

MEMO

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Date:
May 29, 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

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 business 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 will resume on Monday June 15, 2020 if the executive order is lifted by the

Governor. As of May 29, 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:
 - 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:
 - 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:
 - 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. Arcadis will continue to coordinate the installation of the mitigation system with the homeowner. An interim air purifier unit was deployed on November 20, 2019. At the request of the homeowner a second unit was deployed on November 22, 2019. Both purifiers were replaced on February 17, 2020. The homeowner has been contacted regarding replacing the purifiers. The homeowner was not able to arrange an exchange at this time. Arcadis will continue to work with the homeowner to schedule the delivery of purifiers. Monthly vapor intrusion sampling was completed on December 9, 2019, January 14, 2020, and February 18, 2020. The VI sampling was scheduled with the homeowner for March 17, 2020 and was cancelled as a result of the COVID-19 Force Majeure. Monthly sampling is scheduled to resume in June after the COVID-19 Force Majeure suspension has passed.

- **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. Work is currently suspended due to the COVID-19 Force Majeure and will resume after the suspension has passed.

- **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 finalize the structural design modifications for the installation of the IPM system. 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. Work will resume after the Force Majeure suspension has passed and upon approval from the City of Livonia to proceed.

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). The post-mitigation OMM and indoor air sampling will be completed once the order is suspended.
- **12088 Brewster** – The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. Twenty-three gallons of water was removed from the crawlspace barrier. Minor repairs were made to the barrier to prevent water from pooling on the barrier.
- **12075 Brewster** – The system is currently in routine operation and maintenance. On May 29, 2020, following a rain event, Arcadis called the homeowner to verify that water was not observed in the crawlspace from the rain event. The homeowner stated that they were unable to verify if there was water on the barrier. 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. Arcadis will reinspect the barrier, remove any potential water, and make repairs if necessary once the order has been suspended.
- **12089 Boston Post** – The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis called the homeowner and to verify that water was not observed in the basement from the rain event. The homeowner stated that there was no water in his basement or in the system.

On May 19, 2020 Arcadis received a system alarm. Arcadis reached out to the homeowner who stated that there were water noises in the suction pipe from the rain event and he would turn the system on after the water has receded. On May 24, 2020, the system returned to normal operation.

- **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. Arcadis will reinspect the barrier, remove any potential water, and make repairs if necessary once the order has been suspended.
- **34401 Capitol** –The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis inspected the crawlspace, and identified water on and under the barrier. On May 21, 2020 Arcadis inspected the crawlspace again, and detected water below the barrier. Arcadis returned on May 27, 2020 to reinspect the barrier and observed water below the barrier had receded. An additional visit to remove the remaining water on the barrier and make repairs was completed on May 28.
- **34380 Beacon** – The system is currently in routine operation and maintenance. The first routine semi-annual OM&M monitoring event will be scheduled with the property owner once the order is

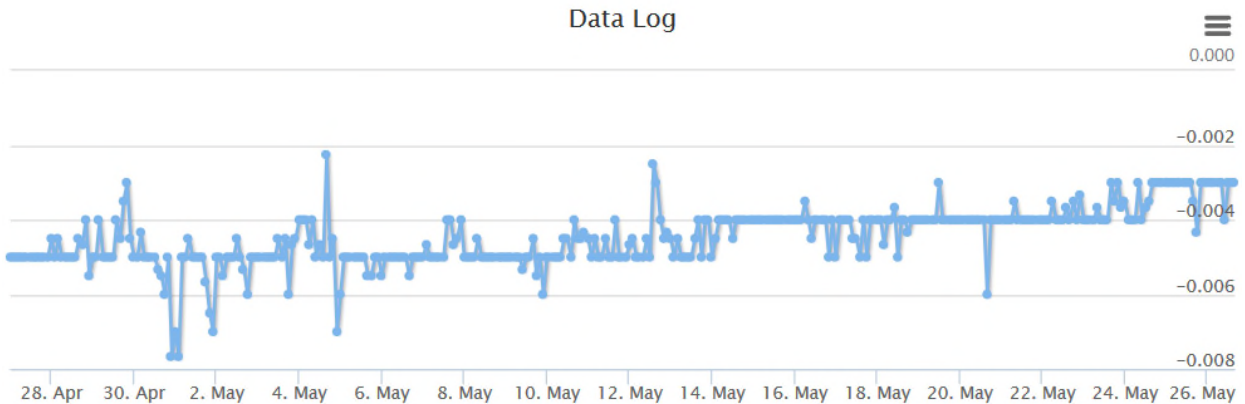
suspended. If the OM&M monitoring event is completed outside of the heating season, the final OM&M sampling event will not occur until the fourth quarter so that it can be completed during the heating season.

