

MEMO

To:

Paul Owens, District Supervisor
EGLE Warren District Office
27700 Donald Court
Warren, Michigan 48092-2793

Copies:

Ms. Beth Vens, EGLE
Mr. Brandon Alger, EGLE
Mr. Todd Walton, Ford

Arcadis of Michigan, LLC
28550 Cabot Drive
Suite 500
Novi
Michigan 48377
Tel 248 994 2240
Fax 248 994 2241

From:

Kris Hinskey

Date:

October 31, 2019

Arcadis Project No.:

30016352 (MI001454.0007)

Subject:

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

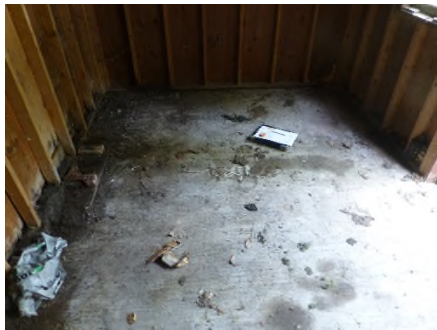
On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this monthly update to the interim preemptive mitigation system installation for the Livonia Transmission Plant (LTP) site (the site) as requested by Michigan Department of Environment, Great Lakes, and Energy (EGLE) via email on May 26, 2019 and on July 26, 2019. As of October 31, 2019, the following progress has been made at 30 residential properties in the Alden Village subdivision:

- 30 of 30 interim preemptive mitigation system are designed
- 26 of 30 interim preemptive mitigation systems are installed and operating as designed
- 1 of 30 interim preemptive mitigation system is installed but requires modification
- 1 of 30 interim preemptive mitigation system installations is awaiting homeowner approval
- 2 of 30 current property owners are unwilling to allow the mitigation systems to be installed at their properties
- 10 of 12 sheds with RetroCoat has been applied to the floor
- 2 of 12 property owners with sheds have not approved RetroCoat application
- 10 of 13 detached garages with RetroCoat has been applied to the floor
- 3 detached garage owners have not approved RetroCoat application

Arcadis continues to work diligently to coordinate and install the interim preemptive mitigation systems. Details are provided below for all 30 locations.

Interim Preemptive Mitigation Systems Operating as Designed

- **12088 Brewster** – The system is currently in routine operation and maintenance. The final routine Operation, Maintenance, and Monitoring (OM&M) sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the shed floor was completed on October 10th. One moving container and professional movers were provided to the property owner during the application. Before and after photos are provided below. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.



12088 Brewster shed before

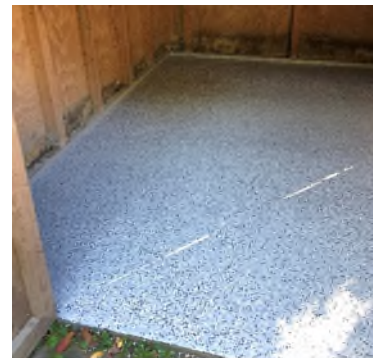


12088 Brewster shed RetroCoat

- **12075 Brewster** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the shed floor was completed on October 8th. The resident stores very little in the shed and declined a moving container or movers. Before and after photos are provided below. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.



12075 Brewster shed before



12075 Brewster shed RetroCoat

- **12089 Boston Post** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the detached garage floor was completed on September 27, 2019. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis contacted the homeowner to inquire if any water was observed in their basement after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded. No water was observed in the basement by the homeowner.
- **34450 Beacon** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the detached garage floor was completed on October 7th. One moving container and professional movers were provided to the property owner during the application. Before and after photos are provided below. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.



34450 Beacon garage before



34450 Beacon garage RetroCoat

- **34401 Capitol** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the detached garage and shed was completed on September 25, 2019. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.
- **34380 Beacon** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the detached garage and shed was completed on September 20, 2019. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.

- **12091 Brewster** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. On September 5, 2019, the Arcadis Communication Liaison discussed with the property owner the process to apply RetroCoat to the floor of the property owners detached garage. The property owner said thank you very much for this very kind offer, but he will need to decline. He does not want anyone to be in his garage. The property owner said no one is living in his garage nor does he intend to have anybody else live in his garage. On September 16, 2019 the Arcadis Communication Liaison spoke to the property owner while he was in the neighborhood and asked if he had changed his mind about having his garage RetroCoated. The property owner said no thank you, but he will not allow anyone working on his garage.
- **34424 Beacon** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the shed floor was completed on September 20, 2019.
- **34920 Beacon** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the detached garage floor and walls was completed on October 31th. Two moving containers from PODS and professional movers were provided to the property owner during the application. Prior to applying the RetroCoat, a concrete slab was poured over the existing slab in the main portion of the garage and a trench drain installed. An interior doorway was also widened per the homeowner's request. The floor and wall work was approved by the City of Livonia building inspector. Before and after photos are provided below.



34920 Beacon garage before



34920 Beacon garage RetroCoat

- **34950 Beacon** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application on the detached garage floor was completed on October 9th. Two moving containers and professional movers were provided to the property owner during the application. Before and after photos are provided below.



