

# TRANSMITTAL LETTER



To:  
Paul Owens  
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From:  
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Copies:

Date:  
February 1, 2023

Subject:  
Livonia Transmission Plant  
– Monthly Update for the  
Utility Corridor SSVE ResAP  
IRA Activities

Arcadis Project No.:  
30146655

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# MEMO



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From:  
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Date: February 1, 2023  
Arcadis Project No.: 30146655

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 January 2023.

## Utility Corridor 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). 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.

On December 29<sup>th</sup>, 2022, the SSVE unit shut off automatically due to low oil pressure in the generator. Arcadis called the generator provider who came out to complete an oil change and maintenance. Total downtime of the SSVE system was 13.4 hours. After the oil change was completed, the SSVE system was restarted, and it has

Utility Corridor Memo  
Livonia Transmission Plant

continued to run since at a flowrate of approximately 900 cfm with no additional downtime. Ford is evaluating potential power sources to power the SSVE system in order to discontinue the use of the generator.

Compliance samples were collected on January 10, 2023. Analytical results from these vapor grab samples were below the 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 February 6, 2023.

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) January 10, 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 = trichloroethene

VC = vinyl chloride

< = Denotes not detected above method detection limit

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**

Location:	EGLE Residential SSVIAC 24-hour exposure	SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231	
Sample Name:		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		SSVE-MH-1231_063022		SSVE-MH-1231_070722		SSVE-MH-1231_071422	
Sample Date:		5/25/2022		5/26/2022		5/31/2022		6/8/2022		6/10/2022		6/15/2022		6/23/2022		6/30/2022		7/7/2022		7/14/2022	
Sample Time:		10:58		14:51		12:24		14:47		12:22		12:21		11:07		9:34		9:43		8:08	
Sample Type:		FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa*	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa
<b>Volatile Organic Compounds (VOCs)</b>																					
1,1-Dichloroethylene	210	NM	9.3	NM	<0.60	NM	<0.60	NM	<5.4	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60
1,4-Dioxane	5.1	NM	<0.60	NM	<0.60	NM	<0.60	NM	<5.8	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60
cis-1,2-Dichloroethylene	8.3	292.63	870	75.93	1.1	57.49	2.2	0.0	<5.5	0.0	<0.58	37.17	7.6	0.0	8.0	71.54	<0.58	0.0	<0.58	179.88	<0.58
Tetrachloroethylene	41	0.0	3.2	0.0	<1.0	0.0	<1.0	6.12 J	<8.7	7.28 J	<1.0	26.83 J	<1.0	9.41 J	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0
trans-1,2-Dichloroethylene	83	0.0	14	0.0	<0.62	0.0	<0.62	0.0	<4.7	0.0	<0.62	0.0	<0.62	0.0	<0.62	0.0	<0.62	0.0	<0.62	0.0	<0.62
Trichloroethylene	2.0	12.94	29	0.0	<0.72	0.0	<0.72	0.0	<9.4	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72
Vinyl chloride	1.6	NM	1,200	NM	0.87	NM	1.8	NM	<6.7	NM	<0.46	NM	<0.46	NM	7.7	NM	<0.46	NM	<0.46	NM	<0.46

See Notes on last page.

