



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
SOUTHEAST MICHIGAN DISTRICT OFFICE



C. HEIDI GREYER  
DIRECTOR

December 28, 2018

RECEIVED JAN -7 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 Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Division (RRD) has reviewed data submitted to date from implementation of the "Response Activity Plan – Vapor Intrusion Evaluation" (Plan) approved with modifications on August 30, 2018, as part of the July 27, 2017 Consent Decree between the MDEQ and Ford Motor Company. Review of this data by the MDEQ determined errors in implementation of the Plan and methodology used in the field. The MDEQ staff met with Mr. Chuck Pinto, Ford Motor Company, and Kristoffer Hinskey, Arcadis U.S., Inc., on December 3, 2018, to communicate this information to Ford and verbally reviewed all data packages submitted before that date. Additional data have been received and reviewed since that time and additional errors were noted.

Data errors for specific address are listed below. These errors should be evaluated and responded to by Ford. A written response, addressing each issue at each residential and non-residential address is due to the MDEQ by January 31, 2019.

- 11770 Belden: There was a difference between the measured canister receipt vacuum at the lab and that on the chain of custody for a sample. Evaluate this and determine if data are valid.
- 34766 Standish: Sample SSMP-34766Standish-04 was not received at the lab on November 2, 2018, despite notation on the chain of custody. The sample was received on November 5, 2018 and analyzed then. Evaluate this and determine if data are valid.
- 11701 Boston Post: Daily log states issues with PID used, results may not be representative.
- 12350 Belden: Initial canister pressure for IA-12350Belden-01 was -25, lower than typical starting pressure and will affect sample quality. This location should be re-sampled. Ending time for that canister is noted as 1433, is this the correct time, and if so, is too short to represent a working day. SSMP-12350Belden-04 was noted as not sealed completely initially and was repaired. Evaluate these issues and determine if data are valid.

- 12555 Belden: There was a difference between the measured canister receipt vacuum and that reported on the chain of custody for SSMP-12555Belden-03. Evaluate this and determine if data are valid.
- 11672 Belden: There was a difference between the measured canister receipt vacuum and that reported on the chain of custody for AA-11672Belden-01. Evaluate this and determine if data are valid.
- 11801 Belden: SSMP-11801Belden-09 was resampled due to concerns ambient air may have gotten into tubing. If the sub-slab point was re-sampled the same day, the sample is likely not representative and should be re-sampled. SSMP-11801Belden-06 had issues with the helium testing and the syringe valve leaking, did this affect the quality of the sample?
- 34850 Standish: Sample identification was revised per an email request, evaluate this and determine if data are valid. A revised chain of custody was provided from the client, please review these changes and ensure sample quality was not affected. There was a difference between the measured canister receipt vacuum at the lab and that on the chain of custody for a sample. Evaluate this and determine if data are valid.
- 12066 Boston Post: Indoor air samples were collected for a time period less than 24 hours, these samples may not be representative.
- 34550 Beacon: A revised chain of custody was submitted, evaluate this and determine if data are valid.
- 12141 Boston Post: Daily log shows that workers returned to site to "repair SSMP that was improperly installed" "between 1940-2015" and it appears the SSMP was sampled between 1855-1909. Therefore, the SSMP was sampled prior to the repair being made and the sample may not be representative or reliable. This location should be re-sampled.
- 34851 Wadsworth: Boring log with data package for this address has the address of 34581 Wadsworth, verify which address this boring log is for.
- 12036 Brewster: A revised chain of custody was submitted, evaluate this and determine if data are valid.
- 12088 Brewster: Several air samples were not received at the lab on the date the chain of custody stated. Samples were received at a later date. Evaluate this and determine if data are valid.
- 34380 Beacon: Chain of custody showed sample AA-34380Beacon-01 was collected on October 24, 2018, but the date on sample tag was October 23, 2018. Verify the correct date of the sample. Daily log states on October 24, 2018, at 0915 "onsite, begin canister deployment" and at 0950 "offsite," but Indoor/Ambient air collection log sheet shows canisters were deployed between 0823 and 0847. Evaluate this and determine if data are valid.
- 12100 Boston Post: SSMP-12100Bostonpost-02 on the Soil Vapor Collection Log Sheet had a notation "Registered above -30 to start sampling." What was the initial pressure of the canister and did it affect the sample quality?