On May 19, 2020, following a rain event, Arcadis inspected the crawlspace, and did not observe any water on the liner.

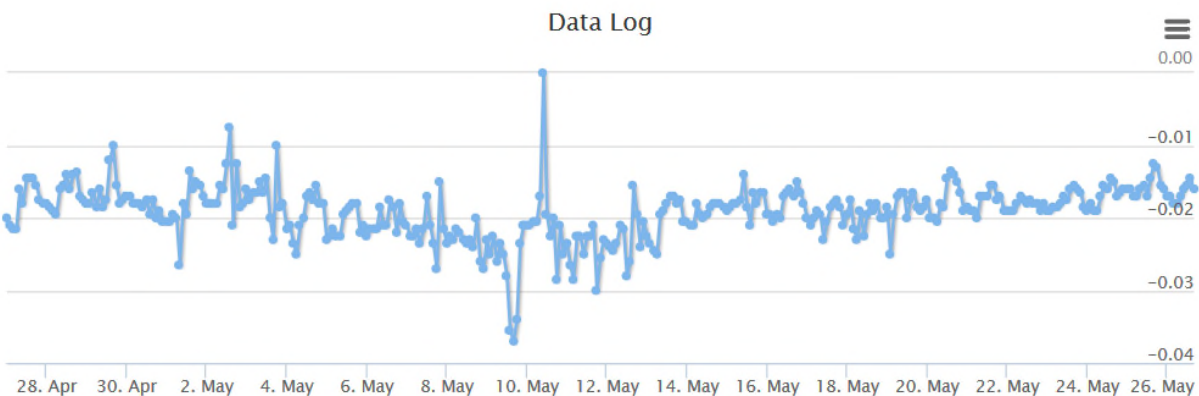
- **12091 Brewster** – The system is currently in routine operation and maintenance. Arcadis has contacted the homeowner on multiple occasions and the homeowner continues to deny access to mitigate the detached garage. Arcadis will continue to inquire with the homeowner regarding gaining access to mitigate 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 will continue to work with the homeowner to arrange access for the retro coat application in the summer of 2020.
- **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.

During a call with the homeowners on March 18, 2020 to discuss the flooring, Arcadis indicated that work is currently suspended due to the COVID-19 Force Majeure. The homeowner indicated during the call that they are not comfortable with people working in their house at this time due to the spread of the COVID-19 virus. Work is currently suspended due to the COVID-19 Force Majeure and Arcadis will work with the homeowner to schedule after it has passed to assess the floor.

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.

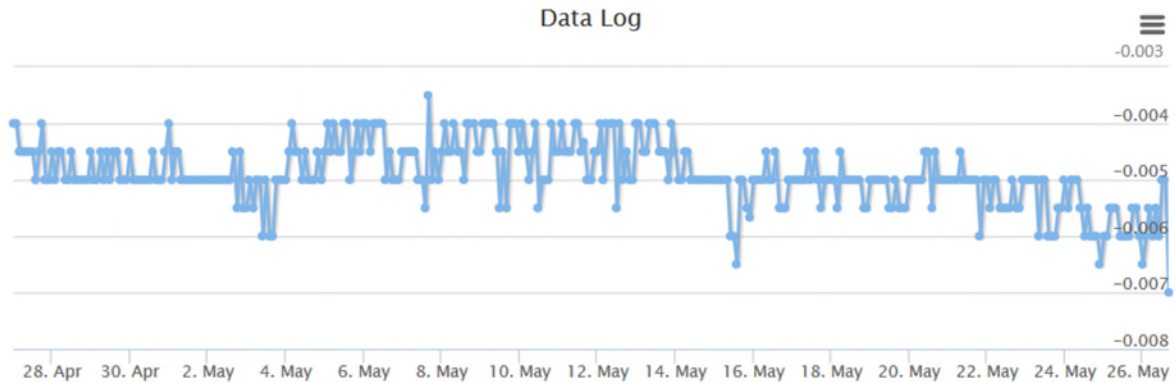


- **12101 Brewster** – The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis inspected the crawlspace, and did not observe any water on the barrier.
- **12067 Boston Post** –The system is currently in routine operation and maintenance. An update 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.



