

MEMO

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Date:
January 31, 2021

Arcadis Project No.:
30050315

Subject:
Livonia Transmission Plant
36200 Plymouth Road, Livonia, Wayne County, Michigan
EGLE Site ID No. 82002970
Offsite Interim Preemptive Mitigation Installation Quarterly Update

On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this quarterly update to the interim preemptive mitigation 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 first quarterly update covering the partial quarter of November and December 2020.

As of December 31, 2020, 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:
 - 1 of 33 IPM systems are currently pending installation.
 - 1 of 33 current property owners is unwilling to allow the IPM system to be installed at their property.
- 10 of 11 sheds where Retro-Coat™ has been proposed have had it applied to the floor. The status of the remaining shed is discussed below:
 - 1 of 11 property owners with sheds have not approved Retro-Coat™ application due to the conditions of the roof on the shed, which makes entry unsafe.
- 10 of 16 detached garages have had Retro-Coat™ applied to the floor. The status of the remaining 6 are discussed below:
 - 3 detached garages are currently pending.

- 3 detached garage owners have not approved Retro-Coat™ application.

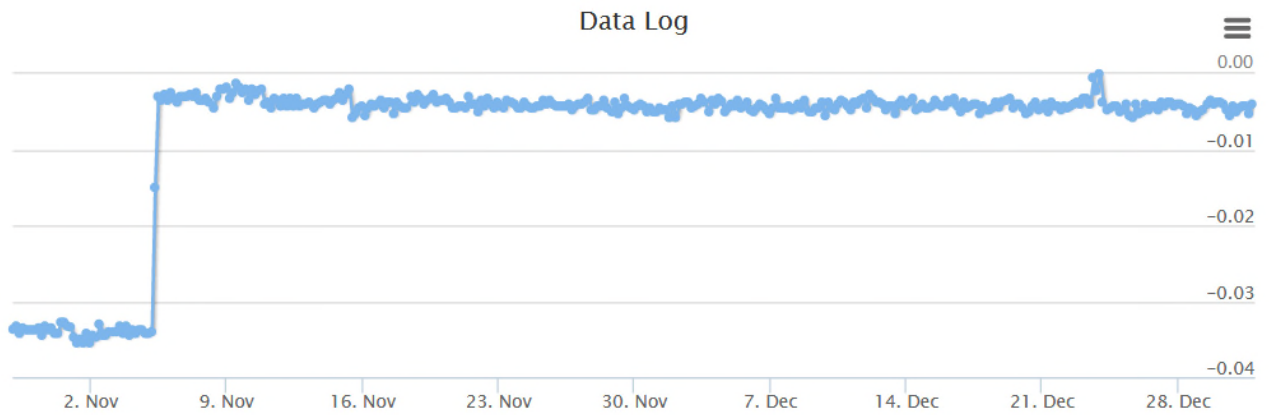
Arcadis continues to work diligently to install and maintain the interim preemptive mitigation systems. Details are provided below for all 33 locations.

Ford has established an Electrical Reimbursement Program to reimburse residents for the electrical costs associated with the operation of the air purifiers and interim preemptive mitigation systems. The Electrical Reimbursement Program is administrated by Arcadis on behalf of Ford. On October 27, 2020, Arcadis sent a cover letter to the residents or a tenant if applicable along with a W-9 form, a return envelope, and the reimbursement plan for the resident. Arcadis has received the necessary paperwork back from 15 of 31 residents and has processed the initial payments along with the Q4 2020 payment. Arcadis is working with the remaining residents to assist them with the paperwork needed to process as required by the federal tax laws. Once Arcadis receives the W-9, an initial payment to the resident will be issued. Electrical reimbursements will continue to be processed and distributed on a quarterly basis.

