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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

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On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this monthly update to the interim preemptive mitigation system installation for the Livonia Transmission Plant (LTP) site (the site) as requested by Michigan Department of Environment, Great Lakes, and Energy (EGLE) via email on May 26, 2019. As of July 12, 2019, the following progress has been made at 30 residential properties in the Alden Village subdivision:

- 19 of 30 interim preemptive mitigation systems are installed and operating as designed
- 30 of 30 interim preemptive mitigation system are designed
- 8 of 30 interim preemptive mitigation system are designed and currently being installed or are scheduled
- 3 of 30 current property owners are unwilling to allow the mitigation system to be installed at their properties

Arcadis continues to work diligently to coordinate and install the interim preemptive mitigation systems. In addition, Arcadis is providing an update EGLE on the current status of properties that are requiring additional work due to the presence of a basement. Details are provided below for all 30 locations.

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

- **12088 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since March 8, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on April 19, 2019. The analytical data package was provided to all parties consistent with the access agreement on July 10, 2019.

- **12075 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since March 11, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on April 18, 2019. The analytical data package was provided to all parties consistent with the access agreement on July 11, 2019.
- **12089 Boston Post** – Interim preemptive mitigation system installed as designed and has been in operation since March 13, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on April 24, 2019. The analytical data package was provided to all parties consistent with the access agreement on July 10, 2019.
- **34450 Beacon** - Interim preemptive mitigation system was installed as designed and has been in operation since March 14, 2019. An additional piping leg was installed on April 15, 2019, to the geo membrane to produce more efficient vacuum. Post mitigation sampling was completed on April 26, 2019. The analytical data package was provided to all parties consistent with the access agreement on July 12, 2019. On June 11, 2019, Arcadis removed all standing water and repaired the liner.
- **12066 Boston Post** - Interim preemptive mitigation system was installed as designed and has been in operation since March 17, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was performed on May 31, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement. Flooding response was conducted on June 14, 2019, during which time we inspected the liner for water and evaluated system performance. We determined the performance metrics were not being met within the crawl space and therefore procured a stronger fan, which is expected to be delivered and installed the week of July 8, 2019.
- **34401 Capitol** – Interim preemptive mitigation system was installed as designed and has been in operation since March 17, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed April 18, 2019. The analytical data package was provided to all parties consistent with the access agreement on May 18, 2019. On June 8, 2019, Arcadis repaired all compromised seams for the liner and observed no water within the crawl space.
- **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 May 3, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement. A vacuum transmitter was installed on the monitoring point located in the main garage on May 4, 2019, due to the main garage not meeting target performance metrics. In addition, performance metrics are currently not being met sub-slab monitoring point (SSMP-02), which is located inside the home. Arcadis is currently evaluating if duct work needs to be lined below the slab but needs to perform an inspection prior to the implementing. Arcadis has contacted the property owner numerous times but has been unable to schedule an evaluation of the mitigation system, inspection of the liner, and the ducts.
- **34380 Beacon** - Interim preemptive mitigation system was installed as designed and began operation on April 2, 2019. The preemptive mitigation system stopped operating unexpectedly on April 4, 2019. After resolving access issues with the property owner, the mitigation system was turned on and has been operating continuously since April 19, 2019. Post mitigation sampling was conducted on May 22, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.

- **12091 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since May 9, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed the week of May 9, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.
- **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 garage, except as noted below. The system is currently in routine operation and maintenance. Post mitigation sampling was conducted in the garage and the home during the week of May 20, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.

Despite several attempts to obtain access, Arcadis has not been able to seal the cracks on the floor in the garage. Although the interim preemptive mitigation system is in operation, the system is not meeting performance metrics for the garage. During a phone conversation on May 15, 2019, the property owner indicated that they preferred the cracks in the garage floor to be sealed in June 2019. Arcadis has still not been able to coordinate with the property owner to seal the cracks last attempt to gain access was on June 18, 2019. Arcadis will continue to make efforts to coordinate the crack sealing in the garage.

Thus far, performance metrics for the interim preemptive mitigation system installed within the home have not been collected/monitored, because monitoring points have not be installed in 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. Therefore, indoor air samples will be collected and analyzed within 90 days after the initial post mitigation sampling event to measure performance metrics in areas that do not currently have a monitoring points installed.

- **34424 Beacon** – Interim preemptive mitigation system was installed as designed and has been in operation since April 12, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on May 15, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.
- **34920 Beacon** – Interim preemptive mitigation system was installed as designed and has been in operation since May 15, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on June 21, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.
- **34950 Beacon** – Interim preemptive mitigation system was installed as designed and has been in operation since April 19, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling is currently schedule for the week of June 3, 2019. The property owner notified Arcadis via telephone on June 3, 2019 and indicated that they would be unable to be home for the post mitigation sampling event. Arcadis attempted to reschedule the post mitigation sampling via phone call on June 11, 2019, but the property owner did not answer. Arcadis continues to try to coordinate the post mitigation sampling, but as of July 10, 2019, no schedule has been confirmed due to lack of responsiveness from the property owner.