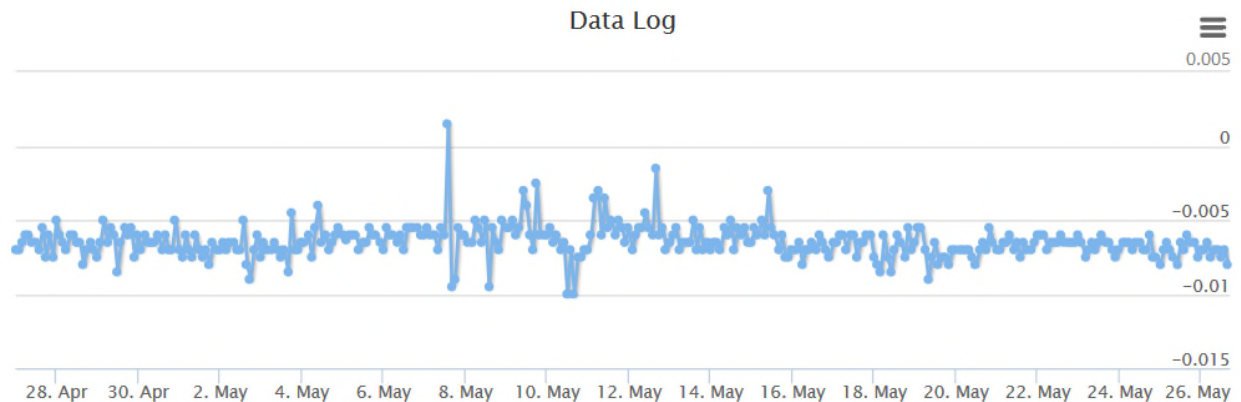
- **34550 Beacon** – The system is currently in routine operation and maintenance.
- **34940 Beacon** – The system is currently in routine operation and maintenance.
- **12141 Boston Post** –The system is currently in routine operation and maintenance. Additional non-routine indoor air sampling will 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. Sampling is currently suspended and Arcadis will work with the homeowner to schedule after it has passed. 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 after the stay at home order has passed to further increase the vacuum level at MP-4.

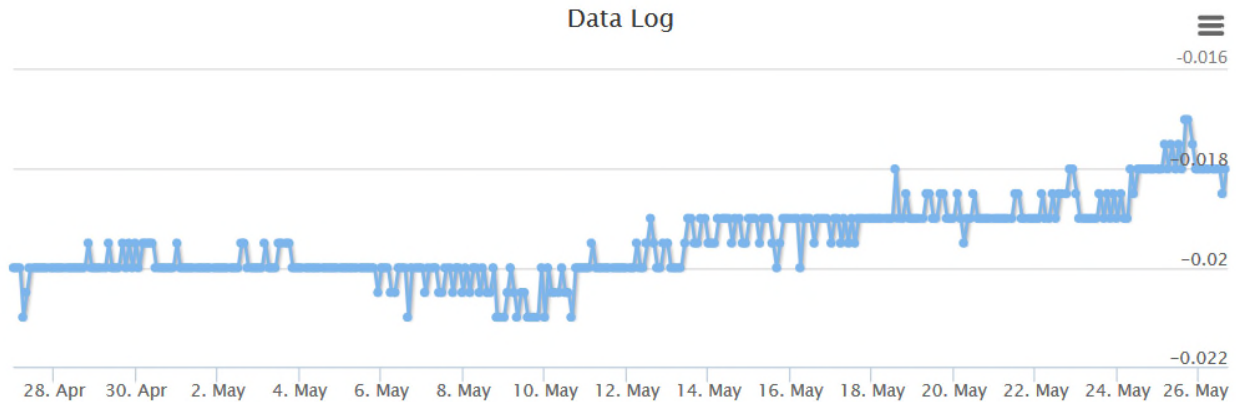


- **12066 Boston Post** – The system is currently in routine operation and maintenance. On May 19, 2020, following a rain event, Arcadis inspected the crawlspace and identified water on the barrier. On May 21, 2020, Arcadis removed sixty gallons of water from the crawlspace barrier. Minor repairs of the liner were conducted using butyl tape and sikaflex following the water removal.
- **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 May 19, 2020, following a rain event, Arcadis called the homeowner to verify that water was not observed in the basement from the rain event. The homeowner stated that there was no water observed. Due to CDC social distancing guidelines, Arcadis was not able to enter the basement and check the for water.



- **34990 Beacon** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event scheduled for March 30, 2020 was delayed as a result of the order. The sampling event will be completed after the order has been suspended. If the OM&M monitoring event is completed outside of the heating season, the final OM&M sampling event will not occur until 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.