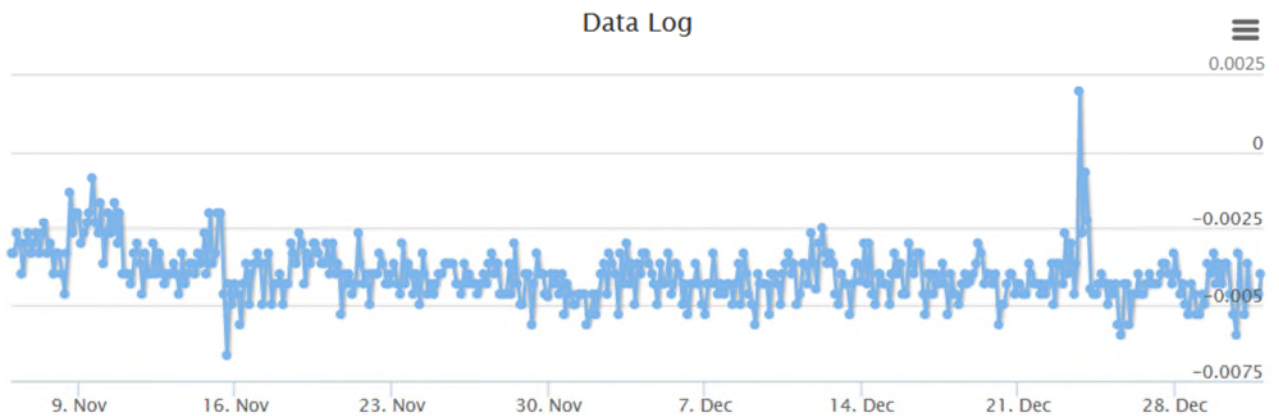
Interim Preemptive Mitigation Systems Currently Operating

- **34380 Beacon** – The system is currently in routine operation and maintenance. The homeowner was not available during the first quarter 2020 heating season. The second routine semi-annual OM&M monitoring event was completed on November 9, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc. The final OM&M sampling event was completed on November 11, 2020. The analytical data package from the November 2020 sampling event was provided to all interested parties consistent with the access agreement on December 18, 2020.
- **34424 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 11, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34450 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 12, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34550 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 12, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34591 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 5, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc, except SSMP-1 which is being continuously monitored by a vacuum transmitter. An update of the data logged by the vacuum transmitter connected to SSMP-1 is presented below demonstrating that the system continues to

operate effectively.



On November 5, 2020, during the OM&M visit, the vacuum transmitter was recalibrated resulting in the change in the vacuum reading as shown above on the data log. On December 24, 2020 there was a single positive reading recorded by the vacuum transmitter. At the time of this reading, wind gusts of 40 miles per hour were recorded. Before and after the wind gust, vacuum influence readings were within the typical range. The data log below shows the readings for November and December in more detail.



Historically water has been observed on the barrier in the crawlspace under the crawlspace window. In an effort to prevent rainwater from pooling on the barrier Arcadis sealed up the crawlspace window. On November 5, 2020 during the OM&M visit, the crawlspace window was removed and replaced with concrete masonry unit blocks.

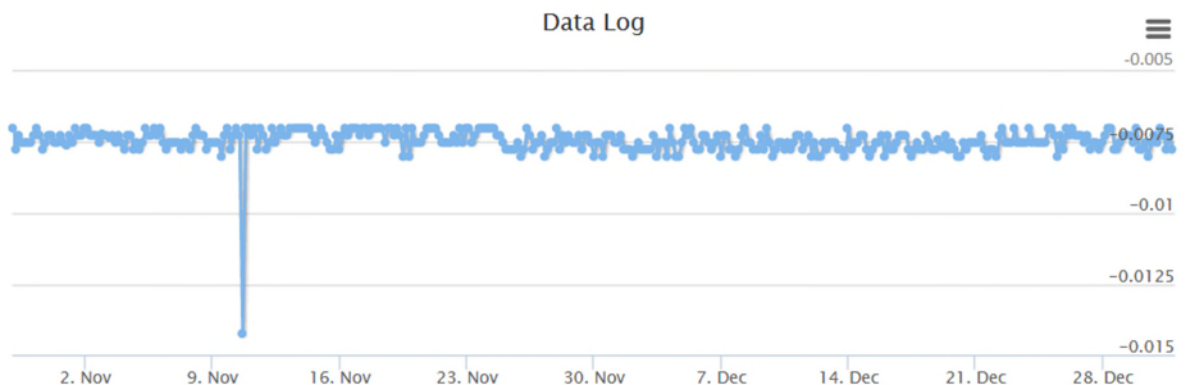


Photo of the crawlspace window before.



Photo of the window after it was sealed.