- 12001 Stark: SSMP-12001Stark-01 was not received at the lab on November 2, 2018, as the chain of custody stated but was received by the lab on November 5, 2018. Evaluate this and determine if data are valid.
- 12034 Brewster: Soil Vapor Collection Log Sheet entry for SSMP-12034Brewster-01 is not legible for the helium post-purge sample reading. Provide this information.
- 11850 Boston Post: A revised chain of custody was submitted, evaluate this and determine if data are valid.
- 11864 Belden: SSMP-11864Belden-02 took 40 minutes for the sample to collect and final canister pressure was -14 in. Hg, indicating there was a problem with the sample collection. This location should be re-sampled.
- 12224 Belden: AA-12224Belden-06 sample identification was not provided on the sample tag. SSMP-12224Belden-07 sample identification was not provided on the sample tag. Evaluate these and determine if the sample is valid.
- 11921 Boston Post: A revised chain of custody was submitted, evaluate this and determine if data are valid.

The enclosed spreadsheet lists residential and non-residential properties with errors that were repeated regularly. These errors should be evaluated and responded to by Ford. A written response, addressing each issue at each residential and non-residential address, is due to the MDEQ by January 31, 2019.

The following specific errors will require re-sampling by January 31, 2019, to correct the listed deficiency:

- For all indoor and ambient air samples with a final canister pressure of "0" in. Hg at sample pickup, the sample is invalid since the amount of air inside the canister is unknown and the sample would not be reliable or representative.
- For all indoor and ambient air samples and soil-gas samples with a final canister pressure higher than -10 in. Hg, the sample is invalid since the amount of air inside the canister would not be reliable or representative.
- For all indoor and ambient air samples and soil-gas samples with canister starting pressure lower than -26 in. Hg the samples are not typically reliable or representative.

Ford is also expected to provide the following information to the MDEQ by January 31, 2019:

- For each address, when installing sub-slab monitoring points, a PID was used to take an initial reading. For those sub-slab monitoring points where readings were detected, provide a technical explanation for the reading.
- For all indoor and ambient air samples and soil-gas samples with a final canister pressure higher than -5 in. Hg and below -10 in. Hg, the sample should be evaluated to determine if the sample is valid. When canister pressure is above -5 in Hg. Sample dilution is greater than normal.

- For all indoor and ambient air samples and soil-gas samples with a final canister pressure lower than -5 in. Hg and higher than "0" in. Hg, the sample should be evaluated to determine if the sample is valid. When canister pressure is below -5 in. Hg, the flow rate begins to drop significantly and typically the sample quality is affected and skews the results in favor of the first portion of the sampling interval.
- For each non-residential building, specifically provide the working shift hours (i.e. 8 hours, 10 hours, 12 hours, etc.) and ensure the indoor air samples are representative of this working shift.
- For all indoor and ambient air samples and soil-gas samples with canister starting pressure lower than -28 in. Hg and higher than -26 in. Hg the samples are not typically reliable or representative and may contain air from previous sampling locations and affect sample quality. Evaluate this and determine if data are valid.
- For lab sheets with corrections, corrections should be legible and initialed by the person making the correction. Review all results and ensure entries are valid.

Ford should further review all data to ensure that all samples were installed and sampled correctly and that all data is reliable and representative. Please note resampling of air within crawl spaces is not required since this has been determined to not be representative of the volatilization to indoor air pathway. Re-sampling of sump water is also not required since sump water has been found to not be representative of groundwater concentrations representing the volatilization to indoor air pathway due to volatilization of water within the sump, therefore, sump data was not evaluated.