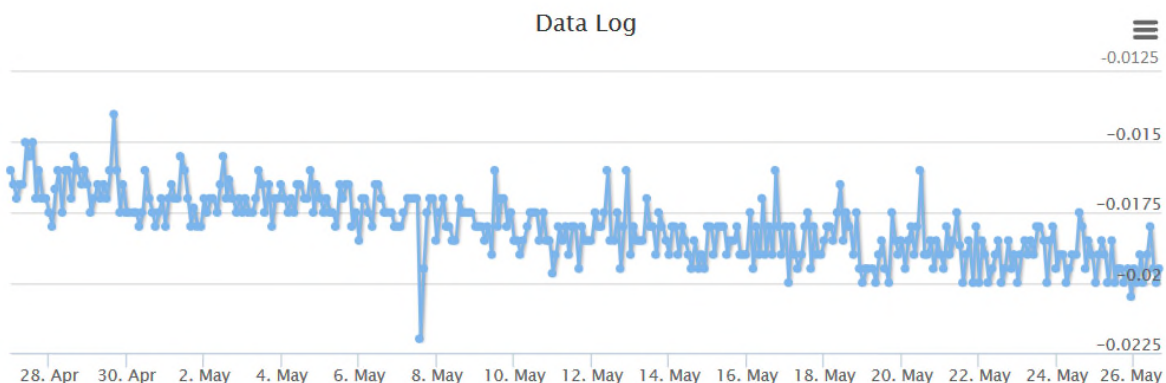
The property owner has initially denied the application of Retro-Coat™ in the detached garage since the floor has an existing epoxy coating and imbedded tubing for radiant heat. Arcadis provided an alternate mitigation system design for the garage to the homeowner for approval on March 19, 2020. In addition, 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. Outstanding work including the installation of carpeting on the basement stairs will be completed after the Force Majeure suspension has passed.

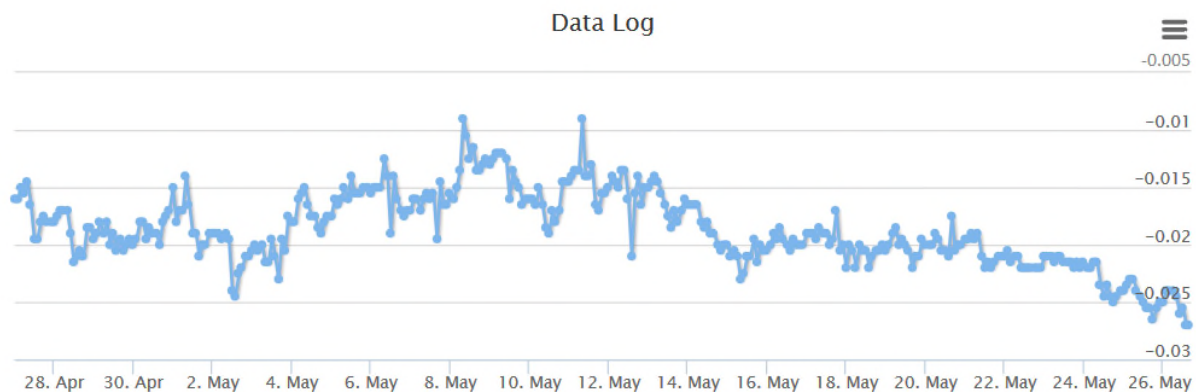
On May 11, 2020 and May 19, 2020, the homeowner notified Arcadis that there was water observed on the northeast corner of the basement on the floor. Arcadis inspected the basement to determine the source of the water and removed water marks from the floor on May 27, 2020. The source of the water was undetermined at this time and additional investigations will be conducted.

- **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 May 19, 2020, following a rain event, Arcadis inspected the crawlspace, and identified water on the barrier. Eighty gallons of water were removed from the crawlspace barrier. Minor repairs were made to the barrier to prevent water from pooling on the barrier. An additional visit to remove the remaining water on the barrier and make repairs was completed on May 28.

