

# MEMO

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Date:  
June 30, 2020

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 Monthly Update

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On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this monthly 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. Based on the groundwater data collected in the third quarter of 2019 from the shallow groundwater monitoring wells the 100-foot buffer line was modified. On November 13, 2019, EGLE sent Ford an email indicating that due to the 100-foot buffer line moving more to the north along Capitol, three (3) additional homes were added to the interim preemptive mitigation (IPM) program.

On March 17, 2020, Ford sent a memo to EGLE titled "COVID-19 Force Majeure" requesting to temporarily halt off-site vapor intrusion (VI) sampling and mitigation work in residential homes and commercial businesses, due to the spread of the Coronavirus Disease (COVID-19), pursuant to the Force Majeure provisions contained in the Consent Decree entered on July 27, 2017 in Michigan Department of Environmental Quality v. Ford Motor Company, Case No. 2:1712372-GAD-RSW. On March 23, 2020 EGLE responded to the memo granting that off-site vapor intrusion (VI) sampling and mitigation work in residential homes and commercial businesses be temporarily suspended for 30 days. In the memo EGLE stipulated that if a residential mitigation system fails during this 30-day Force Majeure event, Ford will be required to evaluate the mitigation system and conduct repairs to make the system effective and operational using the CDC social distancing strategies. On April 24, 2020, EGLE approved an extension to the Force Majeure until April 30, 2020 and advised that the situation be re-evaluated based upon the relevant guidance and orders from the State of Michigan Executive Office. On May 22, 2020 Governor Gretchen Whitmer issued an extension to the executive order for all non-essential workers to stay at home until June 12, 2020.

As a result, all VI sampling appointments and mitigation system installations were temporarily suspended and resumed on Monday June 15, 2020 when the executive order was lifted by the

Governor. As of June 30, 2020, the following progress has been made at 33 residential properties in the Alden Village subdivision:

- 33 of 33 IPM systems are designed. 27 of 33 are installed and operating as designed. The status of the remaining 6 are described below:
  - 2 of 33 IPM systems are installed but require modification.
  - 2 of 33 IPM systems are under construction.
  - 1 of 33 IPM systems is scheduled to begin installation.
  - 1 of 33 current property owners is unwilling to allow the IPM system to be installed at their property.
- 10 of 11 sheds requiring Retro-Coat™ 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 requiring Retro-Coat™ have had it applied to the floor. The status of the remaining 6 are discussed below:
  - 3 detached garages will be completed during the summer 2020.
  - 3 detached garage owners have not approved Retro-Coat™ application.

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

#### **Interim Preemptive Mitigation System Currently Being Installed or Scheduled**

Details are provided below regarding the status of the work at the individual properties.

- **34380 Capitol Avenue** – Arcadis and their subcontractors met with the homeowner on February 25, 2020 to collect information required for the City of Livonia permits. Monthly vapor intrusion sampling was scheduled with the homeowner for March 17, 2020 and was cancelled as a result of the COVID-19 Force Majeure. On June 11, 2020, the three purifiers that had been in service since February 2020 were replaced. The homeowner has stated that due to medical concerns she is not able to schedule the installation of the mitigation system at this time. Arcadis will continue to work with the homeowner to schedule the monthly vapor intrusion sampling.
- **34450 Capitol Avenue** – An interim air purifier unit was deployed on November 20, 2019. On February 20, 2020 and May 20, 2020 Arcadis changed out the air purifier in the home. Installation of the mitigation system began on March 3, 2020. The installation of the sub-membrane depressurization (SMD) system in the crawlspace resumed on June 15, 2020 following the lifting of the executive order. The installation of the SMD system in the crawlspace is projected to be completed in July 2020.
- **12124 Boston Post** – The property owner declined an interim air purifier unit. Work required prior to beginning IPM construction was initiated during January and continued during February 2020 and included installation of a new exterior crawlspace access, installation of a locking door at the existing interior crawlspace access, and asbestos abatement. On May 27, 2020 Arcadis and their architects inspected the crawlspace to evaluate the safety of installing the IPM in the crawlspace. A structural repair evaluation was completed and provided to Arcadis on June 26, 2020. Arcadis is currently

reviewing report and will discuss the results with Ford. The installation of the IPM system is pending concurrence from the City of Livonia on structural repairs needed to enable construction of the IPM system.

