

# MEMO



To:  
Paul Owens, District Supervisor  
EGLE Warren District Office  
27700 Donald Court  
Warren, Michigan 48092-2793  
owensp@michigan.gov

Copies:  
Jeanne Schlaufman, EGLE  
Matt Williams, EGLE  
Beth Vens, EGLE  
Todd Walton, Ford  
Chuck Pinter, Ford

Arcadis of Michigan, LLC  
28550 Cabot Drive  
Suite 500  
Novi  
Michigan 48377  
Tel 248 994 2240

From:  
Kris Hinskey

Date: May 1, 2023  
Arcadis Project No.: 30167538

Subject:  
Utility Corridor Assessment – Monthly Update for the Utility Corridor SSVE  
ResAP IRA Activities  
36200 Plymouth Road, Livonia, Wayne County, Michigan  
Consent Decree No 2:1712372-GAD-RSW (CD)  
Site ID No.: 82002970

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On behalf of Ford Motor Company (Ford), Arcadis of Michigan, LLC (Arcadis) has prepared this memorandum (memo) for the Livonia Transmission Plant (LTP) site (the site). This memo is intended to update the Michigan Department of Environment, Great Lakes, and Energy (EGLE) with the most recent field activities related to the Utility Corridor Sanitary Sewer Vapor Extraction (SSVE) System Response Activity Plan for Interim Response Activities (Utility Corridor SSVE ResAP IRA) submitted to EGLE on May 31, 2022 (approved by EGLE June 23, 2022) and serve as the submittal for the month of April 2023.

## Utility Corridor SSVE Response Activity Plan for Interim Response Activities - Update

### On-site Response Activities

#### Sanitary Sewer Vapor Extraction System Operation and Compliance Sampling

The SSVE system continues to run at a flowrate of approximately 900 cubic feet per minute (cfm). The location of the SSVE system is provided on **Figure 1**. Compliance sampling continues to be completed monthly in accordance with the sampling frequency described in the Utility Corridor SSVE ResAP IRA.

Compliance samples were collected on April 11, 2023. Analytical results from these vapor grab samples were below the site-specific volatilization to indoor air criteria (SSVIAC) at the compliance sample locations SAMH-1231 and SL-2. Vapor grab sampling results to date for the SSVE compliance locations are included in **Table 1**. The next vapor sampling event of the compliance locations will be completed the week of May 8, 2023.

Utility Corridor Memo  
Livonia Transmission Plant

Overall, a significant decrease in analytical vapor concentrations at the compliance locations continues to be observed following the installation and operation of the SSVE system at the primary extraction location, as detailed in **Exhibit 1** below.

*Exhibit 1: Vapor Concentrations at Compliance Locations following On-Site SSVE System Installation*

Structure	Pre-SSVE Installation (Baseline) Concentration (µg/m³) May 25, 2022	Compliance Sample Results (µg/m³) April 11, 2023
SAMH-1231	1,200 (VC)/29 (TCE)	<0.46 (VC) /<0.72 (TCE)
SL-2	58 (VC)/2.8 (TCE)	<0.46 (VC)/<0.72 (TCE)

**Notes:**

µg/m³ = micrograms per cubic meter

TCE = trichloroethylene

VC = vinyl chloride

< = Denotes not detected above method detection limit

Arcadis is coordinating the replacement of the generator powering the SSVE system with a hardwired electrical service to minimize any downtime moving forward.

In closing, information provided in this memo satisfies EGLE's request in the June 23, 2022 letter. Ford is committed to completing the activities outlined in the Utility Corridor SSVE ResAP IRA. Monthly field activities and data associated with the SSVE system will continue to be provided to EGLE in subsequent memos.

Enc.

- Table 1. Compliance Sampling Results
- Figure 1. Utility Corridor Response Activities

# **Table 1**

**Compliance Sampling Results**

**Table 1**  
**Compliance Sampling Results**  
**Ford Livonia Transmission Plant**  
**36200 Plymouth Road**  
**Livonia, Michigan**



Location:	EGLE	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231
Sample Name:	Residential	SSVE-MH-1231_052522	SSVE-MH-1231_052622	SSVE-MH-1231_053122	SSVE-MH-1231_060822	SSVE-MH-1231_061022	SSVE-MH-1231_061522	SSVE-MH-1231_062322
Sample Date:	SSVIAC	5/25/2022	5/26/2022	5/31/2022	6/8/2022	6/10/2022	6/15/2022	6/23/2022
Sample Time:	24-Hour	10:58	14:51	12:24	14:47	12:22	12:21	11:07
Sample Type:	Exposure	Summa	Summa	Summa	Summa*	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	9.3	<0.60	<0.60	<5.4	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	<5.8	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	870	1.1	2.2	<5.5	<0.58	7.6	8.0
Tetrachloroethylene	41	3.2	<1.0	<1.0	<8.7	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	83	14	<0.62	<0.62	<4.7	<0.62	<0.62	<0.62
Trichloroethylene	2.0	29	<0.72	<0.72	<9.4	<0.72	<0.72	<0.72
Vinyl chloride	1.6	1,200	0.87	1.8	<6.7	<0.46	<0.46	7.7