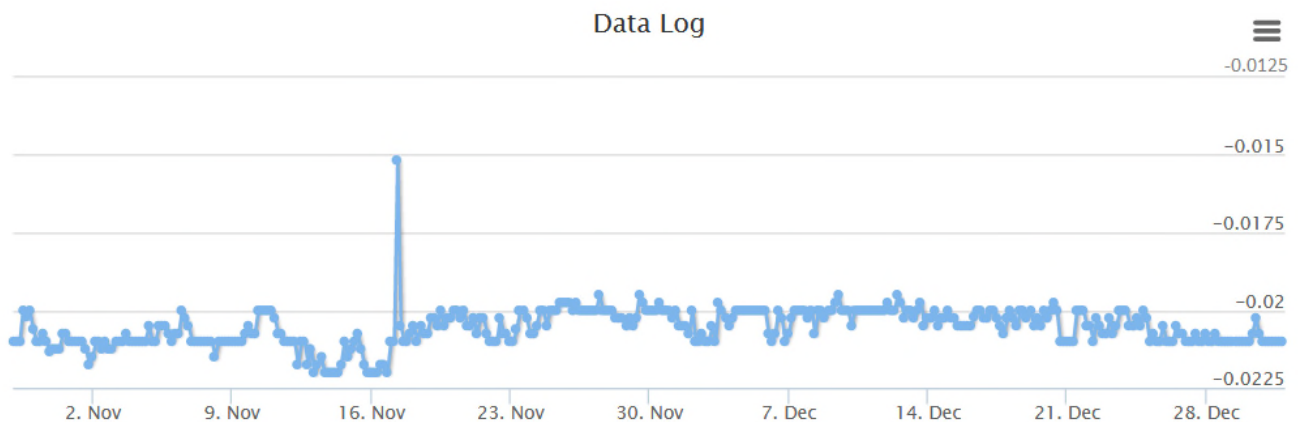
- **34600 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on December 4, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34644 Beacon** – The system is currently in routine operation and maintenance. The first routine semi-annual OM&M monitoring event was completed on November 16, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34682 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 10, 2020. Access to all monitoring points was not provided by the homeowner. Arcadis was not provided access to take vacuum influence readings at the three SSMPs in the garage, SSMP-1, SSMP-3, and SSMP-5. Arcadis collected the following vacuum readings: MP-4: -0.012 in wc, MP-5: -0.004 in wc, SSMP-2: -0.010 in wc, and SSMP-4: -0.004 in wc. 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. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.



- **34920 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 11, 2020. Arcadis recorded the following vacuum influence readings; MP-1: -0.020 in wc, MP-2: -0.030 in wc, MP-3: -0.014 in wc, and

MP-4: -0.033 in wc. On November 17, 2020 Arcadis returned to the property to inspect seams in the barrier and make repairs. Following the repairs and adjustments to valves, Arcadis recorded the following vacuum influence readings; MP-1: -0.028 in wc, MP-2: -0.023 in wc, MP-3: -0.025 in wc, and MP-4: -0.033 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

- **34940 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was unable to be scheduled in the fourth quarter of 2020 due to the property being vacant and in the process of being sold. Arcadis is working to gain access and schedule an OM&M monitoring even in the first quarter of 2021 with the new property owner.
- **34950 Beacon** – The system is currently in routine operation and maintenance. The second semi-annual OM&M monitoring event was completed on April 10, 2020. The first annual OM&M monitoring event will be scheduled during the first quarter of 2021.
- **34990 Beacon** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 17, 2020. The final routine OM&M sampling event scheduled for March 30, 2020 was delayed as a result of the COVID-19 stay at home order. The sampling event was completed on November 19, 2020 during the fourth quarter of 2020 so that it could be completed during the heating season. The analytical data package from the November 2020 sampling event was provided to all interested parties consistent with the access agreement on December 18, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc. An update of the data logged by the vacuum transmitter which is continuously monitored and connected to MP-7 is presented below demonstrating the system continues to operate effectively.



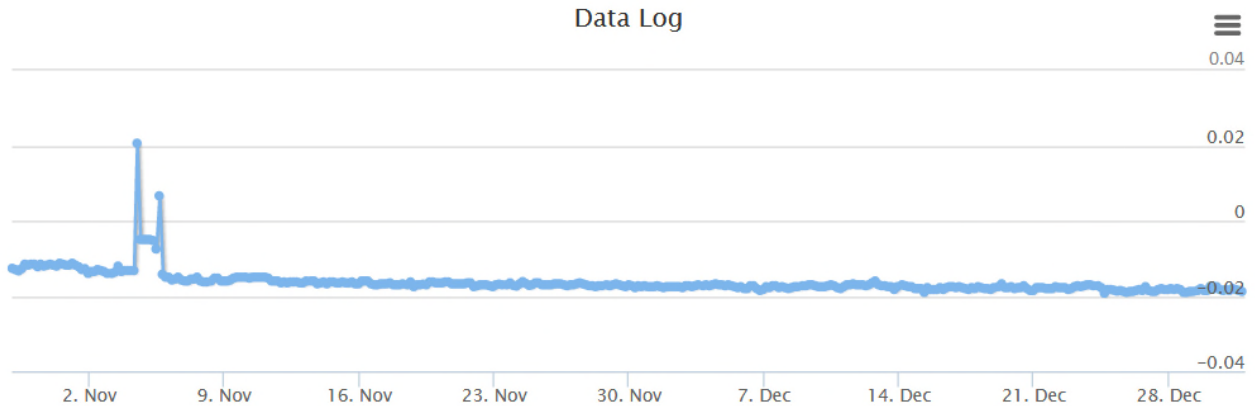
The property owner has denied the application of Retro-Coat™ in the detached garage since the floor has an existing epoxy coating and imbedded tubing for radiant heat. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.