On June 8, 2020 the property owner notified Arcadis that rats had entered the crawlspace and had damaged an electrical wire to the furnace. Arcadis coordinated Silfco to assess the damage and to repair the electrical wire. In addition, Arcadis coordinated with an exterminator to evaluate the rodent problem at the home in order to evaluate the safety of work conditions. The contractor deployed 4 bait stations around the home to resolve the rodent issue prior to the installation of the IPM.

### **Interim Preemptive Mitigation Systems Operating as Designed**

- **34644 Beacon** – Arcadis began construction of the IPM system on February 13, 2020, and installation was substantially complete on March 6, 2020 with all monitoring points meeting the performance metric established by EGLE of -0.02 in water column (wc). During the COVID stop work the homeowner altered the well around the additional crawl space access installed by Arcadis. The homeowner claims that the access well was not large enough for him to access. The homeowner has informed Arcadis that the crawl space access well must be made larger and will not allow any additional activities until his request is met. Arcadis has ordered the materials to complete the access well modification. Arcadis is trying to schedule the post mitigation OMM and indoor air sampling along with the final items remaining from the install. On June 24, 2020, the property owner turned off the mitigation fan. Arcadis called the property owner on June 24, 2020 and left a voicemail message indicating that the system had been turned off. The property owner did not call Arcadis back, but turned the mitigation system back on June 26, 2020
  - **12088 Brewster** – The system is currently in routine operation and maintenance. This property has recently been sold. On June 29, 2020 following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Approximately two gallons of water was removed from the crawlspace barrier. Vacuum influence measurements were collected and exceeded metrics.
  - **12075 Brewster** – The system is currently in routine operation and maintenance. On June 24, 2020 Arcadis entered the crawlspace and inspected the barrier. Water was not observed on the barrier. Arcadis is working with the property owner to schedule the installation of an exterior crawlspace entrance. The new entrance will eliminate the need to enter the home to gain access to the crawlspace. On June 29, 2020 following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. A minimal amount of water, approximately two to three ounces, was wiped up and removed from the crawlspace barrier.
  - **12089 Boston Post** – The system is currently in routine operation and maintenance. On June 29, 2020, following the rain event Arcadis contacted the homeowner to verify that water was not observed in the basement from the rain event. The homeowner was not able to inspect the basement currently.
- 34450 Beacon** - The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis inspected the property and observed standing water in the back yard. Due to CDC social distancing guidelines and the location of the crawlspace access being inside the home, Arcadis was not able to enter the crawlspace and check the barrier for water. On June 9, 2020 Arcadis was granted access to enter the crawlspace and inspect the barrier for water. Arcadis removed twenty-eight gallons of water and made minor repairs. Arcadis contacted the property owner requesting permission to install an exterior crawlspace entrance to avoid having to enter the home to gain access to the crawlspace. The property owner declined to have the new entrance installed.

On June 20, 2020 following a rain event, Arcadis was not able to enter the crawlspace and check the barrier for water. Arcadis contacted the homeowner to verify if water was observed in the crawlspace. The homeowner is not available to check the barrier currently. Arcadis will coordinate with the homeowner and schedule a date to inspect the barrier.

