



Environmental Quality Office
Sustainability, Environment & Safety
Engineering

Ford Motor Company
Fairlane Plaza North
290 Town Center Drive, Suite 800
Dearborn, MI 48126

March 14, 2019

Mr. Paul Owens
District Supervisor, Southeast Michigan District Office
MDEQ Remediation and Redevelopment Division
27700 Donald Court
Warren, Michigan 48092-2793
owensp@michigan.gov
VIA E-MAIL

Re: Ford Livonia Transmission Plant
Extension Request to MDEQ Letter dated February 1, 2019

Dear Paul:

On behalf of Ford Motor Company (Ford), this letter provides an update on efforts by Arcadis of Michigan, LLC (Arcadis) to complete the preemptive mitigation of off-site structures on properties in the area of the Livonia Transmission Plant, and to request an extension of the 45 calendar day deadline for preemptive mitigation in your February 1, 2019 letter.

As you know, via letter dated February 1, 2019, DEQ directed Ford to conduct additional shallow groundwater sampling to identify locations with vinyl chloride at or above 1 ppb, and to install mitigation systems in residential properties within 100 feet of those locations within 45 days. Since then, Ford and Arcadis have been working diligently to complete the engineering surveys, engineering design plans, and additional groundwater sampling necessary to delineate vinyl chloride in shallow groundwater and install mitigation systems where appropriate.

DEQ's Imposition of 45-Day Deadline

As an initial matter, we note that the 45-day deadline is not imposed by the Consent Decree and a failure to meet it does not violate the Consent Decree. DEQ has invoked Section 6.6(d)(iii) of the Consent Decree as its justification for the preemptive mitigation required in its February 1, 2019 letter. That section applies where "information indicates there may be an immediate risk to human health from volatilization of COCs into indoor air within the AOC based upon the screening levels provided in Table 2 of Attachment D and undertake IRA as determined appropriate in consultation with the MDEQ." We do not believe the sampling to date indicates there may be an immediate risk to human health from volatilization of COCs into indoor air. All indoor air sampling, sub-slab sampling, and sump sampling (if a sump exists) shows no detection of vinyl chloride in the residential neighborhood.

Even if Section 6.6(d)(iii) did apply, it does not impose any specific requirements for Interim Response Activities by Ford, let alone require completion of such activities within 45 days. The timeframes for IRA in the other subsections of Section 6.6 are instructive as to the appropriate timeframe for IRA pursuant to 6.6(d)(iii). Section 6.6(b)(ii) of the Consent Decree requires Ford to submit a Response Activity Plan to mitigate risks identified during the ongoing VI Assessment “within 30 days of the completion of” the VI Assessment. Section 6.6(d)(ii) of the Consent Decree requires that, “[w]ithin thirty (30) days of receiving the MDEQ’s approval of the IRA ... Response Activity Plan,” Ford “shall initiate the response activities contained in the plan....” So even if the event triggering IRA is DEQ’s determination that there is a risk of volatilization of indoor COCs into indoor air under Section 6.6(d)(iii), that should simply trigger a 30-day window for Ford to provide a plan for proposed IRA and then Ford should have a further 30 days to *initiate* the activities contained in that plan after approval by DEQ. There is nothing in the IRA provisions of the Consent Decree to suggest a 45-day deadline for completion of IRA without any review or approval by DEQ is required.

Challenges Encountered in Preemptive Mitigation Process

Though the 45-day deadline is not a requirement imposed by the Consent Decree, Ford and Arcadis have nonetheless endeavored diligently to meet it in an effort to cooperate with DEQ and promptly address its requests. We have continued to update you weekly on our progress. All 31 of the properties within the current 100 foot off-set line have been contacted and have completed initial engineering surveys. 16 of 31 have been scheduled for preemptive mitigation activities and 4 have successfully had mitigation systems installed and are meeting performance objectives. Unfortunately, it has not proven possible to complete preemptive mitigation of the identified residential properties within 45 days for a number of reasons. Below is a high-level summary of delays and challenges Arcadis has encountered in the installation of mitigation systems:

- **Initiation of Access** – The attorneys representing many of the homeowners had instructed the homeowners to deny Arcadis access for further sampling prior to DEQ’s February 1, 2019 letter. They did not agree to allow access for construction surveys until February 7, which delayed the initiation of the preemptive mitigation process.
- **Coordination With Homeowners** - Working with homeowners’ schedules and individual needs and requests has required more time to coordinate than originally expected overall. A few examples:
 - At 12100 Boston Post, the homeowner has requested a phased installation to do as much crawl space work as possible while the homeowners aren’t home. The owner also requested a week to move materials out of her garage addition to accommodate the work.
 - At 12101 Brewster, the property owner recently indicated he did not want to talk to Arcadis anymore and has not been returning Arcadis’ calls.
 - At 12121 Boston Post, Arcadis has been greeted with hostile and threatening behavior by the homeowners’ son. Ford’s counsel is working to negotiate access at a time when the homeowners’ son will not be present, to ensure the safety of Arcadis personnel.

- At 12141 Boston Post, the property owner requested that work take place during spring break while she is at home and scheduled it for March 30, 2019.
- At 34544 Beacon, the property owner requested that no work commence until after March 22, 2019.
- Certain property owners, including those at 34424 Beacon and 12070 Boston Post, have only allowed work to proceed while they are at home and have had limited dates when they are at home to allow the work to proceed.
- **Extended Timeframes Necessary to Meet DEQ Performance Objectives**
 - Each house is taking around 2-4 days to batten and boot penetrations and pillars (installing and sealing the liner). The crawl spaces are extremely tight spaces, that average anywhere from 36 to 18 inches tall. This limited height makes it difficult to tape the seams and cut the liners and to complete the termination bar/battening. Arcadis' initial assumptions were to use a weld seamer, but so far they have had to tape nearly all seams due to the limited space and potential fire hazards to the homes. Taping is more time consuming so crawl spaces that were initially thought to only take 1-2 days are now taking 2-4 days.
 - 0.02" of influence requires Arcadis to pay closer attention to detail during installation. Radon companies are used to 0.004" or less. They are not accustomed to meeting vacuum requirements that are required for this project. Insulation work required by the MDEQ performance objectives is also not part of the normal Radon installation. This has required the contractors to work at a slower pace in order to meet installation expectations, which means Arcadis is documenting and completing heavy oversight during the installation. This has resulted in 0.5 – 1.0 days of time on the back end to complete that scope of work.
- **Accessibility** – Crawl space access points have required the crews to cut the membrane into smaller segments in order to fit them into the working areas. Smaller liner segments require more time to seam and to get the liner laid out than anticipated. Working in the narrow crawl spaces around pipe obstructions and pipe penetrations has added more time than anticipated. Crews are also having difficulty completing battening in accordance with the original design up onto the sill plate. There are often joist or utility obstructions at the working height, plus the termination detail requires that the connection be caulked on the top side so the crews have to leave some room to complete this. When the liner is moved down slightly, crews have to spend more time verifying that all cracks and pathways above the liner termination have been adequately sealed.
- **Preparation** – Numerous crawl spaces have required 0.5 – 1.0 days of preparation to clear them of debris and prepare the dirt or stone surface for liner installation. Arcadis had to clear out all sharp angular rock in addition to anything stored in the crawl space. Arcadis is pulling out old paint containers, tires, barrels, HVAC ducts, broken pipes, concrete debris, and general refuse. Homes that have insulation around the perimeter wall have required that Arcadis either re-position the insulation or replace it when possible. The scope of this preparation work has added hours on the front end of the installation process that Arcadis was not anticipating.

- **Equipment Availability** – Acrylonitrile Butadiene Styrene (ABS) piping must be used in accordance with the engineering designs because Polyvinyl Chloride (PVC) piping could potentially off-gas vinyl chloride into homes. But ABS piping has not been readily available from suppliers. Spare fittings are also not typically available and must be ordered. Arcadis is currently stocked up on materials, but the lack of sufficient available piping generated an initial delay.
- **Weather** – There have been a number of snowy and sub-20 degree working days. This has slowed down production as crews have to spend more time preparing work areas to avoid getting homes muddy and wet. The liner is also harder to work with in the cold because it is less flexible, and many of the crawlspace access points are from the outside. Ice has caused numerous hazards and concerns with ladder use that have slowed work down.