- **12066 Boston Post** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 10, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

The second routine semi-annual OM&M monitoring event was completed on November 10, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

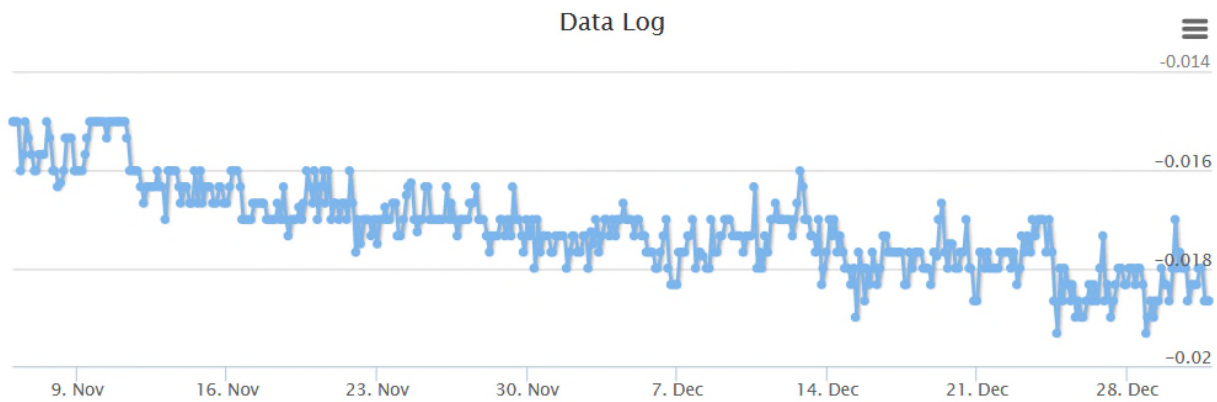
- **12067 Boston Post** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 6, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc, except MP-1. An update of the

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



On October 29, 2020, Arcadis began making repairs to the barrier in the crawlspace. Heat seaming and welding methods were utilized to seal in the barrier. Repairs were completed on November 6, 2020. After repairs were made, Arcadis recorded the following vacuum influence readings; MP-1: -0.012 in wc, MP-2: -0.043 in wc, MP-3: -0.117 in wc, and MP-4: -0.199 in wc. In addition, Arcadis completed modifications to the exterior of the crawlspace entrance. A stone bed was installed to prevent rainwater from entering the crawlspace and pooling on the barrier.

On November 4, 2020 and November 5, 2020, momentary positive readings were recorded. Immediately preceding and following these elevated readings the vacuum influence readings returned to typical operating range. The data log below shows the vacuum readings after the spike on November 5, 2020. These positive readings occurred during the repair work to the barrier, where the mitigation fan was turned off for brief periods of time.





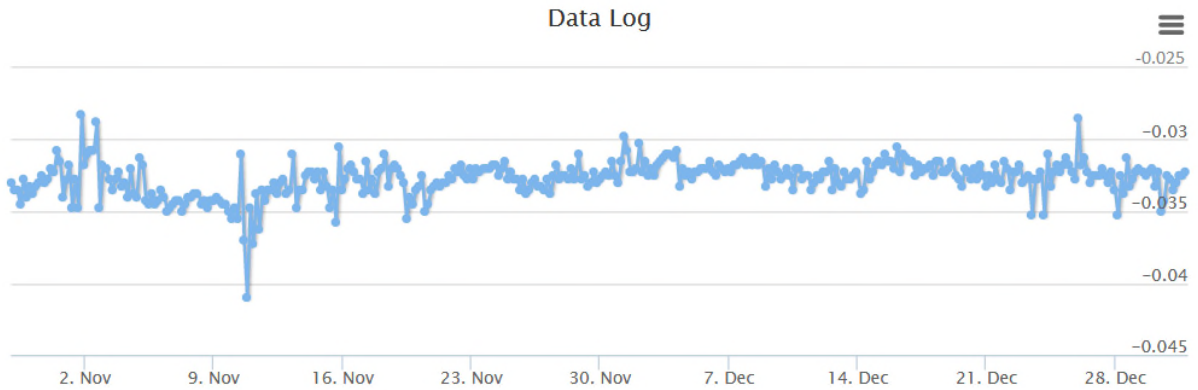
Previous crawlspace entrance.