- **12017 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since April 19, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed on May 30, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.
- **34600 Beacon** – Sub-slab depressurization system for the garage is currently in operation. On June 28, 2019, Arcadis completed the application of RetroCoat for the basement and garage floor. Currently working with the property owner to schedule post mitigation sampling, which should occur in late July or early August. .
- **12131 Boston Post** – The interim preemptive mitigation system was installed as designed with an interim air purifier unit for the basement in operation since March 13, 2019. On July 3, 2019, Arcadis completed the application of RetroCoat for the basement walls, installation of the Cupolex flooring with ventilation, and sealed the sumps in the basement. Currently working with the property owner to schedule post mitigation sampling, which should occur in early August. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **12101 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since June 7, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling is currently being scheduled with the property owner. The property owner has not called us back to complete the sampling as of July 12, 2019.
- **12067 Boston Post** – Interim preemptive mitigation system was installed as designed and has been in operation since July 3, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling is currently being scheduled with the property owner. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **34550 Beacon** – Interim preemptive mitigation system was installed as designed and has been in operation since July 3, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling is currently being scheduled with the property owner. Once the results have been received, reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.

#### **Interim Preemptive Mitigation System Currently Being Designed**

Initial designs for the interim preemptive mitigations systems have been completed for the 30 properties. Modifications to the design and construction of the systems installed at a few residential properties are ongoing to accommodate property owner requests, and as deviations from target performance metrics are identified in the field.

#### **Interim Preemptive Mitigation System is Designed and Currently Being Installed or is Scheduled**

Mitigation systems at 8 of the 30 properties are either in the process of being installed, are currently scheduled, or require additional mitigation activities. The properties with basements have an active air purifier within the basement or in the home that runs 24 hours per day. Per the Vapor Intrusion (VI) Response Activity Plan (RespAp), and EGLE VI Guidance Section 5.5 dated May 2013 indoor air

sampling will continue a monthly basis for the homes with a basement until the mitigation systems are fully operational. The request for monthly indoor air sampling was received by Ford on May 8, 2019 from EGLE. Details are provided below regarding the status of the work at the individual properties.

- **12070 Boston Post** – Interim preemptive mitigation system was installed as designed with an interim air purifier unit for the basement and has been in operation since March 13, 2019. The property owner is currently reviewing an alternate system design that addresses their concerns. The property owner requested on June 28, 2019 that EGLE provide third party to evaluate the interim preemptive mitigation system. EGLE denied this request on July 5, 2019 indicating that the interim preemptive mitigation system will be reviewed in its entirety once Ford/Arcadis submit the Vapor Intrusion Assessment and Mitigation Plan.

Arcadis and a certified HVAC contractor met with the property owner on July 10, 2019 to evaluate the current furnace and potential positioning of a new tankless water heater, which the property owner would like placed newly constructed crawl space. Arcadis is currently evaluating the necessary height of the new tankless water heater to ensure that the current mitigation system design does not need to be modified. Once the design is finalized, Arcadis will coordinate with the City of Livonia building department to secure the necessary permits, if necessary. Installation of the mitigation system will be schedule upon receipt of the permit from the City of Livonia and approval from the resident.

- **34940 Beacon** – The interim preemptive mitigation system has been in operation as of March 27, 2019, in combination with an interim air purifier unit that was deployed on March 17, 2019 for the basement. On July 8, 2019, the additional work, which consists of RetroCoat application on the basement floors and poured concrete walls started. The additional work is anticipated to take two weeks to complete.
- **34990 Beacon** – Interim preemptive mitigation system is currently in operation with an interim air purifier unit for the basement. Arcadis met the resident on May 21, 2019 at 1:00 pm and discussed the steps for the application of the RetroCoat. In order to apply the RetroCoat the furnace and hot water heater will need to be removed. Arcadis will coordinate with the resident to schedule the additional work and coordinate temporary lodging for property owners during the construction if/as necessary. A preconstruction meeting was completed with the property owner on June 5, 2019 at 12:30 pm. The meeting was conducted with Arcadis and Arcadis's subcontractor to review current building conditions and confirm duration of construction and application of RetroCoat. Arcadis is currently working on the implementation schedule, which will be provided to the property owner to review and to approve. Pending that review, Arcadis will finalize a schedule with the property owner. The schedule is to be completed by the week of July 15, 2019.
- **12036 Brewster** - Interim preemptive mitigation system is currently in operation as of April 2, 2019, in combination with an air purifier unit that was deployed on March 17, 2019 for the basement. The block wall depressurization for the basement is not meeting target performance metrics. Therefore, Arcadis proposed another design to the property owner and EGLE the week of May 27, 2019. Subsequently, Arcadis met the property owners on June 3, 2019 at 10:00 AM . Based on that meeting, Arcadis revised the design for the interim preemptive mitigation system and provided the draft design to the property owner on June 6, 2019. The new design includes the application of RetroCoat for the basement floor and walls. In order to apply the RetroCoat the furnace and hot water heater will need to be removed. Arcadis will coordinate with the resident to schedule the additional work and coordinate temporary lodging for property owners during the construction, if/as necessary.

