

TRANSMITTAL LETTER



To:
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From:
 Kris Hinskey

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Date:
 March 1, 2023

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

Arcadis Project No.:
 30167538

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MEMO



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From:
Kris Hinskey

Date: March 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

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 February 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). 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 February 7, 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 March 6, 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/m ³) May 25, 2022	Compliance Sample Results (µg/m ³) February 7, 2023
SAMH-1231	1,200 (VC)/29 (TCE)	0.97 (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

SSVE system compliance with the SSVIAC to date has been based only on laboratory analytical results from grab vapor samples collected at compliance locations. The FROG 5000™ was utilized from May to September 2022 as a screening tool at the compliance locations in addition to grab vapor samples, but use of the FROG 5000™ was discontinued in September 2022 due to compliance of the SSVE system with the SSVIAC being based solely on laboratory analytical results. Therefore, since results from the FROG 5000™ do not determine SSVE system compliance with the SSVIAC, the historical results for the FROG 5000™ have been removed from **Table 1**.

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 Residential SSVIAC 24-hour exposure	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
Sample Date:		5/25/2022	5/26/2022	5/31/2022	6/8/2022	6/10/2022	6/15/2022	6/23/2022
Sample Time:		10:58	14:51	12:24	14:47	12:22	12:21	11:07
Sample Type:		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

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	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231
Sample Name:		SSVE-MH-1231_063022	SSVE-MH-1231_071822	SSVE-MH-1231_072722	SSVE-MH-1231_080422	SSVE-MH-1231_081122	SSVE-MH-1231_081822	SSVE-MH-1231_082522
Sample Date:		6/30/2022	7/18/2022	7/27/2022	8/4/2022	8/11/2022	8/18/2022	8/25/2022
Sample Time:		9:34	11:21	11:01	10:48	10:16	13:36	10:21
Sample Type:		Summa	Summa	Summa	Summa	Summa	Summa	Summa
Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.60	<0.60	<0.6	<0.6	<0.6	<0.6	<0.6
1,4-Dioxane	5.1	<0.60	<0.60	<0.6	<0.6	<0.6	<0.6	<0.6
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	87 J	3.1	<0.58	<0.58	<0.58
Tetrachloroethylene	41	<1.0	<1.0	<1.0	1.1 J	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<0.62	1.3	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	2.1	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	<0.46	<0.46	41	3.3	<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