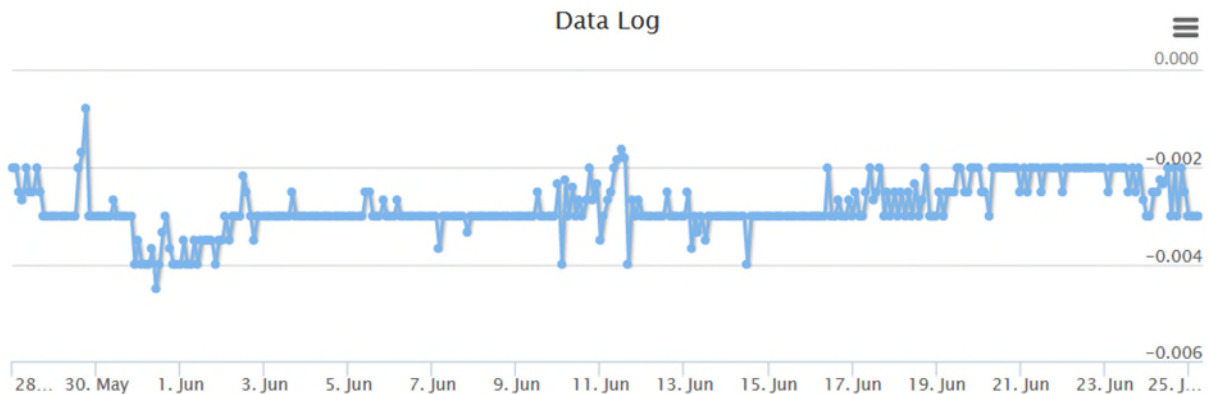
- **34401 Capitol** –The system is currently in routine operation and maintenance. On June 29, 2020, following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Approximately one gallon of water was removed from the crawlspace barrier. Minor repairs were made to barrier seams following the removal of the water. Arcadis collected vacuum influence readings and all monitoring points achieved metrics.
- **34380 Beacon** – The system is currently in routine operation and maintenance. The homeowner was not available during the first quarter 2020 heating season so the final OM&M sampling event will occur in the fourth quarter so it can be completed during the heating season. On June 30, 2020 Arcadis completed the first routine semi-annual OM&M monitoring event, at this time Arcadis also inspected the barrier for water following the rain event and did not observe any water on the crawlspace barrier. Arcadis collected vacuum influence readings and all monitoring points achieved metrics.
- **12091 Brewster** – The system is currently in routine operation and maintenance. Arcadis has contacted the homeowner on multiple occasions and the homeowner continues to deny access to mitigate the detached garage. Arcadis will continue to inquire with the homeowner regarding gaining access to mitigate the garage. 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 vapor intrusion sampling have been completed to date, and there have been no exceedances of the seven constituents of concern (COCs) for indoor air or sub-slab soil gas in the garage or home. During the OMM/sampling event on January 23, 2020, Arcadis asked the homeowner again about access to the garage for the application of Retro-Coat™. The property owner is reconsidering allowing access to the detached garage to have Retro-Coat™ applied later in the fall of 2020. Arcadis spoke with the homeowner to schedule the application of Retro Coat in his garage and the homeowner indicated they are working with their brother to remove the car that their brother is storing in his garage which may not occur until the fall of 2020. Arcadis will continue to work with the homeowner to arrange access for the retro coat application in 2020.

On June 24, 2020 Arcadis completed a check of the IPM system including collecting vacuum influence readings from monitoring points. All monitoring points exceeded -0.020 in wc.

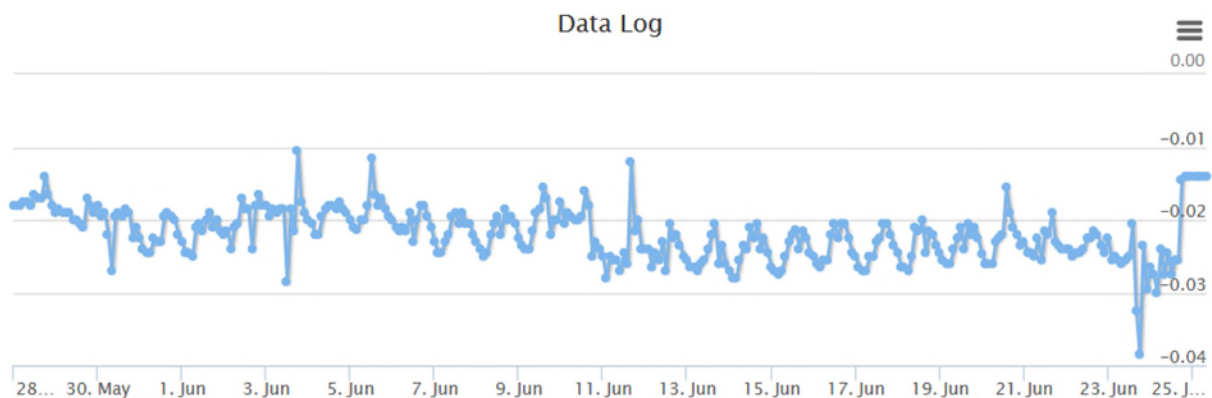
- **34424 Beacon** – The system is currently in routine operation and maintenance.
- **34920 Beacon** – The system is currently in routine operation and maintenance.
- **34950 Beacon** – The system is currently in routine operation and maintenance.
- **12017 Brewster** – The system is currently in routine operation and maintenance.
- **34600 Beacon** – The system is currently in routine operation and maintenance.
- **12131 Boston Post** –The system is currently in routine operation and maintenance. On February 10, 2020, the homeowner reported the presence of moisture on the geotextile that was installed between the barrier covering the Cupolex® and the plywood flooring that was installed in the basement portion of the home as part of the mitigation system. Arcadis provided the homeowner with a dehumidifier on February 20, 2020. Arcadis removed a portion of the plywood flooring and geotextile where moisture was present on February 27, 2020. On June 24, 2020 Arcadis and the construction contractor visited