Two preconstruction meetings were completed with the property owner on June 5, 2019 at 2:45 pm and on July 11, 2019 at 1:45 pm to discuss overall logistics and temporary lodging. The additional mitigation work is proposed to begin on July 17, 2019, pending property owner approval of the schedule.

- **34682 Beacon** - Interim preemptive mitigation system is currently in operation and has been in operation since May 3, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling will be scheduled 30 days from when the mitigation system started. Based on our observations, the slab on grade addition that was originally a garage was subsequently renovated to be a living space years ago. The renovated living space has a floor built over the concrete slab, which cannot be visually inspected to determine if cracks are present without removing the finished flooring. The renovated living space is currently not meeting performance metrics. Therefore, Arcadis is evaluating modifications to the existing interim preemptive mitigation system. If the modifications do not meet the desired vacuum influence, then further testing will be completed to determine if a second system is warranted. The property owner indicated on April 17, 2019, that the living space is potentially going to be remodeled in 2019. If the remodeling does occur Arcadis, then will be able to assess the condition of the concrete slab beneath the wood floor. Arcadis contacted the resident on June 18, 2019 to inquire about when a potential remodel would occur. The property owner indicated that there is no set date for when, or if, the remodeling will occur.

Arcadis additional guidance via email to EGLE on July 8, 2019 to seek input on potential design options. Once a conceptual design has been presented to EGLE and concurrence obtained, Arcadis will modify the design and coordinate with the property owner to complete the additional mitigation system installation.

- **34591 Beacon** – Interim preemptive mitigation system is currently in operation and has been in operation since April 19, 2019. The slab on grade addition that was formerly a garage was renovated to be a living space years ago. The renovated living space is currently not meeting performance metrics. The renovated living space has a floor that has been built over the concrete slab, which cannot be visually inspected to determine if cracks are present. Therefore, Arcadis is evaluating modifications to the existing interim preemptive mitigation system. If the modifications do not meet the desired vacuum influence further testing will be completed to determine if a second system is warranted. Post mitigation sampling was completed the week of May 22, 2019. The laboratory reports have been received, the results are currently being validated and the data package will be provided to all parties consistent with the access agreement.

Arcadis additional guidance via email to EGLE on July 8, 2019 to seek input on potential design options. Once a conceptual design has been presented to EGLE and concurrence obtained, Arcadis will modify the design and coordinate with the property owner to complete the additional mitigation system installation.

- **34367 Capitol** – The installation of the preemptive mitigation system began on May 13, 2019 but has been delayed due to concerns over the structural integrity of the home construction and safety of working in the crawlspace. On May 16, 2019, Arcadis identified wood bracing in the crawl space that appeared to be supporting a portion of the sub-floor. Arcadis discussed the concern with the homeowner and sent pictures of the bracing supports to the City of Livonia on May 23, 2019 at 4:44 pm. The City of Livonia replied on May 29, 2019 at 9:24 pm and indicated that the wood bracing would need to be replaced with concrete bases and treated lumber to meet the City of Livonia



building code. During this time Arcadis revised the structural design for the supports and requested quotes to complete the work from a licensed contractor. On July 8, 2019, Arcadis supplied the property owners with the remedy to replace the wood bracing with code-compliant structural supports. Once approved by the homeowner and the City of Livonia building department, Arcadis will coordinate the repair and then complete installation of the interim preemptive mitigation system.

- **34480 Capitol** – The installation of the preemptive mitigation system began on April 29, 2019. The property owner is only available Mondays and Tuesdays of each week. Arcadis completes the installation of the initial interim preemptive mitigation system on June 11, 2019. Once the system was in operation Arcadis began completing performance testing on June 11, 2019 on the interim preemptive mitigation system. It was determined that metrics were not being met in one portion of the home that contains under the slab addition, which is a living space in the house. Arcadis requested additional guidance via email to EGLE on July 8, 2019 to seek input on potential design options. Once a conceptual design has been presented to EGLE and concurrence obtained, Arcadis will modify the design and coordinate with the property owner to complete the additional mitigation system installation.

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

- **12121 Boston Post** –The homeowner 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 has been filed in Michigan state court to gain access to this home to complete the installation of the interim preemptive mitigation system.
- **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. As of April 16, 2019, Arcadis has been unable to schedule further the installation of the interim preemptive mitigation system. However, the homeowner is allowing Arcadis to complete vapor intrusion sampling. A complaint has been filed in 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

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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.

Arcadis continues to work diligently to install the interim preemptive mitigation systems and anticipates the installations of the remaining location 34367 Capitol should be completed by the end of August 2019. Additional mitigation work, primarily associated with RetroCoat Application in basements, as well as additional/alternate mitigation systems to address performance metrics in at a few properties as mentioned above are anticipated to be completed by the end of August 2019.