Location:	EGLE Residential SSVIAC 24-hour exposure	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231	SAMH-1231
Sample Name:		SSVE-MH-1231_090122	SSVE-MH-1231_090822	SSVE-MH-1231_100322	SSVE-MH-1231_110422	SSVE-MH-1231_111522	SSVE-MH-1231_121522	SSVE-MH-1231_011023
Sample Date:		9/1/2022	9/8/2022	10/3/2022	11/4/2022	11/15/2022	12/15/2022	1/10/2023
Sample Time:		12:21	11:51	12:46	13:03	9:40	11:41	11:06
Sample Type:		Summa	Summa	Summa	Summa	Summa	Summa	Summa
Volatile Organic Compounds (VOCs)								
1,1-Dichloroethylene	210	<0.6	<0.6	<0.6	<0.6	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]
1,4-Dioxane	5.1	<0.6	<0.6	<0.6	<0.6	<0.60 [<0.60]	<0.60 [<0.60]	<0.60 [<0.60]
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	<0.58	7.1	1.5 [1.7]	11 [10]	<0.58 [0.58]
Tetrachloroethylene	41	<1.0	<1.0	<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 [0.92]	<0.62 [<0.62]	<0.62 [<0.62]
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72	<0.72 [<0.72]	1.0 J [1.3]	<0.72 [<0.72]
Vinyl chloride	1.6	<0.46	<0.46	<0.46	3.6	<0.46 [<0.46]	4.6 [6.3]	<0.46 [<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	SAMH-1231	SL-2	SL-2	SL-2	SL-2	SL-2	SL-2
Sample Name:		SSVE-MH_1231_020723	SSVE-SL-2_052522	SSVE-SL-2_052622	SSVE-SL-2_053122	SSVE-SL-2_060822	SSVE-SL-2_061022	SSVE-SL-2_061522
Sample Date:		2/7/2023	5/25/2022	5/26/2022	5/31/2022	6/8/2022	6/10/2022	6/15/2022
Sample Time:		11:08	11:34	15:36	11:38	15:35	14:15	13:22
Sample Type:		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	<5.7	<0.60	<0.60
1,4-Dioxane	5.1	<0.60 [<0.60]	<0.60	<0.60	<0.60	<6.0	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	1.5 [0.68 J]	57	<0.58	6.3	19	<0.58	<0.58
Tetrachloroethylene	41	<1.0 [<1.0]	14	<1.0	1.2 J	<9.1	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62 [<0.62]	<0.62	<0.62	<0.62	<4.9	<0.62	<0.62
Trichloroethylene	2.0	<0.72 [<0.72]	2.8	<0.72	<0.72	<9.7	<0.72	<0.72
Vinyl chloride	1.6	0.97 [<0.46]	58	<0.46	6.5	<7.0	<0.46	<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	SL-2
Sample Name:		SSVE-SL-2_062322	SSVE-SL-2_063022	SSVE-SL-2_070722	SSVE-SL-2_071422	SSVE-SL-2_071822	SSVE-SL-2_072722	SSVE-SL-2_080422
Sample Date:		6/23/2022	6/30/2022	7/7/2022	7/14/2022	7/18/2022	7/27/2022	8/4/2022
Sample Time:		10:36	9:04	9:14	12:54	10:21	11:37	12:44
Sample Type:		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	0.63 J	<0.58	<0.58	<0.58	2.6	<0.58	<0.58
Tetrachloroethylene	41	<1.0	<1.0	<1.0	<1.0	1.2 J	<1.0	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	<0.62	1.7	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72	0.80 J	<0.72	<0.72
Vinyl chloride	1.6	<0.46	<0.46	<0.46	<0.46	0.59	<0.46	<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	SL-2
Sample Name:		SSVE-SL-2_081122	SSVE-SL-2_081822	SSVE-SL-2_082522	SSVE-SL-2_090122	SSVE-SL-2_090822	SSVE-SL-2_100322	SSVE-SL-2_110422
Sample Date:		8/11/2022	8/18/2022	8/25/2022	9/1/2022	9/8/2022	10/3/2022	11/4/2022
Sample Time:		10:53	14:04	14:11	13:36	10:08	13:01	13:13
Sample Type:		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	<0.58	<0.58	<0.58	<0.58	0.67 J	<0.58
Tetrachloroethylene	41	<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
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

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
Sample Name:		SSVE-SL-2_111522	SSVE-SL-2_121522	SSVE-SL-2_011023	SSVE-SL-2_020723
Sample Date:		11/15/2022	12/15/2022	1/10/2023	2/7/2023
Sample Time:		9:52	11:32	10:46	10:57
Sample Type:		Summa	Summa	Summa	Summa
Volatile Organic Compounds (VOCs)					
1,1-Dichloroethylene	210	<0.60	<0.60	<0.60	<0.60
1,4-Dioxane	5.1	<0.60	<0.60	<0.60	<0.60
cis-1,2-Dichloroethylene	8.3	<0.58	<0.58	0.73 J	<0.58
Tetrachloroethylene	41	<1.0	<1.0	1.2 J	<1.0
trans-1,2-Dichloroethylene	83	<0.62	<0.62	<0.62	<0.62
Trichloroethylene	2.0	<0.72	<0.72	<0.72	<0.72
Vinyl chloride	1.6	<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.

