

MEMO

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From:

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Date:

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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. 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 program. As of November 30, 2019, the following progress has been made at 33 residential properties in the Alden Village subdivision:

- 2 of 3 additional properties have design visits completed
- 30 of 33 interim preemptive mitigation system are designed
- 26 of 33 interim preemptive mitigation systems are installed and operating as designed
- 1 of 33 interim preemptive mitigation system is installed but requires modification
- 2 of 33 interim preemptive mitigation system installations are awaiting homeowner approval

- 1 of 33 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
- 1 of 12 property owners with sheds have not approved RetroCoat application
- 10 of 14 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 33 locations.

Interim Preemptive Mitigation System Currently Being Designed

Arcadis has notified three additional property owners that mitigation of their homes has been requested by EGLE. Details are provided below regarding the status of the work at the individual properties.

- **34380 Capitol Avenue** – A predesign visit was performed at the property on November 20, 2019. The homeowner was provided with an air purifier for the first floor and the basement of the home. During the visit the homeowner stated that she did not want the work performed until Spring. The homeowner stated that she had lived with the situation for 30 years and four months was not going to make a difference. Arcadis is currently drafting the interim preemptive mitigation system design. Once completed, the design will be provided to all parties and for the property owner's approval. Upon approval of the design, Arcadis will coordinate a schedule for completion with the homeowner. In an email received by Ford on April 24, 2019, EGLE and the Michigan Department of Human Health and Services requested monthly vapor intrusion sampling for homes with a basement until the interim preemptive mitigation systems was in operation due to the present of a basement. The next monthly vapor intrusion sampling event is scheduled for December 9, 2019.
- **34424 Capitol Avenue** - A predesign visit was performed at the property on November 21, 2019. The homeowner was provided with a purifier for the home. Arcadis is currently drafting the interim preemptive mitigation system design. Once completed, the design will be provided to all parties and for the property owner's approval.
- **34450 Capitol Avenue** – An air purifier was provided to the homeowner on November 20, 2019. A predesign visit was performed at the property on November 25, 2019. Arcadis is currently drafting the interim preemptive mitigation system design. Once completed, the design will be provided to all parties and for the property owner's approval.

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.
- **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.
- **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.

- **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.
- **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.
- **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.
- **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. The property owner has declined access to have RetroCoat applied to 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.
- **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.
- **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.
- **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.
- **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.
- **12131 Boston Post** –The system is currently in routine operation and maintenance. A vacuum transmitter was installed at crawlspace sub-membrane monitoring point MP-4 on November 11, 2019. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020.
- **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.
- **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 following information is provided in response to the letter received from EGLE on November 18, 2019. A vacuum transmitter was installed at sub-membrane monitoring point MP-1 on August 28, 2019. The following data was collected on that date: MP-1 = -0.009 in wc; MP-2 = -0.028 in wc; MP-3 = -0.088 in wc; MP-4 = -0.090 in wc. The transmitter was installed to continuously monitor vacuum levels 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.
- **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 has the lowest measured 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. The following information is provided in response to the November 18, 2019 letter from EGLE. The property owner's denial of the monitoring point installation is documented in the October 24, 2018 and March 29, 2019 field notes. On November 25, 2019 Arcadis inquired again about the possibility of installing a sub slab monitoring point in the northwest corner of the living room and in the northeast corner of the dining room and are currently waiting for a response.

In addition, post mitigation sampling was completed on October 25, 2019 demonstrating the effectiveness of the mitigation system. The post-mitigation indoor air sample collected on that date was located directly in the slab on grade area of the home where monitoring of the differential pressure generated by the mitigation system is not being allowed by the homeowner. The analytical data package was provided to all parties consistent with the access agreement on November 25, 2019. The results of the sampling show that there are no exceedances of indoor air criteria within the home, and therefore demonstrate the effectiveness of the mitigation system. The final routine OM&M sampling event will be scheduled with the property owner in the first quarter of 2020 to provide further evidence of the effectiveness of the mitigation system.

- **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.
- **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.
- **34990 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 property owner denied the application of RetroCoat in the detached garage, since the floor has an existing epoxy coating. The following information is provided in response to the November 18, 2019 letter from EGLE. The September 30, 2019 Offsite Interim Preemptive Mitigation Installation Monthly Update provided details on the installation of a vacuum transmitter and the operating vacuum levels at each of the monitoring points that were achieved after valves were adjusted to optimize the vacuum levels. The transmitter was installed to continuously monitor vacuum levels 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.
- **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. The following information is provided in response to the November 18, 2019 letter from EGLE. The September 30, 2019 Offsite Interim Preemptive Mitigation Installation Monthly Update provided details on the installation of a vacuum transmitter and the operating vacuum levels at each of the monitoring

points that were achieved after valves were adjusted to optimize the vacuum levels. The transmitter was installed to continuously monitor vacuum levels 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.

- **34367 Capitol** – Post mitigation sampling was completed on October 22, 2019. The analytical data package was provided to all parties consistent with the access agreement on November 20, 2019. 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.
- **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.
- **12070 Boston Post** – Post mitigation sampling was completed on October 22, 2019. The analytical data package was provided to all parties consistent with the access agreement on November 20, 2019. 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. The following information is provided in response to the November 18, 2019 letter from EGLE, the September 30, 2019 Offsite Interim Preemptive Mitigation Installation Monthly Update provided details on the installation of a vacuum transmitter and the operating vacuum levels at each of the monitoring points that were achieved after valves were adjusted to optimize the vacuum levels. The transmitter was installed to continuously monitor vacuum levels 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.

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 additional sealing to reduce air leakage.

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. In the November 18, 2019 letter EGLE provided Ford, EGLE requested an update regarding obtaining access to the shed that is currently on the property. As indicated above the structure is currently not safe for anyone to access per the property owner and needs significant repair. Currently as constructed the shed is considered to be not habitable. If the property owner fixes the shed and the structure is deemed habitable, then the structure will be reevaluated for the application of RetroCoat. A picture of the shed is provided below.



Interim Preemptive Mitigation System Installations Awaiting Homeowner Approval

Mitigation systems at 2 of the 33 properties are 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 met 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 the property owner has requested. Because the property

owner is now allowing access, Ford has now dismissed its claim for access to this property in the complaint that was filed on July 10, 2019.

- **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. The homeowner has a purifier provided by Arcadis operating in his home.

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 the 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.

On November 14, 2019, Arcadis contacted the homeowner who indicated that he had additional questions, but he was considering the installation of a mitigation system in his home. An Arcadis engineer and subcontractor supervisor visited the home on the evening of November 14, 2019 to answer the homeowner's questions. Based on additional information observed during this predesign visit Arcadis has updated the design plan for this property. The revised plans were submitted to the homeowner for review on November 20, 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.

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 state court. That motion to remand is now fully briefed and awaiting a ruling from the 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. The claim for access to 12121 Boston Post

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remains pending, but the claim for access to 12124 Boston post has been dismissed because the property owner is now allowing access.

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 systems at the five remaining properties. Arcadis will continue to coordinate and complete OM&M activities as necessary to evaluate the performance of the operating preemptive mitigation systems.