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GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
SOUTHEAST MICHIGAN DISTRICT OFFICE



C. HEIDI GREYER  
DIRECTOR

August 25, 2018

Ford Motor Company  
c/o Mr. Todd M. Walton  
Fairlane Plaza North, 8F  
290 Town Center Drive  
Dearborn, Michigan 48126

Dear Mr. Walton:

**SUBJECT:** Compliance with Consent Decree No. 2:1712372-GAD-RSW  
Response Activity Plan-Vapor Intrusion Evaluation  
Ford - Livonia Transmission Plant  
36200 Plymouth Road; Livonia, Wayne County, Michigan  
MDEQ Site ID No. 82002970

The Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Division, has reviewed the Response Activity Plan-Vapor Intrusion Evaluation submitted by Ford Motor Company (Ford) in accordance with Section 6.6 of the Consent Decree entered into by the MDEQ and Ford on July 27, 2017. The response activity plan for conducting further investigations and evaluation of the volatilization to indoor air pathway was submitted by Arcadis of Michigan, LLC on the behalf of Ford on April 13, 2018. Section 13.2 of the Consent Decree requires MDEQ to review the submission and (a) approve the submission; (b) approve the submission with modifications; or (c) disapprove the submission and notify the Defendant of the deficiencies in the submission.”

Based on MDEQ review, the Response Activity Plan-Vapor Intrusion Evaluation (RespAP-VI) is approved with the following modifications:

- **Section 1 – Schedule:** As it relates to obtaining access to off-site properties, the schedule shall be modified to include an additional line to address the requirement for Ford to pursue judicial action, if necessary.
- **Section 3 – Proposed Off-site Vapor Intrusion Response Activity Plan:** Add language to indicate:
  - Ford will continue to work with, and under the advisement of the Michigan Department of Health and Human Services (MDHHS) regarding the proposed collection of indoor air samples. Due to variability, the MDEQ does not recognize indoor air sampling as a reliable line of evidence, nor as reason not to mitigate a structure to address risk via the volatilization to indoor air pathway.
  - The MDEQ considers 12 hours to represent the average work day.

- **Section 3 – Access Agreements:** The RespAP-VI states, “*Ford proposes to initiate sampling as soon as possible following receipt of a signed access agreement at each property via coordination with each property owner.*”

Within the response activity plan, this statement shall be changed to read, “*Ford proposes to initiate sampling within two weeks following receipt of a signed access agreement at each property via coordination with each property owner.*”

- **Section 3 – Collection of Building-Specific Samples:** Add language to the RespAP-VI to address the following:
  - Based upon disagreement between MDEQ and Ford regarding the reliability of the current set of groundwater monitoring data, Ford shall add additional properties to those to be investigated and evaluated, as needed, based on the analytical data for samples of groundwater, sump water, soil-gas, and indoor air that are proposed to be collected from off-site properties. Detected concentrations that exceed the applicable generic or site-specific screening levels for each media will require modifications to the present groundwater plume model and the establishment of a new plume boundary to include/account for the 100’ lateral inclusion zone. All properties within the new, defined limits of the groundwater plume (that incorporates properties within the lateral inclusion zone) will be included in the investigation.
  - Groundwater monitoring wells installed near structures and in lieu of the installation and sampling of sub-slab gas point which is not possible due to the presence of shallow groundwater, shall be installed as permanent monitoring wells (not temporary), and shall be constructed such that at least one screen intersects the top of the water table. Additional screens may be set in a nested well as situationally justified.
    - Groundwater samples from these wells shall be representative of the groundwater in contact with the adjacent/nearby structure.
    - At locations where sub-slab soil gas is unable to be sampled and concentrations exceeding vapor intrusion screening criteria or analytical method target detection limits are detected in groundwater samples collected from nearby monitoring wells or in groundwater collected from sumps present within the structures, whichever is applicable, for those structures, Ford will immediately initiate the remedial activities necessary to mitigate the risk from the volatilization to indoor air.
  - The off-site volatilization to indoor air pathway investigation and proposed sampling activities shall be considered/conducted at/within any permanent, fixed, and potentially inhabitable structures such as, but not limited to garages or insulated sheds.
  - The collection of soil gas samples from shallow soil gas wells will require a strict quality control (QC) analysis including, but not limited to comparing CO<sub>2</sub> to O<sub>2</sub> ratios and documentation of the rate at which samples were collected. The data for samples not collected in exact accordance with the standard operating procedures (SOPs) included as part of the MDEQ 2013 VI Guidance Document may be incorporated with other lines of

evidence but cannot be relied upon as a sole line of evidence to determine or negate the need for mitigation/remedial actions.