Location:	EGLE Residential SSVIAC 24-hour exposure	SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		SAMH-1231		
Sample Name:		SSVE-MH-1231_071822	SSVE-MH-1231_072722	SSVE-MH-1231_080422	SSVE-MH-1231_081122	SSVE-MH-1231_081822	SSVE-MH-1231_082522	SSVE-MH-1231_090122	SSVE-MH-1231_090822	SSVE-MH-1231_100322	SSVE-MH-1231_110422									
Sample Date:		7/18/2022	7/27/2022	8/4/2022	8/11/2022	8/18/2022	8/25/2022	9/1/2022	9/8/2022	10/3/2022	11/4/2022									
Sample Time:		11:21	11:01	10:48	10:16	13:36	10:21	12:21	11:51	12:46	13:03									
Sample Type:		FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	Summa	Summa	Summa
<b>Volatile Organic Compounds (VOCs)</b>																				
1,1-Dichloroethylene	210	NM	<0.60	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	<0.6	<0.6	
1,4-Dioxane	5.1	NM	<0.60	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	NM	<0.6	<0.6	<0.6	
cis-1,2-Dichloroethylene	8.3	0.0	<0.58	0.0	87 J	0.0	3.1	0.0	<0.58	0.0	<0.58	127.87	<0.58	761.34	<0.58	NM	<0.58	<0.58	7.1	
Tetrachloroethylene	41	0.0	<1.0	0.0	<1.0	0.0	1.1 J	0.0	<1.0	0.0	<1.0	0.0	<1.0	0	<1.0	0.0	<1.0	<1.0	<1.0	
trans-1,2-Dichloroethylene	83	0.0	<0.62	58.43 J	1.3	0.0	<0.62	218.41 J	<0.62	0.0	<0.62	0.0	<0.62	0	<0.62	131.35	<0.62	<0.62	<0.62	
Trichloroethylene	2.0	0.0	<0.72	0.0	2.1	0.0	<0.72	0.0	<0.72	0.0	<0.72	29.45 J	<0.72	0	<0.72	0.0	<0.72	<0.72	<0.72	
Vinyl chloride	1.6	NM	<0.46	NM	41	NM	3.3	NM	<0.46	NM	<0.46	NM	<0.46	NM	<0.46	NM	<0.46	<0.46	3.6	

See Notes on last page.

Location:	EGLE Residential SSVIAC 24-hour exposure	SAMH-1231	SAMH-1231	SAMH-1231	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2		
Sample Name:		SSVE-MH-1231_111522	SSVE-MH-1231_121522	SSVE-MH-1231_011023	SSVE-SL-2_052522	SSVE-SL-2_052622	SSVE-SL-2_053122	SSVE-SL-2_060822	SSVE-SL-2_061022	SSVE-SL-2_061522	SSVE-SL-2_062322									
Sample Date:		11/15/2022	12/15/2022	1/10/2023	5/25/2022	5/26/2022	5/31/2022	6/8/2022	6/10/2022	6/15/2022	6/23/2022									
Sample Time:		9:40	11:41	11:06	11:34	15:36	11:38	15:35	14:15	13:22	10:36									
Sample Type:		Summa	Summa	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa*	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa
Volatile Organic Compounds (VOCs)																				
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<5.7	NM	<0.60	NM	<0.60	NM	<0.60	<0.60	
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<6.0	NM	<0.60	NM	<0.60	NM	<0.60	<0.60	
cis-1,2-Dichloroethylene	8.3	1.5	11	<0.58	114.66	57	72.7	<0.58	325.89	6.3	0.0	19	0.0	<0.58	0.0	<0.58	0.0	<0.58	0.63 J	
Tetrachloroethylene	41	<1.0	<1.0	<1.0	0	14	0.0	<1.0	0.0	1.2 J	5.73 J	<9.1	0.0	<1.0	0.0	<1.0	0.0	<1.0	<1.0	
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	0	<0.62	0.0	<0.62	0.0	<0.62	0.0	<4.9	0.0	<0.62	0.0	<0.62	0.0	<0.62	<0.62	
Trichloroethylene	2.0	<0.72	1.0 J	<0.72	38.33	2.8	0.0	<0.72	0.0	<0.72	0.0	<9.7	0.0	<0.72	0.0	<0.72	0.0	<0.72	<0.72	
Vinyl chloride	1.6	<0.46	4.6	<0.46	NM	58	NM	<0.46	NM	6.5	NM	<7.0	NM	<0.46	NM	<0.46	NM	<0.46	<0.46	

See Notes on last page.

