

TRANSMITTAL LETTER



To:
Jeanne Schlaufman
Michigan Department of
Environment, Great Lakes &
Energy
27700 Donald Court
Warren, MI 48092

From:
Kris Hinskey

Arcadis U.S., Inc.
28550 Cabot Drive
Suite 500
Novi
Michigan 48377
Tel 248 994 2240

Copies:

Date:
December 22 2023

Subject:
ResAp-Interim Response
Activity Plan ZVI Injections
Quarterly Update Letter

Arcadis Project No.:
30195206

We are sending you copies:

Attached **Under Separate Cover Via _____ the Following Items:**

Shop Drawings Plans Specifications Change Order
 Prints Samples Copy of Letter Reports

Other: CD And Hardcopy

Copies	Delivery Date	Drawing No.	Rev.	Description	Action*
1	12/22/23			ResAP-Interim Response Activity Plan ZVI Injections Quarterly Update Letter	

Action*

A Approved CR Correct and Resubmit Resubmit _____ Copies
 AN Approved As Noted F File Return _____ Copies
 AS As Requested FA For Approval Review and Comment
 Other: _____

Mailing Method

U.S. Postal Service 1st Class Courier/Hand Delivery FedEx Priority Overnight FedEx 2-Day Delivery
 Certified/Registered Mail United Parcel Service (UPS) FedEx Standard Overnight FedEx Economy
 Other: File Sharing

SUBJECT

ResAP-Interim Response Activity Plan ZVI Injections
Quarterly Update Letter

TO

Ms. Jeanne Schlaufman, EGLE

DATE

December 22, 2023

OUR REF

30195206

COPIES TO

Mr. Todd Walton, Ford
Mr. Chuck Pinter, Ford

NAME

Kris Hinskey – Arcadis of Michigan, LLC

On behalf of Ford Motor Company (Ford), this letter has been prepared by Arcadis of Michigan, LLC (Arcadis) for the Livonia Transmission Plant (LTP) site (the site), located on **Figure 1**. This letter complies with the following Response Activity Plan (ResAP) and EGLE approval letter:

- ResAP for Interim Response Activities – Property Boundary Zero Valent Iron, date June 30, 2023
- *Notice of Conditional Approval of Response Activity Pan – Interim Response Activities for Zero Valent Iron Injections at the Ford – Livonia Transmission Plant*, dated July 20, 2023

All work outlined below was completed in accordance with the approved ResAP for Interim Response Activities (IRA).

This work included utility clearance, performance monitoring well installation, performance sampling, Zero Valent Iron (ZVI) injections, and storm sewer evaluation as outlined in the ResAP IRA.

Performance Monitoring Well Installation

As requested in the ResAP IRA approval letter, two additional monitoring wells were requested to be installed along the eastern boundary of the site, co-located with HPT-04 and HPT-06 (**Figure 2**), to provide additional performance monitoring for the injections. Two new wells were installed at locations with the highest detected vinyl chloride concentrations observed during historical aquifer profiling investigations. Prior to installing the new monitoring wells, a private utility locate was completed by Metiri Group (Metiri) utilizing ground penetrating radar (GPR) and electromagnetic surveying (EM-61). Additionally, a MISSDIG clearance was completed. Monitoring wells MW-234 and MW-235 were installed to a depth of 20-feet below ground surface with 5-foot stainless steel screens set below encountered groundwater at a depth of 12 to 17 feet below ground surface and 14 to 19 feet below ground surface, respectively. The monitoring wells (MW-234 and MW-235) were developed 24-hours after installation by purging groundwater for approximately 30-minutes until the purge water was visually clear. All soil cuttings were containerized in 55-gallon drums and taken off-site for disposal by MPS Group, and the development water was treated through the onsite hydraulic control system. Boring and monitoring well construction logs for MW-234 and MW-235 are included in **Attachment 1**.

Performance Groundwater Sampling

In addition to the two new monitoring wells (MW-234 and MW-235) installed for additional performance monitoring, six existing monitoring wells (MW-35, MW-43, MW-52, MW-211S, MW-212S, and MW-213S) are also included in the performance monitoring program.

Baseline groundwater sampling was completed in accordance with the parameters in the ResAP IRA. Monitoring data collected from the six existing monitoring wells during the third quarter groundwater sampling event were utilized for the baseline data at those locations. Additionally, baseline groundwater samples were collected from performance monitoring wells MW-234 and MW-235 on September 18, 2023.

Each monitoring well was sampled using a peristaltic pump and low-flow sampling techniques in accordance with the project Quality Assurance Project Plan. Groundwater samples were collected into laboratory-supplied bottles and were submitted on ice to Eurofins Laboratories (Eurofins) in Barberton, Ohio for laboratory analysis. All samples were analyzed for the seven constituents of concern (COCs) for the Site: 1,1-dichloroethene (DCE), cis-1,2-DCE, trans-1,2-DCE, tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride (VC), and 1,4-dioxane in accordance with United States Environmental Protection Agency (USEPA) Method 8260D and 1,4-dioxane via USEPA Method 8260D-SIM.

