

MEMO

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From:
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Date:
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Arcadis Project No.:
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. As of June 7, 2019, the following progress has been made at 30 residential properties in the Alden Village subdivision:

- 14 of 30 interim preemptive mitigation systems are installed and operating as designed
- 30 of 30 interim preemptive mitigation system are designed
- 13 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 the week of April 15, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.

- **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 the week of April 15, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **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 the week of April 22, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **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 the week of April 26, 2019. Once the results has been review and validated, the data package will be submitted to all parties as outlined in the access agreement. In an email received by Arcadis on May 31, 2019, the property owner has requested Arcadis repair the mitigation system liner, which was damaged due to flooding that occurred in the Alden Village subdivision in May 2019. Arcadis is coordinating with the property owner to schedule a visit to make the repairs, which will occur after June 5, 2019. The effectiveness of the liner repair will be evaluated immediately to repeat initial performance metrics.
- **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 during the week of May 27, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.
- **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 the week of April 15, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement. Arcadis has repaired the liner, which was damaged due to flooding in May 2019, during the week of June 3, 2019. The effectiveness of the liner repair will be evaluated immediately to repeat initial performance metrics.
- **12100 Boston Post** – Interim preemptive mitigation system was installed as designed and has been in operation since March 25, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed the week of April 29, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in 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 -0.02 vacuum. Arcadis has contacted the property owner numerous times but has been unable to schedule an evaluation of the mitigation system and inspection of the liner.
- **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 the week of May 20, 2019. Once the results have been reviewed and validated, the data package will be

submitted to all parties as outlined in the access agreement. On May 22, 2019, Arcadis removed approximately 10 gallons of water and plugged the green drains below the home. The water in the crawl space was related to the flooding conditions within Alden Village. Arcadis completed a liner inspection the week of June 3, 2019 and confirmed flooding has not damaged the liner.

- **12091 Brewster** – Interim preemptive mitigation system was installed as designed and has been in operation since April 3, 2019. The system is currently in routine operation and maintenance. Post mitigation sampling was completed the week of May 6, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in 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. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in 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 would prefer if the cracks in the garage floor was conducted in June 2019.

Thus far, performance metrics for the interim preemptive mitigation system installed within the home have not been collected/monitored, because monitoring points have not been 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 the week of May 13, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in 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 will be scheduled 30 days from when the mitigation system started. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in 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 scheduled for the week of June 3, 2019. Once the results have been reviewed and validated, the data package will be submitted to all parties as outlined in the access agreement.

- **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 the week of May 27, 2019. Once the results have been 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 13 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 on 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.

- **34600 Beacon** – Interim preemptive mitigation system was installed as designed and has been in operation since April 3, 2019. However, the block wall depressurization for the basement is not meeting EGLE vacuum standards of -0.02. Therefore, Arcadis is proposing an alternate design to the property owner and EGLE. On March 17, 2019, Arcadis received an email at 9:32 pm from the property owner's son indicated that Wednesday May 22, 2019 would be fine for the meeting. Arcadis contacted the property owner's son via telephone on March 18, 2019 to schedule an appointment to replace the vent fan and to discuss the additional work. Arcadis emailed the property owner on May 19, 2019 at 4:24 pm and requested that the meeting be postponed to Thursday May 23, 2019. The homeowner then suggested May 29, 2019. Subsequently, the meeting was conducted on May 29, 2019 at 3:30 pm.

A preconstruction meeting was completed with the property owner on June 5, 2019 at 3:30 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 to the basement floor and walls. The property owner has confirmed the schedule and the additional scope of work is scheduled to start the week of June 10, 2019.

- **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. The interim preemptive design for the basement will involve addition of a false floor and ventilation system in combination of the application of RetroCoat to the basement floor and walls. A preconstruction meeting was completed with the property owner on June 5, 2019. The meeting was conducted with Arcadis and Arcadis's subcontractor to review current building conditions and confirm duration of the additional activities. The property owner has confirmed the schedule and the additional scope of work is schedule to start the week of June 17, 2019.

- **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 owners are concerned that elevating the floor will not provide enough room for the hot water heater to be staged. Arcadis discussed the design approach with the resident on May 22, 2019 via telephone at 3:57 pm. During the same telephone conversation on May 22, 2019, the property owner also requested an in-person meeting to review the full design. The property requested this previously in an email received by Arcadis on May 20, 2019. Arcadis met the property owners on June 3, 2019 at 11:00 AM to discuss the current design for the basement. Arcadis is currently amending the design to reflect property owners input obtained during the meeting that occurred on June 3, 2019. A confirmation from the property owner will be provided to EGLE agreeing to the revised design. Currently the additional work is scheduled for July 15, 2019.
- **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. At this time, additional mitigation activities are on hold pending application of RetroCoat to the concrete walls and basement slab. 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. Arcadis will also determine in advance when the furnace and hot water heater will need to be removed as part of the application, so the property owners can vacate the home if necessary. A preconstruction meeting was completed with the property owner on June 5, 2019 at 2:00 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. The property owner is tentatively scheduled the additional scope of work to start the week of July 8, 2019
- **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. Arcadis will also determine in advance when the furnace and hot water heater will need to be removed as part of the application, so the property owners can vacate the home if 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. The property owner is tentatively scheduled the additional scope of work to start the week of July 22, 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 EGLE vacuum standards of -0.02. Therefore, Arcadis will propose another design to the property owner and EGLE, by the week of May 27, 2019. Arcadis met the property owners on June 3, 2019 at 10:00 AM. Based on that meeting, Arcadis revised the current 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. Arcadis will also determine in advance when the furnace and hot water heater will need to be removed as part of the application, so the property owners can vacate the home if necessary. A

preconstruction meeting was completed with the property owner on June 5, 2019 at 2:45 pm. The meeting was conducted with Arcadis and Arcadis's subcontractor. The property owner is tentatively scheduled the additional scope of work to start the week of July 22, 2019.