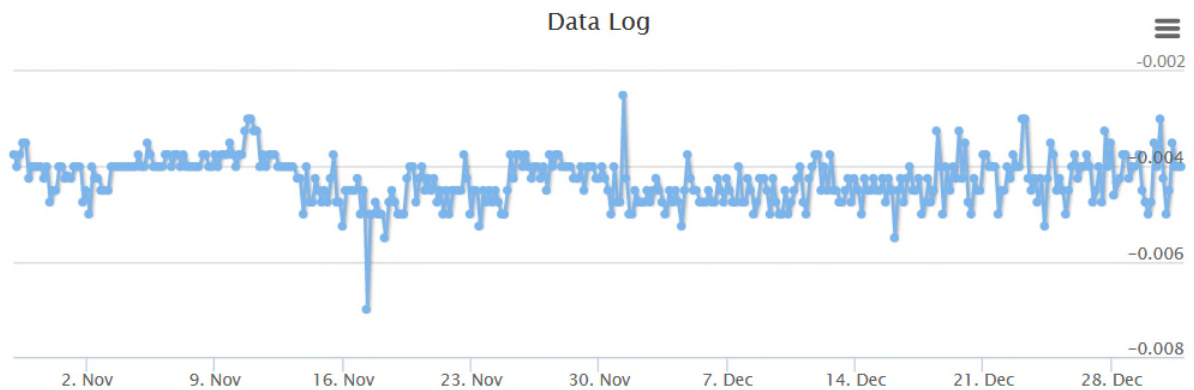
Crawlspace entrance modified to prevent water from entering.

- 12070 Boston Post** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 12, 2020. Arcadis collected the following vacuum influence readings; MP-1: -0.141 in wc, MP-2: -0.006 in wc, MP-3: -0.053 in wc, MP-4: -0.020 in wc, SSMP-1: -0.067 in wc, SSMP-2: -0.020 in wc, and SSMP-3: -0.022 in wc. Arcadis inspected the seams and the barrier around this monitoring point and identified a seam to repair and seal. Following the brief repairs, Arcadis collected and recorded a second round of vacuum influence readings; MP-1: -0.148 in wc, MP-2: -0.050 in wc, MP-3: -0.051 in wc, MP-4: -0.020 in wc, SSMP-1: -0.067 in wc, SSMP-2: -0.020 in wc, and SSMP-3: -0.022 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- 12089 Boston Post** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 9, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- 12100 Boston Post** – The installation of the interim preemptive mitigation system in the crawlspace and attached garage was completed on March 25, 2019 and is currently in routine operation and maintenance. The sub slab depressurization portion of the system in the raised slab living area was also installed, however vacuum influence does not exceed the performance metric established by EGLE of -0.02 in wc at the sub-slab monitoring point SSMP-2. The second routine semi-annual OM&M monitoring event was completed on November 9, 2020. All monitoring points except the one located in the raised slab living area (SSMP-2) achieved the performance metric established by EGLE of -0.02 in wc. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.

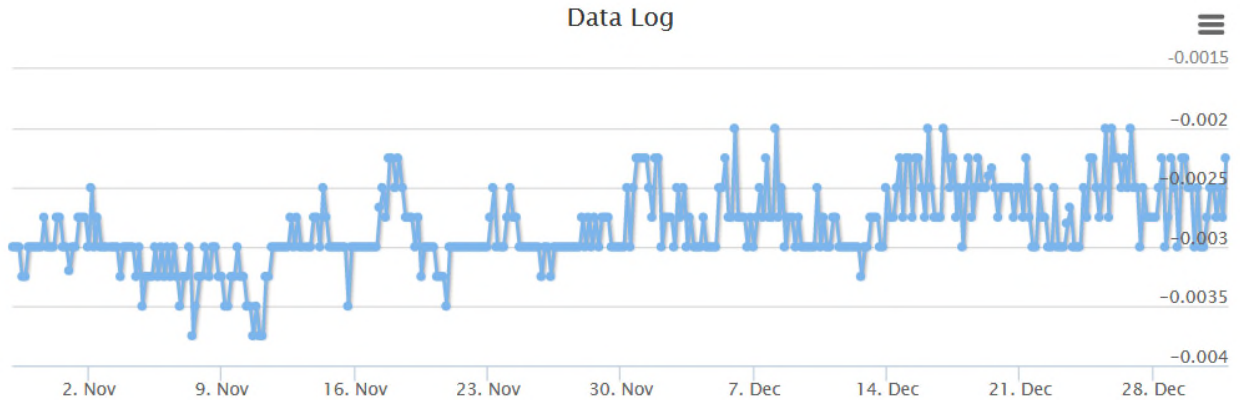
An update of the data logged by the vacuum transmitter connected to sub-slab monitoring point SSMP-4 is presented below demonstrating system continues to operate effectively.



