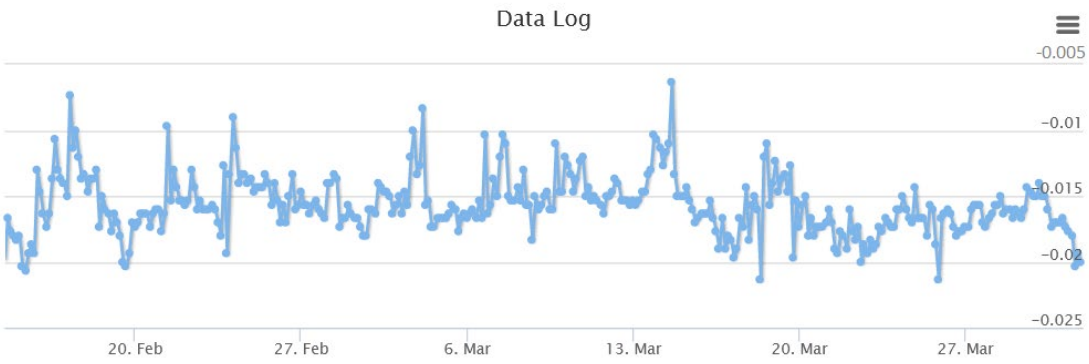
Quarterly groundwater sampling results for vinyl chloride have not exceeded the groundwater screening level of 1.0 µg/L at MW-108S, MW-168S, and MW-169S. At MW-137S, which is 137 feet away from the home, groundwater results from the August 15, 2022 sample had a vinyl chloride detection of 1.2 µg/L which exceeded the historic high of 1.1 µg/L observed in September 2019. Arcadis had the data validated through the normal quality control process to determine if the results had any errors which needed to be discussed with the lab or if the monitoring well needed to be resampled to verify the August 2022 results. Arcadis resampled monitoring well MW-137S to confirm previous sample results on November 17, 2022. The vinyl chloride concentration at monitoring well MW-137S was 0.73 µg/L. During the 3Q2022 and 4Q2022 groundwater sampling events monitoring well MW-169S which resides on the property and is 73 feet away from the house was non-detect for all site related COCs. Arcadis will continue to monitor monitoring well MW-137S on a quarterly basis and if warranted conduct sub-slab sampling at the property if the 1Q2023 exceeds 1.2 ug/L for vinyl chloride.

- **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.



  On February 13, 2023 there was a neighborhood wide power outage due to a storm event which resulted in the negative spike seen on the plot above. Below is a zoomed in portion of the data plot starting on February 14, 2023 showing the IPM system continuing to maintain vacuum level at the monitoring point which is typical of normal operation at this property.



Interim Preemptive Mitigation Systems – Extension Requested

- **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.