Location:	EGLE Residential SSVIAC 24-hour exposure	SL-2		SL-2		SL-2		SL-2		SL-2		SL-2		SL-2		SL-2		SL-2		SL-2		
Sample Name:		SSVE-SL-2_063022	SSVE-SL-2_070722	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	SSVE-SL-2_090122											
Sample Date:		6/30/2022	7/7/2022	7/14/2022	7/18/2022	7/27/2022	8/4/2022	8/11/2022	8/18/2022	8/25/2022	9/1/2022											
Sample Time:		9:04	9:14	12:54	10:21	11:37	12:44	10:53	14:04	14:11	13:36											
Sample Type:		FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000	Summa	FROG-5000
<b>Volatile Organic Compounds (VOCs)</b>																						
1,1-Dichloroethylene	210	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	
1,4-Dioxane	5.1	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	NM	<0.60	
cis-1,2-Dichloroethylene	8.3	129.12	<0.58	112.53	<0.58	178.46 J	<0.58	0.0	2.6	0.0	<0.58	0.0	<0.58	0.0	<0.58	0.0	<0.58	101.5	<0.58	0.0	<0.58	
Tetrachloroethylene	41	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	1.2 J	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0	0.0	<1.0	
trans-1,2-Dichloroethylene	83	0.0	<0.62	0.0	<0.62	0.0	<0.62	0.0	1.7	1,195.43 J	<0.62	0.0	<0.62	85.18 J	<0.62	0.0	<0.62	0.0	<0.62	0.0	<0.62	
Trichloroethylene	2.0	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	0.80 J	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72	0.0	<0.72	
Vinyl chloride	1.6	NM	<0.46	NM	<0.46	NM	<0.46	NM	0.59	NM	<0.46	NM	<0.46	NM	<0.46	NM	<0.46	NM	<0.46	NM	<0.46	

See Notes on last page.



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



Location:	EGLE Residential SSVIAC 24-hour exposure	SL-2		SL-2	SL-2	SL-2	SL-2	SL-2
Sample Name:		SSVE-SL-2_090822	SSVE-SL-2_100322	SSVE-SL-2_110422	SSVE-SL-2_111522	SSVE-SL-2_121522	SSVE-SL-2_011023	
Sample Date:		9/8/2022	10/3/2022	11/4/2022	11/15/2022	12/15/2022	1/10/2023	
Sample Time:		10:08	13:01	13:13	9:52	11:32	10:46	
Sample Type:		FROG-5000	Summa	Summa	Summa	Summa	Summa	Summa
<b>Volatile Organic Compounds (VOCs)</b>								
1,1-Dichloroethylene	210	NM	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	NM	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	1815.19	<0.58	0.67 J	<0.58	<0.58	<0.58	0.73 J
Tetrachloroethylene	41	0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2 J
trans-1,2-Dichloroethylene	83	2114.56	<0.62	<0.62	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	0.00	<0.72	<0.72	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	NM	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46

See Notes on last page.

**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

**Sample Type**

FROG-5000 Indicates results are from FROG-5000™ screening real time result.