the property to look at the basement with the homeowner. Alternative flooring to replace the geotextile and plywood was discussed with the homeowner which would involve pouring a concrete floor on top of the Cupolex®. The installation of the concrete floor is being planned for late July based on contractor availability.

An update of the data logged by the vacuum transmitter connected to MP-4 is presented below demonstrating that vacuum is continuously being maintained and that the system continues to operate effectively.



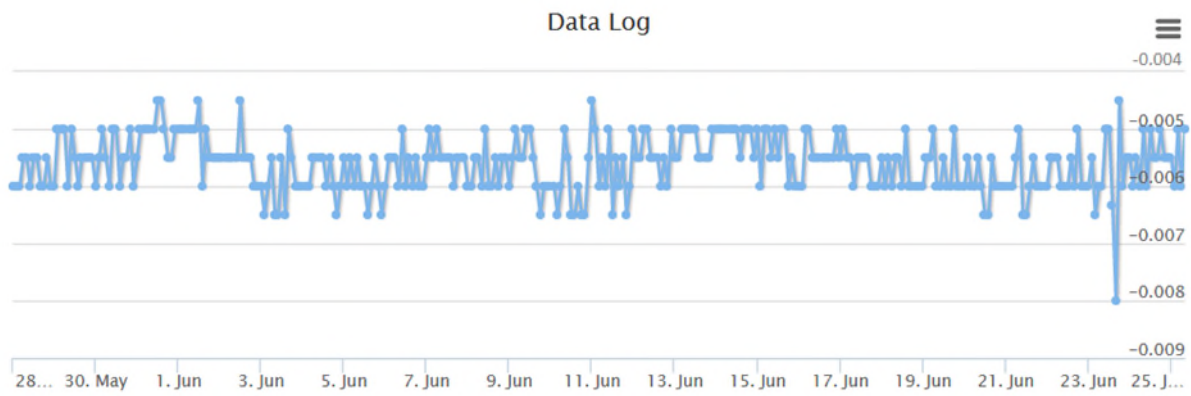
- **12101 Brewster** – The system is currently in routine operation and maintenance. On June 29, 2020 following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Approximately one gallon of water was removed from the crawlspace barrier.
- **12067 Boston Post** –The system is currently in routine operation and maintenance. An update of the data logged by the vacuum transmitter connected to MP-1 is presented below demonstrating that vacuum is being maintained and that the system continues to operate effectively. On June 30, 2020 following the rain event, Arcadis inspected the crawlspace barrier for water. Approximately seventy-five gallons of water were removed from the crawlspace barrier. Minor repairs were made to the barrier seams. Vacuum influence measurements were collected, and all monitoring points achieved metrics.