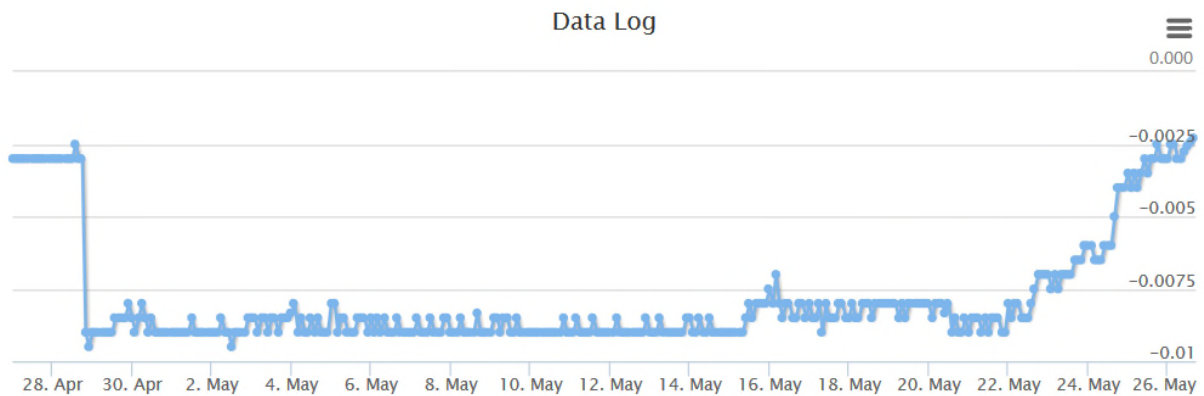


- **34367 Capitol** – The system is currently in routine operation and maintenance.
- **34480 Capitol** – The system is currently in routine operation and maintenance. An update of the data logged by the vacuum transmitter connected to SSMP-2 is presented below demonstrating that vacuum is continuously 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 monitoring event. During the monitoring event the differential pressure at SSMP-4 and SSMP-5 were measured at 0.000 in wc. Reduced vacuum levels were also measured at all of the remaining sub-slab monitoring points: SSMP-1 (-0.007 in wc), SSMP-2 (-0.005 in wc), and SSMP-3 (-0.003 in wc). An additional round of monitoring was conducted on February 26, 2020 at which time the following monitoring point data was collected: SSMP-1 (-0.009 in wc), SSMP-2 (-0.007 in wc), and SSMP-3 (-0.002 in wc). The level at SSMP-5 had recovered to -0.003 in wc (this is a correction from the -0.009 in wc that was included in the February 2020 Monthly Update). The level at SSMP-4 was measured at 0.000 in wc. To accommodate the homeowner's schedule the event was scheduled for 7:00 pm in the evening, Arcadis was not able to complete additional troubleshooting during this event. Arcadis will continue to work with the homeowner to coordinate additional O&M activities after the COVID-19 Force Majeure suspension has passed to resolve this condition. In the interim, an air purifier was provided to the homeowner on March 25, 2020. The analytical data package was provided to all interested parties consistent with the access agreement on April 16, 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, however the vacuum level has been decreasing recently.



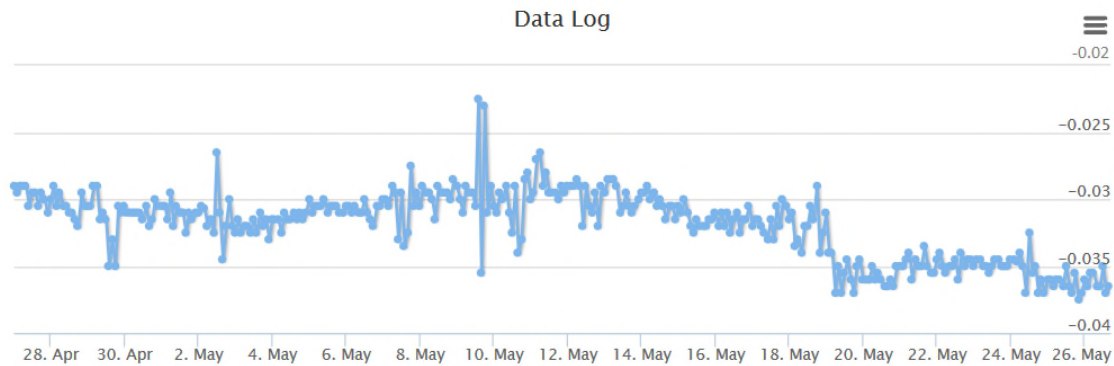
Interim Preemptive Mitigation System is Installed but Requires Modification

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.
- 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. The analytical data package was provided to all interested parties consistent with the access agreement on April 23, 2020.

Arcadis has contacted the property owner to propose additional system modifications and will work with the homeowner to schedule the completion of this task after the COVID-19 Force Majeure suspension has passed. 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 coordinated 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.