[] 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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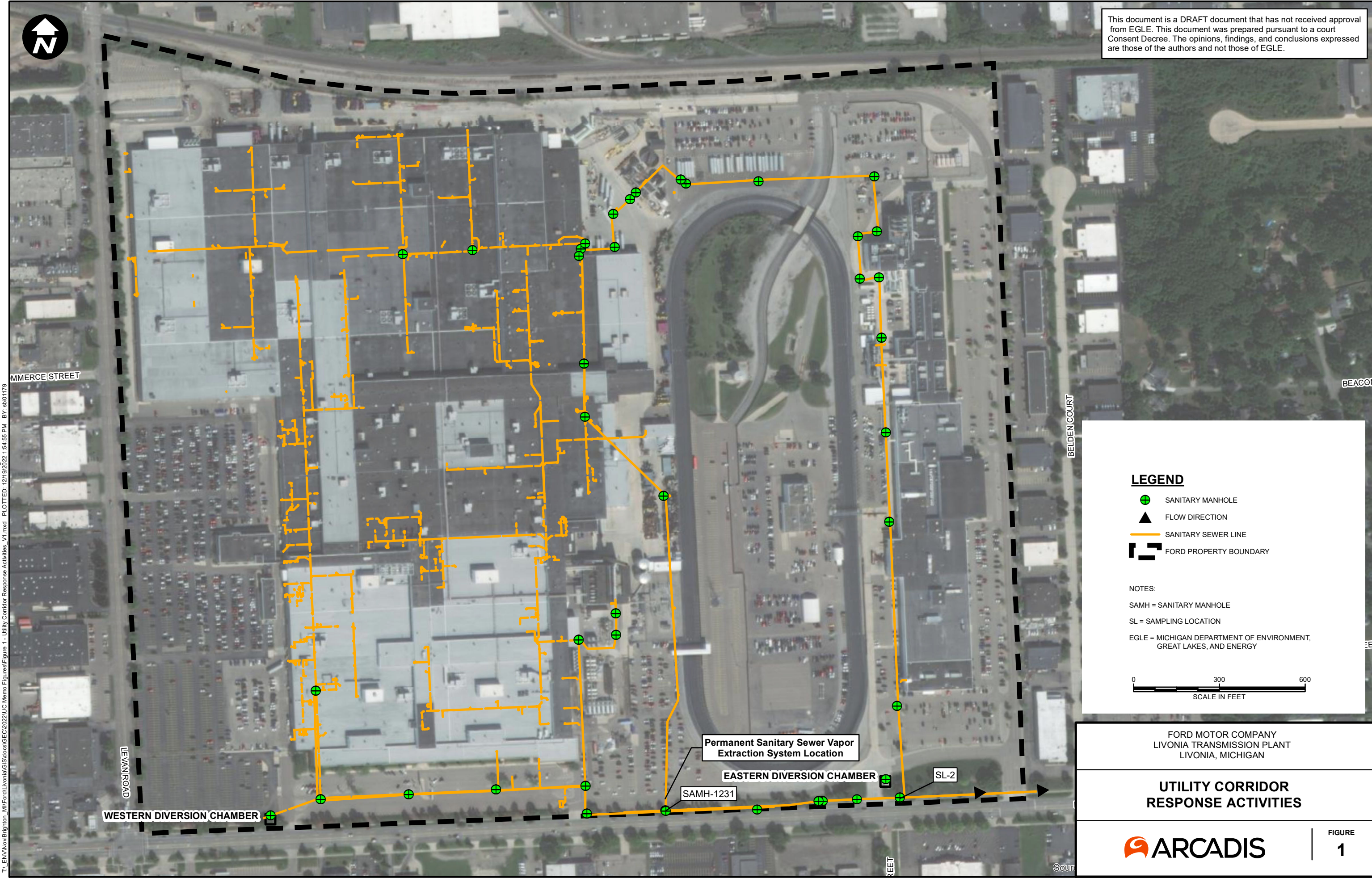
Figure 1

Utility Corridor Response Activities

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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; G2022; UC; Memo Figures; Figure 1 - Utility Corridor Response Activities_V1.mxd; PLOTTED: 12/19/2022 1:54:55 PM; BY: ab01179



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**