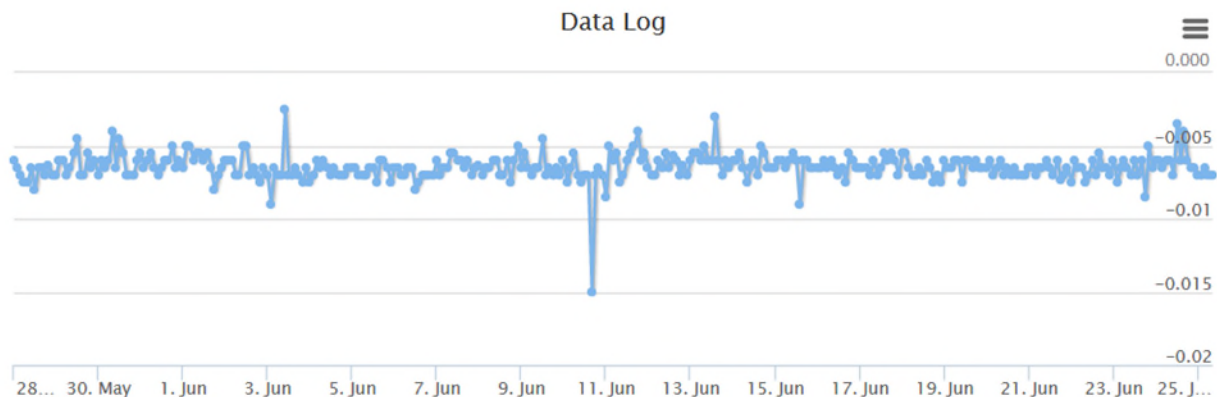
- **34550 Beacon** – The system is currently in routine operation and maintenance.

- **34940 Beacon** – The system is currently in routine operation and maintenance.
- **12141 Boston Post** –The system is currently in routine operation and maintenance. Additional non-routine indoor air sampling will be conducted to demonstrate effectiveness of the mitigation system in the portion of the home that is not being monitored for sub-slab vacuum influence. Arcadis has scheduled an OM&M inspection and indoor air sampling for July 20, 2020. Arcadis will continue to work to coordinate the monitoring point installation in the northern living room space with the homeowner.

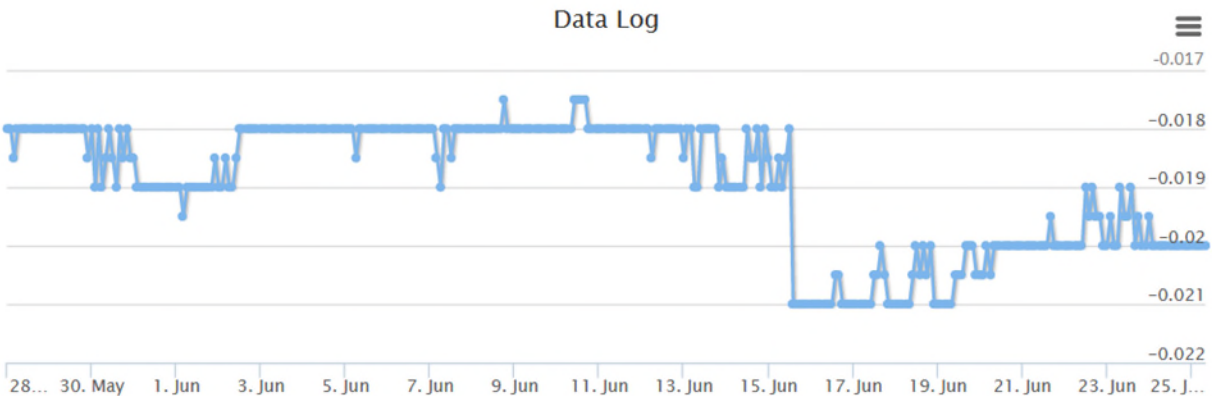
An update of the data logged by the vacuum transmitter connected to MP-4 is presented below demonstrating that vacuum is continuously being maintained and that the system continues to operate effectively. Additional valve adjustments are proposed and will be completed during the July 2020 OM&M event to further increase the vacuum level at MP-4.



