



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTHEAST MICHIGAN DISTRICT OFFICE



LIESL EICHLER CLARK
DIRECTOR

March 21, 2019

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

Dear Mr. Walton:

SUBJECT: Ford Livonia Transmission Plant
36200 Plymouth Road, Livonia, Wayne County, Michigan
DEQ Site ID No.: 82002970

The Department of Environmental Quality (DEQ), Remediation and Redevelopment Division (RRD) received a memorandum entitled "Multiple Lines of Evidence" (Memo) on March 14, 2019, from Ford Motor Company (Ford). This Memo proposes to continue monitoring of seven identified homes within the groundwater plume and 100-foot offset area which were identified as requiring mitigation as directed in the DEQ correspondence dated February 1, 2019. The DEQ has reviewed the Memo and does not agree to remove the seven homes from the requirement for mitigation. General comments including those related to the lines of evidence are provided below:

- Since shallow monitor wells were recently installed, only one round of groundwater sampling data is available, which is an extremely limited set of data. This does not provide data representative of groundwater concentrations and conditions. Additional rounds of groundwater data would be required to properly characterize groundwater concentrations within the shallow groundwater. Once groundwater is characterized, additional assessment of these homes could be conducted.
- Seasonal variations and fluctuations in the shallow groundwater are not accounted for in one round of groundwater sampling. Many of the groundwater samples at these seven homes were collected when the ground was saturated and shallow groundwater was likely diluted from surface infiltration. Sampling results are likely not representative of typical site conditions and may under-represent actual groundwater concentrations and conditions.
- The shallow wells in the northern portion of the residential neighborhood have detected vinyl chloride greater than 1 part per billion (ppb). Exceedances are present in some of the shallow wells which shows that a vinyl chloride plume is present in this area in the shallow groundwater. This indicates there is a pathway for communication between the deeper and shallow groundwater, and the data available to date is insufficient to rule out the need to mitigate homes within the groundwater plume and 100-foot offset.
- Soil-gas wells previously installed by Ford do not provide representative and reliable soil-gas data. Oxygen levels in many of the soil-gas wells shows oxygen from the atmosphere is entering the soil-gas well. Soil-gas well data is not a reliable line of evidence due to the shallow groundwater and shallow depth of the soil-gas wells. Note that the soil-gas sampling locations can be highly influenced by ambient air and not representative of concentrations of vapor that may be entering into a structure that has concentrations in the groundwater likely to be present as a vapor source. Modeling performed by the U.S. Environmental Protection

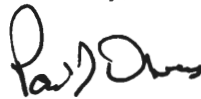
Agency (EPA) and identified in the 2012 Conceptual Model Scenarios for the Vapor Intrusion Pathway (EPA 530-R-10-003) indicates the most appropriate location to monitor the representative concentrations from a shallow source of vapors from within the structure are from a sub-slab vapor point and not from a soil-gas well.

- The use of helium leakage above or below a threshold does not address whether the shallow nature of the soil-gas wells allowed for a representative vapor sample to be collected. Though it may indicate that a leak in the sampling train did not occur, it does not address whether the vapor sample is more likely to be representative of ambient air or of the vapor source. The Memo does not contain any justification on how the use of helium nor the "low flow rates" allow for representative samples in soil-gas wells that may be highly influenced by ambient air and that sampling conditions are influenced by wet soil conditions present at the time of the sampling for many of the sampling events.
- Indoor air sampling is known to be highly variable and a single (or even multiple) sampling events are unlikely to be representative of a reasonable maximum exposure.

As identified above, the groundwater data still have concentrations above 1 ppb vinyl chloride that represent a potential vapor intrusion risk; the soil gas samples have not been collected in locations that are likely to be representative of the highest concentrations that will migrate to a structure and may not provide representative data; and the indoor air data is insufficient. Therefore, the multiple lines of evidence presented is not conclusive, nor at this time does it support that the mitigation systems need not be installed.

If you should have further questions or concerns, please contact Ms. Beth Vens, Assistant District Supervisor, at 586-753-3825, or vensb@michigan.gov; or Brandon Alger, Project Manager, Southeast Michigan District Office, DEQ, RRD, 27700 Donald Court, 586-753-3826, algerb@michigan.gov; or you may contact me.

Sincerely,



Paul Owens, District Supervisor
Southeast Michigan District Office
Remediation and Redevelopment Division
586-235-6990
owensp@michigan.gov

cc: Senator Dayna Polehanki
Representative Laurie Pohutsy
Mr. Paul Bernier, City of Livonia
Ms. Maureen Franklin, Wayne County DNVCW
Mr. Shawn Collins, The Collins Law Firm, PC
Mr. Kris Hinskey, Arcadis of Michigan, LLC
Mr. Brian Negele, DAG
Mr. Aaron Cooch, DHHS
Ms. Alexandra Rafalski, DHHS
Mr. Darren Bowling, DEQ
Ms. Cyndi Mollenhour, DEQ
Ms. Beth Vens, DEQ
Mr. Brandon Alger, DEQ