- **Section 5 – Reporting:** Ford shall notify the MDEQ if the proposed waste production is to exceed the estimated 100-115 barrels of waste as proposed in the Response Activity Plan Remedial Investigation. Ford should note the Response Activity Plan-Vapor Intrusion Evaluation was to include a section on waste production.
- **Additional Section, to satisfy Section 6.6(b)(i) – Proving the Groundwater Plume Model:**
  - To prove the groundwater plume model, as the model is proposed by Ford, additional groundwater monitoring wells need to be installed between the point in the aquifer where the plume has been delineated to less than the analytical method target detection limit, and the edge of the 100' lateral inclusion zone. The monitoring wells should be added at intervals as necessary to demonstrate model confidence. This is required to further assess or demonstrate plume stability and to investigate potential for variability in samples collected previously, at temporary Hydraulic Profiling Tool points.
  - To prove the groundwater plume model, Ford shall install nested or paired groundwater monitoring wells with a screen to intersect the water table, at the locations of any existing monitoring well which does not currently have a screen that intersects the top of the water table and are being used by Ford to extrapolate the extent of vinyl chloride levels to the analytical method target detection limit or assess plume stability. The added wells shall be monitored and sampled in accordance with the MDEQ guidance document as part of the continuing site investigations to determine plume stability. Note: proving the model also includes proving the groundwater plume divide, as depicted by Ford on Figure 11. This is necessary to assure it is appropriate to exclude the structures that are located between the edges of the two plumes from further assessment for the volatilization to indoor air pathway.
  - If, vinyl chloride is detected a concentration above the site-specific screening levels or analytical method target detection limit in any groundwater sample, collected from any of the new wells installed to comply with the direction provided in either of the above bullets, Ford must make the necessary modifications to the groundwater plume model and establish a new plume boundary (that includes a 100' lateral inclusion zone). All properties within the new area bounded by the lateral inclusion zone shall be included in the investigation.
- **General Comment – Modification to Response Activity Plan-Vapor Intrusion Evaluation:** As part of the response activities as proposed in the **Response Activity Plan-Vapor Intrusion Evaluation**, Ford shall also conduct a utility corridor analysis as outlined within Section 6.7 of the Consent Decree. Ford shall work with the MDEQ, as necessary, to determine what sampling is needed and where preferential pathways may or may not exist.

If the above modifications are not undertaken or accomplished, the MDEQ's approval with modifications of the Response Activity Plan-Vapor Intrusion Evaluation is withdrawn. The MDEQ's approval with modifications is also contingent upon **Ford's** timely implementation of the response activities as proposed in the plan in accordance with the schedule provided in the Response Activity Plan-Vapor Intrusion Evaluation.

MDEQ's approval with modifications of the submission (Response Activity Plan-Vapor Intrusion Evaluation) with modifications is based upon the representations and information contained in the submittal, therefore the MDEQ expresses no opinion as to whether other conditions that may exist will be adequately addressed by the proposed response activities. Notwithstanding this approval with modifications, if environmental contamination is found to exist that is not addressed by the Response Activity Plan-Vapor Intrusion Evaluation and Ford is otherwise liable for the contamination, additional response activities may be necessary.

If Ford should have further questions or concerns, please contact Brandon Alger, Remediation Division, Southeast Michigan District Office, at 586-753-3826.

Sincerely,

Paul Owens, District Supervisor  
Southeast Michigan District Office  
Remediation and Redevelopment Division  
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OwensP@michigan.gov

cc: Mr. Kris Hinskey, Arcadis of Michigan, LLC  
Mr. Brian Negele, MDAG  
Mr. Darren Bowling, MDEQ  
Ms. Cyndi Mollenhour, MDEQ  
Mr. Travis Boeskool, MDEQ  
Ms. Beth Vens MDEQ  
Mr. Brandon Alger, MDEQ