- **12066 Boston Post** – The system is currently in routine operation and maintenance. On June 29, 2020 following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Approximately two gallons were removed from the crawlspace barrier. Vacuum influence readings were collected, and metrics were achieved.
- **12036 Brewster** - The system is currently in routine operation and maintenance. An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below demonstrating that vacuum is being maintained and that the system continues to operate effectively. On June 30, 2020, following the rain event, Arcadis contacted the homeowner to verify that water had not been observed in the basement. The homeowner stated that water was not observed in the basement.



- 34990 Beacon** – The system is currently in routine operation and maintenance. An OM&M inspection was completed on June 9, 2020. The final routine OM&M sampling event scheduled for March 30, 2020 was delayed as a result of the stay at home order. The sampling event will be completed during the fourth quarter so that it can be completed during the heating season. An update of the data logged by the vacuum transmitter connected to MP-7 is presented below demonstrating that vacuum is continuously being maintained and that the system continues to operate effectively.

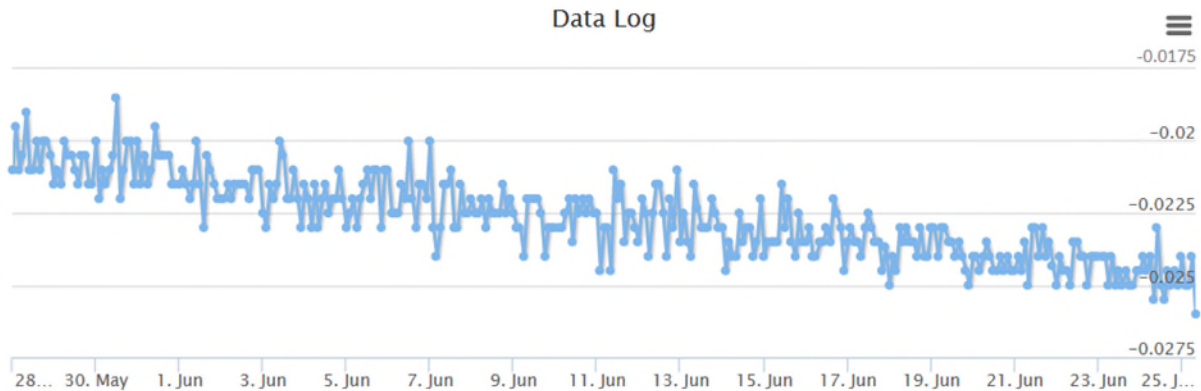


The property owner has initially denied the application of Retro-Coat™ in the detached garage since the floor has an existing epoxy coating and imbedded tubing for radiant heat. Arcadis provided an alternate mitigation system design for the garage to the homeowner for approval on March 19, 2020. In addition, there have been four rounds of indoor air sampling that has been conducted in the garage, and to date there has been no detections or exceedances of the seven constituents of concern.

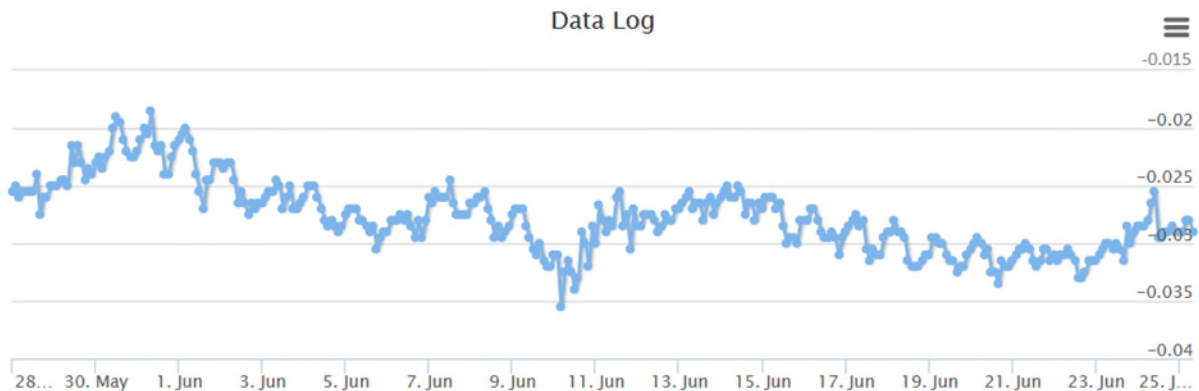
Reconstruction including the installation of drywall covering the basement walls that have been mitigated through the application of Retro-Coat™ began on February 6, 2020 and was substantially completed in March 2020. The reconstruction of the basement included installation of a water sensor and access panels. The remaining work including the installation of carpeting on the basement stairs was completed on June 10, 2020.