Location:	EGLE	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231
Sample Name:	Residential	SSVE-MH-1231_063022	SSVE-MH-1231_070722	SSVE-MH-1231_071422	SSVE-MH-1231_071822	SSVE-MH-1231_072722	SSVE-MH-1231_080422	SSVE-MH-1231_081122
Sample Date:	SSVIAC	6/30/2022	7/7/2022	7/14/2022	7/18/2022	7/27/2022	8/4/2022	8/11/2022
Sample Time:	24-Hour	9:34	9:43	8:08	11:21	11:01	10:48	10:16
Sample Type:	Exposure	Summa	Summa	Summa	Summa	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60	<0.60	<0.6	<0.6	<0.6
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	<0.60	<0.6	<0.6	<0.6
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	<0.58	<0.58	87 J	3.1	<0.58
Tetrachloroethylene	41	<1.0	<1.0	<1.0	<1.0	<1.0	1.1 J	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	<0.62	1.3	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72	2.1	<0.72	<0.72
Vinyl chloride	1.6	<0.46	<0.46	<0.46	<0.46	41	3.3	<0.46

Location:	EGLE	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231
Sample Name:	Residential	SSVE-MH-1231_081822	SSVE-MH-1231_082522	SSVE-MH-1231_090122	SSVE-MH-1231_090822	SSVE-MH-1231_100322	SSVE-MH-1231_110422	MH-1231_111522
Sample Date:	SSVIAC	8/18/2022	8/25/2022	9/1/2022	9/8/2022	10/3/2022	11/4/2022	11/15/2022
Sample Time:	24-Hour	13:36	10:21	12:21	11:51	12:46	13:03	9:40
Sample Type:	Exposure	Summa	Summa	Summa	Summa	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.60 [<0.60]
1,4-Dioxane	5.1	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.60 [<0.60]
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	<0.58	<0.58	<0.58	7.1	1.5 [1.7]
Tetrachloroethylene	41	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 [<1.0]
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62 [0.92]
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72 [<0.72]
Vinyl chloride	1.6	<0.46	<0.46	<0.46	<0.46	<0.46	3.6	<0.46 [<0.46]

Table 1  
 Compliance Sampling Results  
 Ford Livonia Transmission Plant  
 36200 Plymouth Road  
 Livonia, Michigan



Location:	EGLE	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SL-2	SL-2
Sample Name:	Residential	MH1231-121522	MH-1231-011023	MH-1231-020723	MH-1231-030123	MH-1231-041123	SSVE-SL-2_052522	SSVE-SL-2_052622
Sample Date:	SSVIAC	12/15/2022	1/10/2023	2/7/2023	3/1/2023	4/11/2023	5/25/2022	5/26/2022
Sample Time:	24-Hour	11:41	11:06	11:08	10:21	10:12	11:34	15:36
Sample Type:	Exposure	Summa	Summa	Summa	Summa	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60	<0.60
1,4-Dioxane	5.1	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	11 [10]	<0.58 [<0.58]	1.5 [0.68 J]	<0.58 [<0.58]	<0.58 [<0.58]	57	<0.58
Tetrachloroethylene	41	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	<1.0 [<1.0]	14	<1.0
trans-1,2-Dichloroethylene	83	<0.62 [<0.62]	<0.62 [<0.62]	<0.62 [<0.62]	<0.62 [<0.62]	0.70 J [<0.62]	<0.62	<0.62
Trichloroethylene	2.0	1.0 J [1.3]	<0.72 [<0.72]	<0.72 [<0.72]	<0.72 [<0.72]	<0.72 [<0.72]	2.8	<0.72
Vinyl chloride	1.6	4.6 [6.3]	<0.46 [<0.46]	0.97 [<0.46]	<0.46 [<0.46]	<0.46 [<0.46]	58	<0.46

Location:	EGLE	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2
Sample Name:	Residential	SSVE-SL-2_053122	SSVE-SL-2_060822	SSVE-SL-2_061022	SSVE-SL-2_061522	SSVE-SL-2_062322	SSVE-SL-2_063022	SSVE-SL-2_070722
Sample Date:	SSVIAC	5/31/2022	6/8/2022	6/10/2022	6/15/2022	6/23/2022	6/30/2022	7/7/2022
Sample Time:	24-Hour	11:38	15:35	14:15	13:22	10:36	9:04	9:14
Sample Type:	Exposure	Summa	Summa*	Summa	Summa	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.60	<5.7	<0.60	<0.60	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<6.0	<0.60	<0.60	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	6.3	19	<0.58	<0.58	0.63 J	<0.58	<0.58
Tetrachloroethylene	41	1.2 J	<9.1	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<4.9	<0.62	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<9.7	<0.72	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	6.5	<7.0	<0.46	<0.46	<0.46	<0.46	<0.46