34950 Beacon garage before



34950 Beacon garage RetroCoat

- **12017 Brewster** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat of the shed was completed on September 25, 2019.
- **34600 Beacon** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat of the shed was completed on September 25, 2019.
- **12131 Boston Post** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat of the detached garage was completed on October 14th, 2019. Moving containers and professional movers were provided to the property owners during the application. Before and after photos are shown below.



12131 Boston Post garage before



12131 Boston Post garage RetroCoat

- **12101 Brewster** – The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. Additional grinding and reapplication of the epoxy coating on the attached garage floor was completed on October 24th, 2019 per the homeowner's request. A photo of the completed floor is presented below. Per the Arcadis memo titled "Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces" dated June 28, 2019, Arcadis conducted an inspection of the crawl space after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded. Approximately 2-3 gallons of water was observed and removed during the inspection, which was conducted on Monday October 28, 2019.



12101 Boston Post garage

- **12067 Boston Post** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the detached garage floor was completed on September 27th, 2019.
- **34550 Beacon** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020.
- **34940 Beacon** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020.
- **12141 Boston Post** – Interim preemptive mitigation system was installed as designed and has been in operation since April 9, 2019 for both the home and the attached garage. On September 6, 2019 a vacuum transmitter was installed at monitoring point MP-4, which had the least vacuum influence.

Thus far, performance metrics have not been collected for the interim preemptive mitigation system within the slab on grade portion of the home. Monitoring points have not been installed in the finished spaces (e.g., through carpeted and/or finished floors) per the property owner's request, as documented in the March 29, 2019 field notes. Post mitigation sampling was completed on October 25, 2019. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the detached garage floor was complete on September 19, 2019.

- **12066 Boston Post** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the detached garage was completed on September 20, 2019. Per the Arcadis memo titled "Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces" dated June 28, 2019, Arcadis conducted an inspection of the crawl space after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded. Less than a quart of water was observed during the inspection which was conducted on Monday October 28, 2019 near the crawl space entrance.

- **12036 Brewster** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat application of the shed was completed on September 27, 2019. Per the Arcadis memo titled "Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces" dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.
- **34990 Beacon** –Post mitigation sampling was completed on October 2, 2019. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement. The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The application of RetroCoat to the concrete floor of the shed that is present on the property was completed on August 28, 2019. The property owner denied the application of RetroCoat in the detached garage, since the floor has an existing epoxy coating.
- **34591 Beacon** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. Per the Arcadis memo titled "Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces" dated June 28, 2019 Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.
- **34367 Capitol** –Post mitigation sampling was completed on October 22, 2019. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement. The system is currently in routine operation and maintenance. The RetroCoat of the detached garage floor was completed on October 11th, 2019. Moving containers and professional movers were provided to the property owners during the application. Before and after photos are shown below.



34367 Capitol garage before

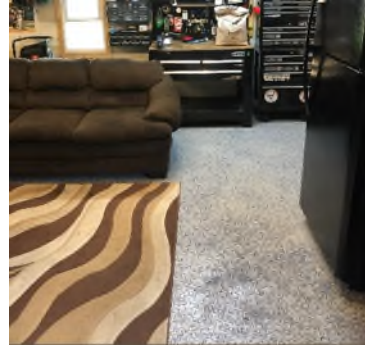


34367 Capitol garage RetroCoat

- **34480 Capitol** –The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. The RetroCoat of the detached garage floor was completed on October 9th, 2019. Moving containers and professional movers were provided to the property owners during the application. Before and after photos are shown below.



34480 Capitol garage before



34480 Capitol garage RetroCoat

- **12070 Boston Post** –Post mitigation sampling was completed on October 22, 2019. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement. The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020.
- **34682 Beacon** - The system is currently in routine operation and maintenance. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020. Per the Arcadis memo titled “Regarding Email received on 5/26/2019- Long term solution to address flooding in crawl spaces” dated June 28, 2019, Arcadis conducted an inspection of the crawl space. The inspection was completed after the rain event on Saturday, October 26th, 2019 when over 1 inch of rainfall was recorded within a 24-hour period. No water was observed during the inspection, which was conducted on Monday October 28, 2019.

Interim Preemptive Mitigation System Currently Being Designed

Initial designs for the interim preemptive mitigations systems have been completed for the 30 properties.

Interim Preemptive Mitigation System is Installed but Requires Modification

Mitigation systems at 1 of the 30 properties require additional mitigation activities. Details are provided below regarding the status of the work at this property.

- **12100 Boston Post** – Interim preemptive mitigation system was installed as designed and has been in operation since March 25, 2019. Post mitigation sampling was completed on May 3, 2019. The analytical data package was provided to all parties consistent with the access agreement on July 13, 2019.

A vacuum transmitter was installed on the monitoring point located in the attached garage addition on May 4, 2019. The transmitter was installed to continuously monitor vacuum levels at SSMP-04 and to confirm that vacuum is being maintained since the vacuum level was less than the performance metric established by EGLE of -0.02 in wc.