On June 16, 2020 Arcadis completed a follow up system inspection. Adjustments and repairs were made during the inspection to increase vacuum influence at MP-7.

- 34591 Beacon** – The system is currently in routine operation and maintenance. An update of the data logged by the vacuum transmitter connected to SSMP-1 is presented below demonstrating that vacuum is continuously being maintained and that the system continues to operate effectively. On June 30, 2020, following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Approximately twenty gallons of water was removed from the crawlspace barrier. Vacuum measurements were collected, and metrics were achieved.



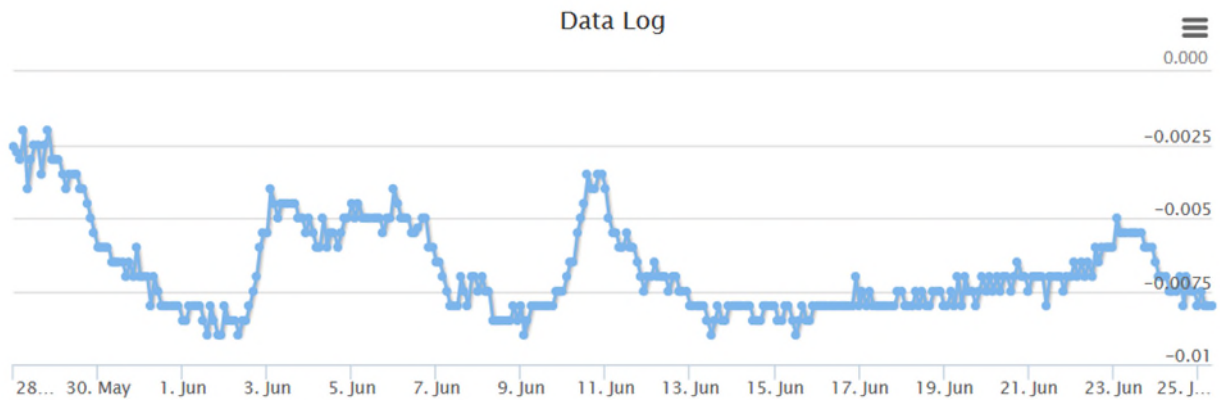
- **34367 Capitol** – The system is currently in routine operation and maintenance.
- **34480 Capitol** – The system is currently in routine operation and maintenance. An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below demonstrating that vacuum is continuously being maintained and that the system continues to operate effectively.



- **12070 Boston Post** – The system is currently in routine operation and maintenance.
- **34682 Beacon** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event was completed on February 24, 2020 along with the first routine semi-annual OM&M event. On June 29, 2020 Arcadis completed an OM&M inspection. Arcadis attempted to collect vacuum readings at all SSMPs and MPs, however two SSMPs were obstructed by household objects and the homeowner would not grant Arcadis access to SSMP-1 or SSMP-4. The recorded vacuum levels at accessible monitoring points included the following: SSMP-2 (-0.004 in wc), SSMP-3 (-0.012 in wc), SSMP-5 (-0.006 in wc), MP-4 (-0.012 in wc), and MP-5 (-0.006 in wc). An air purifier was provided to the homeowner on March 25, 2020. At the request of the homeowner Arcadis picked up the air purifier on June 29, 2020.