Location:	EGLE	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2
Sample Name:	Residential	SSVE-SL-2_071422	SSVE-SL-2_071822	SSVE-SL-2_072722	SSVE-SL-2_080422	SSVE-SL-2_081122	SSVE-SL-2_081822	SSVE-SL-2_082522
Sample Date:	SSVIAC	7/14/2022	7/18/2022	7/27/2022	8/4/2022	8/11/2022	8/18/2022	8/25/2022
Sample Time:	24-Hour	12:54	10:21	11:37	12:44	10:53	14:04	14:11
Sample Type:	Exposure	Summa	Summa	Summa	Summa	Summa	Summa	Summa

Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	<0.58	2.6	<0.58	<0.58	<0.58	<0.58	<0.58
Tetrachloroethylene	41	<1.0	1.2 J	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62	1.7	<0.62	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	0.80 J	<0.72	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	<0.46	0.59	<0.46	<0.46	<0.46	<0.46	<0.46

Table 1  
 Compliance Sampling Results  
 Ford Livonia Transmission Plant  
 36200 Plymouth Road  
 Livonia, Michigan



Location:	EGLE	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2
Sample Name:	Residential	SSVE-SL-2_090122	SSVE-SL-2_090822	SSVE-SL-2_100322	SSVE-SL-2_110422	SL-2-111522	SL-2-121522	SL-2-011023
Sample Date:	SSVIAC	9/1/2022	9/8/2022	10/3/2022	11/4/2022	11/15/2022	12/15/2022	1/10/2023
Sample Time:	24-Hour	13:36	10:08	13:01	13:13	9:52	11:32	10:46
Sample Type:	Exposure	Summa	Summa	Summa	Summa	Summa	Summa	Summa
<b>Volatile Organic Compounds (VOCs)</b>								
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	0.67 J	<0.58	<0.58	<0.58	0.73 J
Tetrachloroethylene	41	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2 J
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46

Location:	EGLE	SL-2	SL-2	SL-2
Sample Name:	Residential	SL-2-020723	SL-2-030123	SL-2-041123
Sample Date:	SSVIAC	2/7/2023	3/1/2023	4/11/2023
Sample Time:	24-Hour	10:57	10:06	10:01
Sample Type:	Exposure	Summa	Summa	Summa
<b>Volatile Organic Compounds (VOCs)</b>				
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	<0.58
Tetrachloroethylene	41	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	<0.72
Vinyl chloride	1.6	<0.46	<0.46	<0.46

**Table 1**  
**Compliance Sampling Results**  
**Ford Livonia Transmission Plant**  
**36200 Plymouth Road**  
**Livonia, Michigan**

**Notes:**

All results reported in  $\mu\text{g}/\text{m}^3$ .

Result exceeds the EGLE site-specific volatilization to indoor air criteria (SSVIAC) to evaluate vapor migration in preferential pathways developed for residential 24-hour exposure.

< Denotes not detected above method detection limit.

\* Method detection limits were elevated for this sample.

[ ] Indicates duplicate sample

**Sample Type:**

Summa Indicates results are from lab analyzed summa canister.

**Abbreviations:**

$\mu\text{g}/\text{m}^3$  micrograms per cubic meter

EGLE Michigan Department of Environment, Great Lakes, and Energy

J estimated result

MH manhole

SAMH sanitary manhole

SSVE sanitary sewer vapor extraction system

SL sample location

**Analytical Methods:**

United States Environmental Protection Agency (USEPA) Method TO-15

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# Figure 1

Utility Corridor Response Activities





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COMMERCIAL STREET

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Permanent Sanitary Sewer Vapor Extraction System Location

EASTERN DIVERSION CHAMBER

SAMH-1231

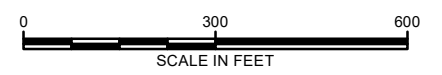
SL-2

**LEGEND**

- SANITARY MANHOLE
- FLOW DIRECTION
- SANITARY SEWER LINE
- FORD PROPERTY BOUNDARY

**NOTES:**

- SAMH = SANITARY MANHOLE
- SL = SAMPLING LOCATION
- EGLE = MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY



FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

**UTILITY CORRIDOR  
RESPONSE ACTIVITIES**



FIGURE  
1

CITY: Novi; DIV: ENV; DB: MG; PIC: R. ELLIS; PM: K. HINSKEY; PROJECT NUMBER: 30080642; COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl; T: ENV; NOVI; BRIGHTON; MI; FORD; LIVONIA; GIS; DATA; GCS; GEG; 2022; UC; Memo; Figures; Figure 1 - Utility Corridor Response Activities\_V1.mxd; PLOTTED: 12/19/2022 1:54:55 PM; BY: ab01179