Based on Arcadis' experience to date installing mitigation systems in the residential neighborhood, it estimates the following timeframe required to complete installation:

- Standard Crawl Space No Attached Garage – 4 days
- Crawl Space with Attached Garage – 5-6 days
- Houses with Basements/Crawl/Attached Garages – 7-12 Days¹

In light of these challenges preventing completion of preemptive mitigation within 45 days, we are requesting that DEQ extend the deadline to complete preemptive mitigation.

Force Majeure

Finally, even if DEQ is not otherwise inclined to extend the 45-day deadline it imposed, it should be extended pursuant to the *Force Majeure* provisions of the Consent Decree. Article X, Section 10.2 of the Consent Decree defines a *Force Majeure* event as “any event arising from causes beyond the control of and without the fault of [Ford] ... or of [Ford’s] contractors, that delays or prevents the performance of any obligation under this Decree despite [Ford’s] ‘best efforts to fulfill the obligation.’” This definition includes (1) “acts or omissions of third parties” such as the off-site property owners and (2) “untimely review of permit applications or submission by the MDEQ or other applicable authority.” There are therefore two independent *Force Majeure* events that have interfered with Ford’s completion of preemptive mitigation within the 45-day period. First, the off-site property owners’ actions are actions by third parties beyond Ford’s control, and have delayed Ford’s completion of mitigation activities despite Ford’s and Arcadis’ best efforts, so they are a *Force Majeure* event as defined in the Consent Decree. Second, DEQ is not reviewing and approving Ford’s mitigation design packages and has committed only to review a future Response Activity Plan after the completion of vapor intrusion assessment activities. Ford is grateful for DEQ’s informal guidance on technical questions that have arisen

¹ This does not include application of RetroCoat, if necessary. RetroCoat adds an additional 5 days. Most RetroCoat applications require disconnection of the furnace and cannot be done until the spring. Accordingly, if RetroCoat applications are necessary, their timing will be determined by the weather and property owners’ availability, and they may not be able to be completed even within the 60-day extended deadline we are requesting.

Paul Owens, MDEQ

March 14, 2019

Page 5

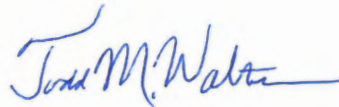
during this process and any further questions that may arise as this process continues. However, DEQ's failure to review the mitigation design packages constitutes "untimely review of ... submissions by MDEQ" and is a *Force Majeure* under the Consent Decree. Ford respectfully requests that DEQ determine that the off-site property owners' actions and its decision not to review mitigation design packages are *Force Majeure* events as defined in the Consent Decree, and delay the deadline to complete preemptive mitigation.

In light of these issues, we request that DEQ extend the deadline set out in its February 1, 2019 letter by 60 days to allow Ford and Arcadis to complete preemptive mitigation at the residential properties within 100 feet of shallow groundwater sample results showing vinyl chloride at or above 1 ppb.²

Lastly, pending property access and property owner agreement, Ford plans to install air purifiers in the homes that cannot be mitigated before the current deadline. The air purifiers are capable of treating vinyl chloride and can temporarily support preemptive mitigation efforts.

If you have any questions, please feel free to contact me.

Sincerely,



Todd M. Walton

Manager, Global Site Assessment & Remediation

cc: Mr. Kris Hinskey, Arcadis
Mr. Shawn Collins, The Collins Law Firm, PC
Mr. Paul Bernier, City of Livonia
Senator Dayna Polehanki
Representative Laurie Pohutsky
Mr. Brian Negele, MDAG
Mr. Aaron Cooch, DHHS
Ms. Alexandra Rafalski, DHHS
Mr. Darren Bowling, MDEQ
Ms. Cyndi Mollenhour, MDEQ
Ms. Krista Reed, MDEQ
Ms. Beth Vens MDEQ
Mr. Brandon Alger, MDEQ

² Under separate cover, we have submitted a letter explaining that multiple lines of evidence do not support preemptive mitigation of several of the properties within the 100 foot off-set line. We will await DEQ's response to that letter before proceeding with preemptive mitigation at those properties (other than 34940 Beacon, which we will preemptively mitigate as agreed by email this morning).