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





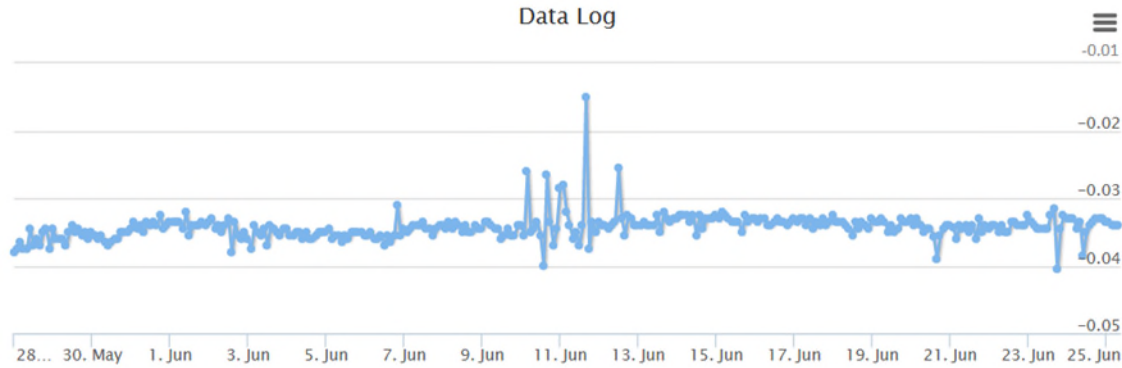
### **Interim Preemptive Mitigation System is Installed but Requires Modification**

Mitigation systems at 2 of the 33 properties require additional mitigation activities. Details are provided below regarding the status of the work at this property.

- 34424 Capitol Avenue** - An interim air purifier unit was on November 21, 2019 and a replacement unit was deployed on February 2, 2020 and May 20, 2020. Arcadis began construction of the IPM system on January 7, 2020, and installation was substantially complete on February 13, 2020. However, work continued at the property through February 19, 2020 to complete the installation of the new crawlspace access door. Modifications are being evaluated to improve system performance in the slab on grade portion of the home. On June 29, 2020, Arcadis completed the routine OM&M monitoring event. Arcadis also inspected the barrier for water following the rain event and did not observe any water on the crawlspace barrier. Arcadis collected vacuum influence readings and all monitoring points achieved metrics (-0.020 in. wc) other than slab monitoring point SSMP-1, which is currently being evaluated.

**12100 Boston Post** – The property owner declined an interim air purifier unit. An interim preemptive mitigation system was installed as designed and has been in operation since March 25, 2019. The routine OM&M sampling event for the first quarter of 2020 was completed on February 10, 2020 along with the routine semi-annual OM&M monitoring event. The vacuum transmitter installed at sub-slab monitoring point SSMP-4 continues to confirm vacuum influence, and the other two sub-membrane monitoring points and two sub-slab monitoring points installed at this property were all measured at stronger vacuum influence. However sub-slab monitoring point SSMP-2 was measured at -0.001 in wc. Arcadis has contacted the property owner to propose additional system modifications and will work with the homeowner to schedule the completion of this task. Additionally, during the OM&M visit, the homeowner again denied access to the shed, indicating that the roof is falling in. The homeowner stated that the shed may be accessible later this year if the roof is repaired by the homeowner. Arcadis will again request access to the shed during each routine semi-annual OM&M event until access has been granted.

An update of the data logged by the vacuum transmitter connected to sub-slab monitoring point SSMP-4 is presented below demonstrating that vacuum is continuously being maintained at SSMP-4.



### **Interim Preemptive Mitigation Systems Declined – Extension Requested**

- 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 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.

In the July 26, 2019 letter EGLE requested an update for the property located at 12034 Brewster. On April 19, 2019, Arcadis provided EGLE documentation based on groundwater data that had been collected from a newly installed shallow monitoring well MW-192S. Monitoring well MW-192S analytical results showed no presence of vinyl chloride or any other constituent of concern. Based upon that data the 100-foot buffer was moved to the north. Subsequently, 12034 Brewster no longer resided in the 100-foot buffer; therefore, the installation of the interim preemptive mitigation system was put on hold. Although the interim preemptive mitigation system installation was put on hold vapor intrusion sampling continues.

Arcadis continues to work diligently to schedule the additional work at 12100 Boston Post and 34424 Capitol to complete the installation of the interim preemptive mitigation systems as well as to coordinate mitigation activities at the three remaining properties (34380 Capitol, 34450 Capitol, and 12124 Boston Post). Arcadis will continue to coordinate and complete OM&M activities as necessary to evaluate the performance of the operating preemptive mitigation systems.