- **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. The slab on grade addition that was formerly a garage was renovated to be a living space. The renovated living space is currently not meeting performance metrics. The renovated living space has a floor that has been built over the slab. Arcadis is currently evaluating options, but the slab cannot be visually inspected to determine if cracks are present. Arcadis is currently 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. The property owner indicated on April 17, 2019 to an Arcadis field engineer, 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 slab beneath the floor. Arcadis will continue to contact the property owner to determine if the remodeling will occur.
- **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. 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. Arcadis is currently evaluating options, but the slab cannot be visually inspected to determine if cracks are present. Arcadis has installed a monitoring point in the living space, but the monitoring point is below performance metrics outlined by EGLE. Arcadis is currently 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. The system is currently in operation and maintenance. Post mitigation sampling was completed the week of May 20, 2019.
- **34550 Beacon** – The installation of the interim preemptive mitigation system installation is ongoing. An air purifying unit was deployed at the home on March 17, 2019. The installation has been slowed due to property owner availability and overall difficulty installing the liner in the multiple crawl spaces. It has been determined that a concrete pad will be needed in a portion of the crawl space, which was successfully installed. Additional sealing in the crawl space will be conducted on May 18, 2019. Initial performance metrics conducted on May 18, 2019, indicated the current configuration of the interim preemptive mitigation system is not meeting performance metrics identified by EGLE. Therefore, Arcadis has optimized the current interim preemptive mitigation system to include two fans. One interim preemptive mitigation system will mitigate the garage and breezeway. The second system will mitigate both crawl spaces and the utility room, which is slab on grade. Arcadis provided the revised design to the property owner on June 6, 2019. The current system remains in operation until construction can begin.
- **12101 Brewster** – On March 21, 2019, Arcadis oversaw the removal of debris under the crawl space. Upon further investigation of the crawl space it was determined that application of the liner was not feasible due to the HVAC duct work laying on the ground. Ford, Arcadis, and EGLE discussed this home on April 9, 2019. During the removal of the piping associated with the homeowners HVAC,

tape securing the piping together had the potential to contain asbestos. On May 23, 2019, Arcadis sent the tape to be analyzed for potential asbestos. On May 23, 2019, Arcadis received analytical results from EMSL Analytical, Inc and indicated the tape contained 40% crystalline asbestos. The asbestos was safely abated the week of May 27th and June 3, 2019. In addition, during the week of May 20, 2019, it was identified that the homeowner's electrical system is currently overloaded. Arcadis is working with the local utility company to install a new service line to the home. The new service line will be needed, or the City of Livonia will not close out the current permit. Arcadis continues to work with the utility company to schedule the new service line connection.

- **34367 Capitol** – The installation of the preemptive mitigation system is currently ongoing and began on May 13, 2019. The current property is rented to a tenant and the property owners want to be present for the installation. On May 16, 2019, Arcadis identified wood bracing that appeared to be supporting a portion of the sub-floor. Arcadis 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. Ford's outside counsel is currently discussing the next steps with plaintiff's counsel concerning the support issue.
- **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. Per the current schedule, Arcadis intends to complete the installation by June 14, 2019.
- **12067 Boston Post** – On April 15, 2019, Arcadis began the installation of the preemptive mitigation system. Arcadis confirmed with the property owner that the foundation had been repaired prior to mitigation activities and the excess soil had been moved to the middle of the crawl space. In order to install the liner for within the crawl space the soil will need to be removed. The excess soil was successfully removed the week of May 20, 2019. The removal of the approximately 30 cubic yards of soil delayed the installation of the interim preemptive mitigation system by two weeks. Prior to the soil being removed waste characterization samples had to be collected and equipment coordination to remove the excess soil. Once Arcadis was able to remove debris from the crawl space it was determined that a potential structural repair may be necessary since the first floor of the house is currently supported with wood posts. Arcadis is still working with the City of Livonia to determining if a repair is necessary. Arcadis intends to complete the installation by June 30, 2019.

Interim Preemptive Mitigation Systems Declined – Extension Requested

- **12121 Boston Post** – Ford's outside counsel continues to work with plaintiff's counsel to gain access to the home to complete the installation of the interim preemptive mitigation system. The home owner was presented with an air purifier on March 21, 2019. 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.

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- **12124 Boston Post** – This property was scheduled for the 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 citing the purifier would make too much noise and take up too much space on March 18, 2019. As of April 16, 2019, Arcadis has been unable to schedule further the installation of the interim preemptive mitigation system. The resident is allowing Arcadis to complete vapor intrusion sampling.
- **34644 Beacon** - The interim preemptive mitigation system is tentatively scheduled to begin on May 15, 2019. 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 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. Arcadis is currently 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.

Arcadis continues to work diligently to install the interim preemptive mitigation systems and anticipates the installations should be completed by the end of June 2019. Additional mitigation work as it relates to basements are anticipated to be completed by August 2019.