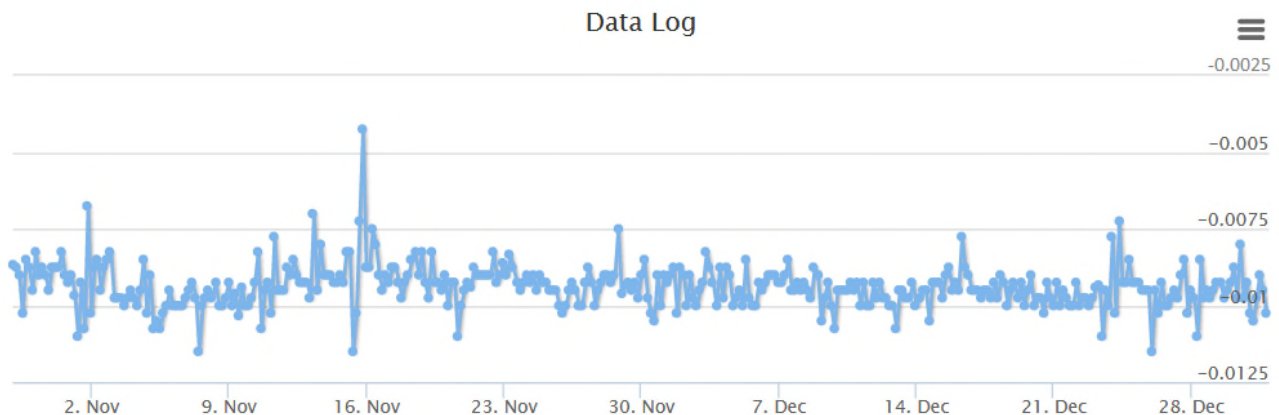
- 12131 Boston Post** –The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 13, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc except MP-4. An update of the data logged by the vacuum transmitter connected to MP-4 is presented below demonstrating that the system continues to operate effectively. The 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 monthly updates has also shown that vacuum in the area being monitored by the transmitter has been maintained.



- 12141 Boston Post** – The system is currently in routine operation and maintenance. The second semi-annual OM&M monitoring event was completed on July 20, 2020. The first annual OM&M monitoring event will be scheduled during the first quarter of 2021. 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 monthly updates has also shown that vacuum in the area being monitored by the transmitter has been maintained.



- **12017 Brewster** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 13, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **12036 Brewster** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 9, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc. 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 routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 9, 2020. Arcadis collected the following vacuum influence readings at all monitoring points: MP-1: -0.161 in wc, MP-2: -0.086 in wc, MP-3: -0.077 in wc, SSMP-1: -0.145 in wc, SSMP-2: -0.033 in wc, SSMP-3: -0.012 in wc, and SSMP-4: -0.039 in wc.. One monitoring point in the garage slab was below the performance metric established by EGLE. After inspecting the seams in the barrier and adjusting the IPM system ball valves, Arcadis recorded the following vacuum influence readings: MP-1: -0.163 in wc, MP-2: -0.089 in wc, MP-3: -0.080 in wc, SSMP-1: -0.159 in wc, SSMP-2: -0.037 in wc, SSMP-3: -0.020 in wc, and SSMP-4: -0.044 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **12088 Brewster** – The system is currently in routine operation and maintenance. Arcadis was unable to schedule the second routine semi-annual OM&M monitoring event during November and December 2020 due to COVID-19 concerns. Arcadis will schedule the second routine semi-annual OM&M monitoring event during the first quarter of 2021.