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

NM not measured

SAMH sanitary manhole

SSVE sanitary sewer vapor extraction system

SL sample location

**Analytical Methods (Summa Canister):**

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

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# Figure 1

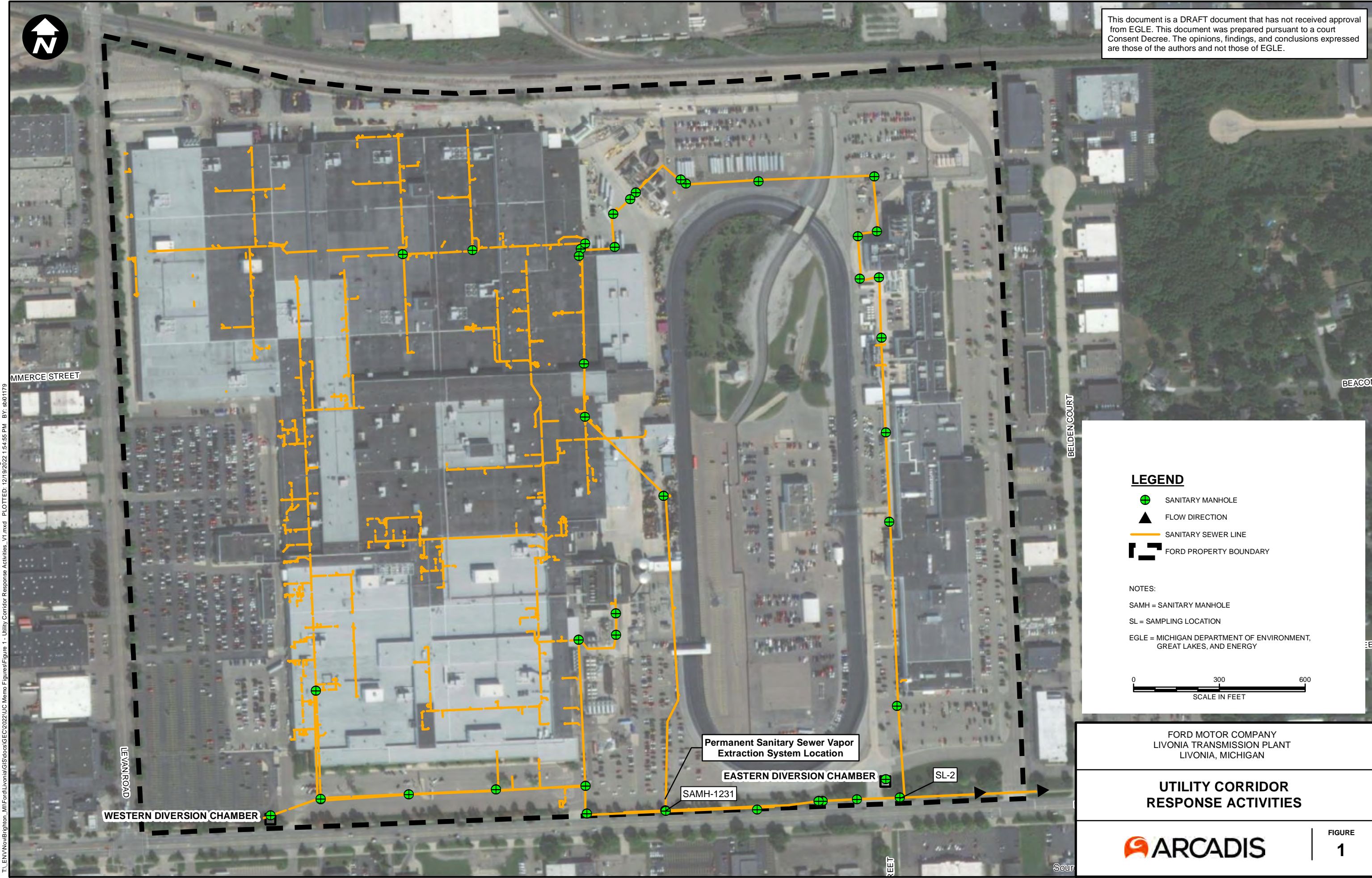
Utility Corridor Response Activities



This document is a DRAFT document that has not received approval from EGLE. This document was prepared pursuant to a court Consent Decree. The opinions, findings, and conclusions expressed are those of the authors and not those of EGLE.



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; Nov; Brighton; MI; Ford; Livonia; GIS; Geo; 2022; UC; Memo; Figures; Figure 1 - Utility Corridor Response Activities; VI.mxd; PLOTTED: 12/19/2022 1:54:55 PM; BY: sbd1179



**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

0 300 600  
SCALE IN FEET

FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

**UTILITY CORRIDOR  
RESPONSE ACTIVITIES**