If you should have further questions or concerns, please contact Ms. Beth Vens, Assistant District Supervisor, at 586-753-3825, or [vensb@michigan.gov](mailto:vensb@michigan.gov); or Brandon Alger, Project Manager, Southeast Michigan District Office, RRD, MDEQ, 27700 Donald Court; at 586-753-3826 or [algerb@michigan.gov](mailto: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](mailto:owensp@michigan.gov)

Enclosure

cc: Mr. Kris Hinskey, Arcadis  
Mr. Brian Negele, MDAG  
Mr. Darren Bowling, MDEQ  
Ms. Cyndi Mollenhour, MDEQ  
Ms. Beth Vens MDEQ  
Ms. Krista Reed, MDEQ  
Mr. Brandon Alger, MDEQ

Address	Chain of custody for sample(s) does not match entry on sample tag(s)	Chain of custody information for sample(s) does not match information on canister with regard to canister barcode	Chain of custody not relinquished properly - signature, date and time missing	Indoor/Ambient air canister(s) - final canister(s) pressure "0", invalid sample(s)	Indoor/Ambient air canister(s) - final canister(s) pressure higher than -5 in. Hg, sample may not be representative	Purge rate and volume - provide technical explanation for rate/volume used	Helium testing pre and/or post sample(s) show detections	Helium testing pre or post not collected	Indoor air/sub-slab starting canister(s) pressure lower than 28 in. Hg - sample(s) may not be representative
11770 Belden Court					X	X		X	X
11710 Boston Post		X				X			X
11672 Belden Court					X	X			X
11800 Belden Court					X	X			X
34367 Capitol				X	X	X			X
11771 Belden Court					X	X			X
12333 Belden Court					X	X			
12087 Stark					X	X			
34934 Standish		X			X	X	X	X	
11850 Boston Post		X			X	X		X	
12124 Boston Post					X	X	X		
34380 Capitol		X			X	X	X		X
11721 Boston Post					X	X		X	
34851 Beacon			X			X			
12075 Brewster	X				X	X	X		
34965 Wadsworth	X			X	X	X	X		X
11921 Boston Post	X			X	X	X	X		
34940 Beacon				X	X	X	X		
12224 Belden Court*	X				X				
12270 Belden Court*					X				
35000 Plymouth*	X				X				
11877 Belden Court*		X			X				
11891/93 Belden Court*					X				
11895 Belden Court*			X		X				
11897 Belden Court*	X				X				
12034 Boston Post			X		X	X	X		
34401 Capitol		X			X	X	X		
34966 Standish				X	X	X	X		X
34990 Wadsworth				X	X	X		X	X
34450 Beacon			X		X	X	X	X	
11845 Boston Post	X				X	X	X	X	X
11865 Boston Post					X	X	X	X	
34550 Beacon	X		X		X	X	X	X	
34935 Wadsworth		X			X	X		X	
34450 Capitol				X	X	X		X	
11775 Boston Post	X			X	X	X		X	X
12017 Brewster					X	X		X	X
12069 Stark	X				X	X		X	
12131 Boston Post					X	X	X		
34891 Wadsworth					X	X		X	
34920 Beacon				X		X	X		X
12141 Boston Post	X				X	X		X	X
34851 Wadsworth				X		X			X
12036 Brewster					X	X	X		
34480 Capitol		X			X	X	X	X	
12088 Brewster					X	X	X	X	
34380 Beacon					X	X	X	X	
12100 Boston Post				X	X	X	X		X
12001 Stark			X		X	X		X	
12034 Brewster			X		X	X			
12067 Boston Post		X	X		X	X	X		
34600 Beacon	X			X	X	X		X	
34766 Standish	X	X	X		X	X	X	X	
11701 Boston Post Road				X	X	X	X	X	
11680 Boston Post Road		X		X		X		X	
12350 Belden Court					X	X		X	X
11675 Belden Court					X	X			X
34591 Beacon					X				
12400 Belden Court		X	X		X	X		X	
11866 Boston Post	X	X			X	X			