On June 11, 2019, sub-slab monitoring point SSMP-01 (located in the slab addition) was measured at -0.002 in wc. However, both of the sub-membrane monitoring point (MP-1 and MP-2) and the sub-slab monitoring points in the attached garage (SSMP-01 and SSMP-03) meet the performance metric established by EGLE of -0.02 in wc. Arcadis contacted the property owner on a weekly basis throughout September inquiring on their availability to gain access for a HVAC professional to investigate the duct system and to conduct further system evaluations. On September 23, 2019,

Arcadis, along with a HVAC professional, evaluated if the ducts in the slab addition are affecting the vacuum influence. Based on observations and discussions with the property owner, the ducts appear to be embedded within the concrete slab, and therefore not affecting vacuum influence. Therefore, lining of the ducts is not warranted. Arcadis was provided access to the property on October 26, 2019 to perform an additional evaluation of the system performance within the slab-on-grade portion of the home. Air leakage was observed to be occurring behind the finished building materials, limiting vacuum propagation. Arcadis will contact the property owner to propose removal of the building materials to access the perimeter of the slab to perform sealing.

On September 16, 2019 the property owner called Arcadis and said that Arcadis will not be able to RetroCoat the floor of her shed. The shed has a concrete floor; however, the shed is not structurally sound. The roof needs to be repaired. It is not safe at this time for anyone to enter it.

Interim Preemptive Mitigation System Installations is Awaiting Homeowner Approval

Mitigation systems at 1 of the 30 properties is currently being scheduled for interim preemptive mitigation activities. Details are provided below regarding the status of the work at this property.

- **12124 Boston Post** – This property was scheduled for installation of the preemptive mitigation system on March 23, 2019. On March 19, 2019, Arcadis received an email from the property owner declining the installation of the preemptive mitigation system. The property owner indicated that he wanted to discuss in further detail with his attorney. The property owner also declined the air purifier on March 18, 2019, citing the purifier would make too much noise and take up too much space. 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. On October 14, 2019 the homeowner approached the Arcadis community liaison and stated that he would like to proceed with the mitigation system installation after the holiday season given that his concerns about noise and smell were addressed. Arcadis meet with the homeowner and reviewed his concerns including issues regarding access to the crawl space and provided an updated design to the homeowner on October 22, 2019. Arcadis spoke to the homeowner on October 29, 2019 to inquire if the homeowner had any comments regarding the new design. The homeowner said that he does not want a suction point installed in his bedroom. Arcadis offered to provide an air purifier to be placed in his home until the installation of the mitigation system was complete. The homeowner declined the offer and said he does not want an air purifier running in his home. Arcadis will continue to work with the homeowner to coordinate the system installation in early January as he requested. The property owner is allowing Arcadis to perform vapor intrusion sampling which was completed on August 7, 2019. The analytical data package was provided to all parties consistent with the access agreement on September 3, 2019.

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.

- **34644 Beacon** - The interim preemptive mitigation system was tentatively scheduled to begin on May 15, 2019. However, the property owner has refused the installation of the interim preemptive mitigation system until the noise of the fans at the adjacent neighbor's property is reduced. In addition, the property owner is only allowing construction activities to occur when they are home, which is after 4:00 PM. The property owner has requested a white liner instead of the black liner in the past.

Arcadis has been working with the property owner to address their concerns, but on June 1, 2019 the property owner contacted Arcadis via telephone indicating that he is not ready to have the system installed and needs to think it over. On July 10, 2019, Arcadis contacted the property owner and again indicated he is not ready for the installation of the interim preemptive mitigation system and asked Arcadis send him the design again so his friend who owns a radon business can review. On July 10, 2019, Arcadis sent the property owner the design, as requested. On July 25, 2019, Arcadis's Community Liaison met with the property owner to determine if he had any further questions or concerns regarding the design. The property owner indicated that he sent our design to his friend who was a radon installer. Based on the radon installers evaluation of the Arcadis design, the property owner indicated that the interim mitigation system will not do anything to remove vapors and he feels it is unnecessary. The property owner indicated that he does not want his home to be tore up for a system that is not needed, does not work, and indicated that Arcadis will not be installing one in his home. Arcadis contacted the property owner via telephone on July 29 and 31, 2019 to schedule the sampling event. The property owner has not allowed access to Arcadis to conduct any additional rounds of indoor air sampling.

Because the property owners have now rejected the installation of an interim preemptive mitigation system, Ford's outside counsel plans to amend the complaint seeking access to the properties at 12121 Boston Post and 12124 Boston Post to also seek access to 34644 Beacon to complete the installation of an interim preemptive mitigation system. The suit seeking access to the properties at 12121 Boston Post and 12124 Boston Post has been removed by those property owners to federal court. Ford has moved to remand that lawsuit to federal court and, once that issue is resolved, will seek to amend the complaint to include access to 34644 Beacon if necessary.

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 continue to schedule the additional work at 12100 Boston Post and to schedule the installation of the interim preemptive mitigation system at 12124 Boston Post. Arcadis has completed the application of RetroCoat to the detached garage and shed floors for property owners that have allowed access. Arcadis will continue to coordinate and complete OM&M activities as necessary to evaluate the performance of the operating preemptive mitigation systems.