- **12091 Brewster** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 11, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

On October 28, 2020, Arcadis spoke with the homeowner regarding the application of Retro Coat in his garage and the homeowner indicated that his brother has removed the car that was stored in his garage; however, he would prefer not to have Retro-Coat™ applied. Arcadis will continue to work with the property owner to schedule the installation of Retro-Coat™ in the garage in 2021. The garage is not inhabited or occupied at this time and is primarily used to store a motorcycle and vehicle. In addition, three rounds of pre-mitigation sub-slab vapor intrusion sampling have been completed beneath the garage to date, and there have been no exceedances of the seven constituents of concern (COCs) indicating that there is not a potential for vapor intrusion at this structure. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.

- **12101 Brewster** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 11, 2020. Arcadis adjusted ball valves during this visit to optimize the distribution of vacuum influence and to ensure all monitoring points achieve metrics. Arcadis recorded the following vacuum influence readings: MP-1: -0.075 in wc, MP-2: -0.051 in wc, MP-3: -0.037 in wc, MP-4: -0.107 in wc, SSMP-1: -1.104 in wc, SSMP-2: -0.051 in wc, SSMP-3: -0.322 in wc, SSMP-4: -0.161 in wc, SSMP-5: -0.0381 in wc, SSMP-6: -0.197 in wc, SSMP-7: -0.058 in wc, and SSMP-8: -0.022 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34367 Capitol** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 19, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc. On December 22, 2020 Arcadis responded to a call from the homeowner about the possibility of draft or gaps in the foundation wall in the crawlspace. Arcadis inspected the crawlspace and sealed up the opening observed during the inspection. Arcadis collected the following vacuum influence readings: MP-1: -0.051 in wc, MP-2: -0.021 in wc, MP-3: -0.029 in wc, and MP-4: -0.024 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

34380 Capitol Avenue – The IPM was completed on October 2, 2020. Vacuum influence readings were collected on October 2, 2020, and readings at all monitoring points exceed the performance metric established by EGLE of -0.02 in wc; SSMP-2: -0.693 in wc and SSMP-3: -0.694 in wc. The reconstruction of the finished portion of the basement was completed on October 30, 2020. The first post-mitigation sampling was completed on November 11, 2020. The indoor air samples collected on November 11, 2020 had an elevated Tetrachloroethylene (PCE) that exceeded the indoor air screening level of 41 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). On December 10, 2020 Arcadis submitted a 24-hour notification with corrective action to all parties. On December 10, 2020 Arcadis deployed three air purifiers to the property. On December 11, 2020 Arcadis removed the source of the PCE, which was determined to be the adhesive on the garage steps securing the rubber tread. The rubber tread was replaced and secured with a different adhesive. An additional round of indoor air sampling was completed on January 13, 2021 and verified that PCE is no longer in the indoor air. The analytical data package was provided to all interested parties consistent with the access agreement on January 28, 2021.



Finished construction of the entertainment unit. Reconstruction of the finished room in the basement.

- **34401 Capitol** – The system is currently in routine operation and maintenance. On October 26, 2020, Arcadis collected the following vacuum influence readings: MP-1: -0.025 in wc. And MP-2: -0.015 in wc. Arcadis inspected seams and made repairs using heat seaming and welding methods to seal leaks in the barrier. Repairs were completed on October 28, 2020. After repairs were made, Arcadis recorded the following vacuum influence readings; MP-1: -0.027 iwc, and MP-2: -0.027 iwc. The second routine semi-annual OM&M monitoring event was completed on November 12, 2020. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.
- **34424 Capitol Avenue** –The installation of the sub membrane depressurization system in the crawlspace was completed on February 13, 2020 and is currently in routine operation and maintenance. The sub slab depressurization portion of the system was also installed, however vacuum influence does not exceed the performance metric established by EGLE of -0.02 iwc at SSMP-2 located in the slab area. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.

The first routine semi-annual OM&M monitoring event was completed on November 19, 2020. All monitoring points, except SSMP-2 located in the slab area, achieved the performance metric established by EGLE of -0.02 in wc. The first OM&M sampling event was completed on November 19, 2020. The analytical data package from the November 2020 sampling event was provided to all interested parties consistent with the access agreement on December 18, 2020.

