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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 December 31, 2019, the following progress has been made at 33 residential properties in the Alden Village subdivision:

- 3 of 3 additional properties have design visits completed, scheduled, and awaiting construction activities
- 33 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 Scheduled Awaiting Construction Activities

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** – Arcadis conducted an additional site visit with the subcontractors on December 9, 2019 in preparation for the system install. During this visit the homeowner stated again that she did not want the work performed until Spring 2020 . The interim preemptive mitigation system design package was provided to the homeowner for review on December 17, 2019. Arcadis will continue to coordinate the installation of the mitigation system with the homeowner. The monthly vapor intrusion sampling event was completed on December 9, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **34424 Capitol Avenue** - Arcadis conducted an additional site visit with the subcontractors in preparation for the system install on December 9th, 2019. The interim preemptive mitigation system design package was provided to the homeowner for review on December 16, 2019. Upon approval from the property owner's Arcadis will coordinate the installation of the mitigation system. A tentative start date of January 7, 2019 has been scheduled pending homeowners' approval.
- **34450 Capitol Avenue** – The interim preemptive mitigation system design package was provided to the homeowner for review on December 17, 2019. Upon approval from the property owner's Arcadis will coordinate the installation of the mitigation system.

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 on several occasions.
- **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. On December 13, 2019, Arcadis contacted the property owner again to install the sub-slab monitoring points in the northwest corner, but unfortunately the homeowner responded via text, "absolutely not".

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 on August 28, 2018 at Monitoring Point MP-7 (-0.016 in wc.) 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. The other six sub-membrane monitoring points installed at this property all meet the performance metric established by EGLE of -0.02 in wc.

On November 26, 2019, Arcadis met with Matt Williams from EGLE to discuss the reinstallation of drywall at this property that will be covering basement walls that have been mitigated through the application of Retro-Coat. Per that discussion, Arcadis has added a water sensor to the design, to be installed behind the new drywall. The sensor will be wired to the existing control panel, which will notify Arcadis of an alarm condition. Three access panels will also be installed within the drywall to provide access for visual inspections as needed. The revised draft design was provided to the homeowner on December 17, 2019. The homeowner contacted Arcadis by telephone upon receipt and requested that a meeting be held in early January to review the design plans.

- **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. Post mitigation sampling was conducted in the garage and the home during the week of December 16, 2019. Once the results have been 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 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-02 (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, and October 26, 2019 to perform additional evaluations of the system performance within the raised portion of the home. Air leakage was observed to be occurring behind the finished building materials, limiting vacuum propagation. The carpeting was pulled back, and this area was sealed to the extent possible from inside the living room and a second sub-slab suction point was installed from inside the crawlspace. Valve adjustments were also made to force more air to be extracted from the raised slab area, however this resulted in sub-slab soil being pulled into the system, so the valves were readjusted to prevent this. Arcadis has contacted the property owner monthly to propose additional sealing to reduce air leakage and is working with the homeowner to schedule the completion of this task.

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** – Arcadis conducted an additional site visit with the subcontractors on December 9, 2019 in preparation for the system install. The homeowner has requested that work not begin until after the holiday. Arcadis collected samples of suspected asbestos containing materials within the crawl space on December 12, 2019. The analytical data package was provided to all parties consistent with the access agreement on December 18, 2019. The revised interim preemptive mitigation system design package was provided to the homeowner for review on December 5, 2019. Arcadis will continue to work with the homeowner to coordinate the system installation in early January as the property owner has requested. A tentative start date of January 7, 2019 has been scheduled pending the homeowners' approval.
- **34644 Beacon** - The revised plans were submitted to the homeowner for review on November 20, 2019 and based on the homeowners request an additional design was submitted for review on November 22, 2019. Arcadis will continue to work with the homeowner to coordinate the system installation.

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 (34380 Capitol, 34424 Capitol, 34450 Capitol, 12124 Boston Post, and 34644 Beacon). Arcadis will continue to coordinate and complete OM&M activities as necessary to evaluate the performance of the operating preemptive mitigation systems.