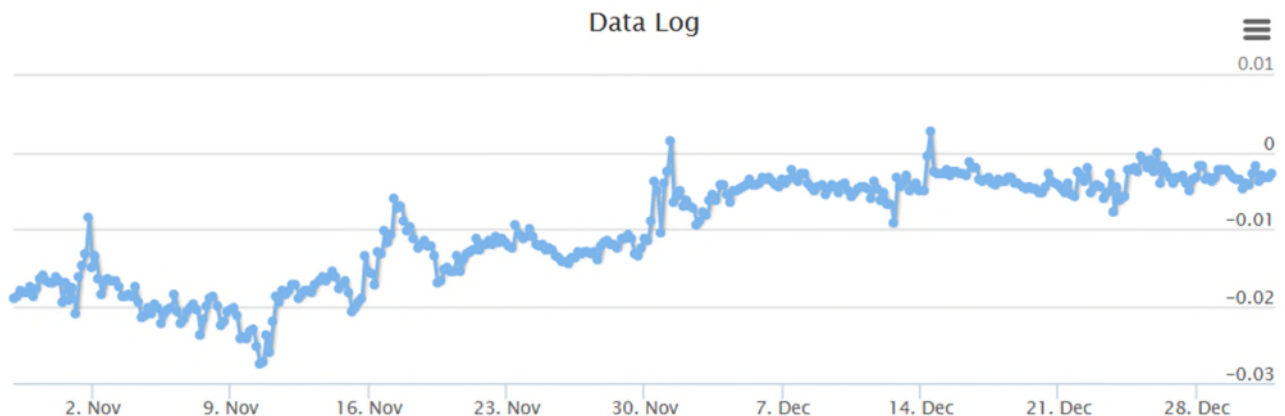
- **34450 Capitol Avenue** – The installation of the sub membrane depressurization system in the crawlspace portion of the home was completed on July 23, 2020 and is currently in routine operation and maintenance. On October 22, 2020, Arcadis collected post-mitigation IA and SS samples. The analytical data package will be provided to all required parties consistent with the access agreement after receipt and validation.

The first routine semi-annual OM&M monitoring event was completed on December 1, 2020. All sub-membrane monitoring points achieved the performance metric established by EGLE of -0.02 in wc. On December 1, 2020, Arcadis responded to a notification from the property owner that the mitigation fan was louder than normal. Arcadis inspected the mitigation fan and cleaned the fan. The noise level from the fan decreased. Arcadis collected the following vacuum influence readings following the maintenance on the mitigation fan: MP-1: -0.193 in wc, MP-2: -0.221 in wc, MP-3: -0.236 in wc, MP-4: -0.179 in wc, and MP-5: -0.445 in wc. All monitoring points achieved the performance metric established by EGLE of -0.02 in wc.

Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.

- **34480 Capitol** – The system is currently in routine operation and maintenance. The second routine semi-annual OM&M monitoring event was completed on November 16, 2020. Arcadis collected the following vacuum influence readings: MP-1: -0.026 in wc, MP-2: -0.026 in wc, MP-3: -0.015 in wc, and SSMP-2: -0.010 in wc. 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. The positive spikes seen on the data log below occurs on December 1, 2020, December 14, 2020, and December 25, 2020 when wind gusts greater than 30 miles per hour were recorded. Following the wind gusts, the vacuum transmitter recorded vacuum influence in the typical range.

On December 3, 2020, Arcadis responded to a notification from the property owner that the mitigation fan was louder than normal. Arcadis inspected the mitigation fan and cleaned the fan. The noise level from the fan decreased. Arcadis collected the following vacuum influence readings following the maintenance on the mitigation fan: MP-1: -0.023 in wc, MP-2: -0.007 in wc, MP-3: -0.011 in wc, and SSMP-2: -0.009 in wc.



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 (7 rounds) and MW-79SR (8 rounds) have been below the groundwater screening level of 1 part per billion. Arcadis is in discussions with EGLE to develop a monitoring program to assess VI potential associated with the slab at this property.
- **12121 Boston Post** – The property owner was presented with an air purifier on March 21, 2019 as part of the initial preemptive mitigation approach. The air purifier remained on the front porch until March 24, 2019, when an Arcadis employee retrieved the unit. The air purifier was retrieved from the location, so damage did not occur to the unit from being outside and exposed to the weather. The draft design for the preemptive mitigation system was provided on March 29, 2019. On April 16, 2019, the property owners sent an email indicating that Ford nor Arcadis had access to the property any

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longer. A complaint was filed on July 10, 2019 in the Michigan state court to gain access to this home to complete the installation of the interim preemptive mitigation system.

The suit seeking access to the property at 12121 Boston Post was removed by those property owners to federal court. Ford moved to remand that lawsuit to state court, and it was remanded on January 7, 2020. Ford will continue to pursue access through that proceeding in state court. The property owners at 12121 Boston Post are the only remaining property owners currently refusing to allow the mitigation systems to be installed at their properties.