Groundwater analytical results and low-flow sampling parameters for baseline samples are provided in **Table 1**, with the data compared to Michigan Part 201 Non-Residential Generic Cleanup Criteria (EGLE 2018). Low-flow groundwater sampling logs are included in **Attachment 2**.

Preliminary Injection Locations

Two preliminary injections (INJ-33 and INJ-35) were chosen to monitor injection materials within the assumed radius of influence. ZVI material was injected at 10 feet below ground surface (bgs), 14 feet bgs, and 18 feet bgs at INJ-33 and at 10 feet bgs, 14 feet bgs, 18 feet bgs, and 22 feet bgs at INJ-35. Five confirmation borings (INJ-33-7.5, INJ-33-10, INJ-33/35-15, INJ-35-12.5, and INJ-33-15) were completed within the design footprint of INJ-33 and INJ-35 following injections to verify the assumed 15-foot radius of influence. Boring logs for the confirmation borings are included in **Attachment 1**. The table below shows the depth of the injected ZVI as well as the depth of the observed ZVI fractures and ZVI material.

Boring Name	Boring Depth	Depths of ZVI Injected at Adjacent Injection Location (feet bgs)	Depths of Observed ZVI Influence (feet bgs)
INJ-33-7.5	25 feet	10, 14, and 18	9 (fracture), 13 (unconsolidated) and 18
INJ-33-10	25 feet	10, 14, and 18	9.5 (fracture), 6.5 (trace), 7 (trace), 15 (trace), 18
INJ-35-12.5	25 feet	10, 14, 18, and 22	8 (fracture), 9 (fracture), 9.2 (fracture), 10.5 (fracture), 12 (fracture), and 13 (fracture), and 18
INJ-35-15	25 feet	10, 14, 18, and 22	9 (fracture), 14.5 (fracture), and 19 (fracture)
INJ-33/35-15	25 feet	10, 14, 18, and 22	8.5 (fracture), 9.5 (trace), 18, and 22 (trace)

At each of the five confirmation borings evidence of ZVI material was observed at the fracture depths of the adjacent injection location demonstrating emplacement of media as designed. A magnet was run across the confirmation borings and ZVI material was visibly magnetized at the observed ZVI influence locations.

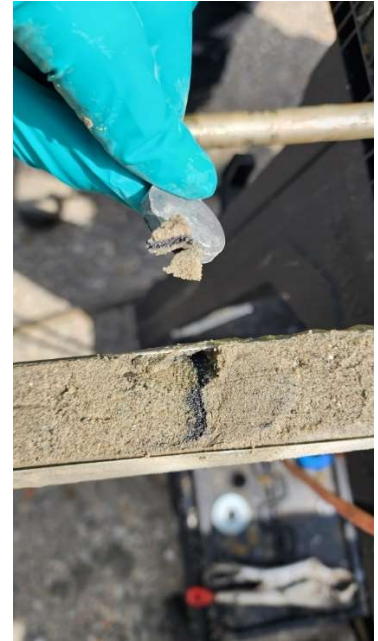
Example photos of the ZVI emplacement are included below.



INJ-33-7.5 ZVI at 18 feet bgs



INJ-35-15 ZVI at 9 feet bgs



INJ-33-10 ZVI at 9.5 feet bgs

Injection Activities

The ZVI injection scope of work, as documented in the ResAP IRA, was completed at the Site between September 12 and 27, 2023. Prior to completing any subsurface injections, a private utility locate was completed by Metiri and a MISSDIG clearance was completed. At all locations, a utility clearance was completed by potholing with vacuum extraction to clear the first five feet of material. Upon completion to five feet below ground surface, the materials were placed back in the borehole in preparation for the ZVI injections.

The ZVI injections were completed by FRx, Inc. (FRx) using a direct-push drill rig and a trailer mounted injection mixing system at the locations presented on **Figure 3**. ZVI injections were completed at 47 locations, with a total of 114 injection intervals. 113 ZVI injection intervals were planned, and one additional injection interval was installed at location INJ-46 at a depth of 20 feet below ground surface. The additional injection interval was installed to use up contingency ZVI purchased for the project. Each individual injection point was comprised of one to four vertical injection zones with intervals vertically spaced four feet apart. The injection intervals were installed between 10 to 24-feet below the ground surface. Injection information including the number of fractures, fracture depth and ZVI injection material quantities at each location is outlined in **Table 2**.

In total, approximately 167,466 pounds of ZVI were injected in a treatment area up to 750-feet wide on the site. Refer to **Figure 3** for injection locations. Individual injection locations were spaced approximately 30-feet apart due to the radius of influence confirmed by the confirmation borings which was consistent with the anticipated extent forecasted in the ResAP IRA. The injection point locations were adjusted based on field conditions including subsurface utilities and/or above ground interferences.

Ms. Jeanne Schlaufman
Michigan Department of Environment, Great Lakes, and Energy
December 22, 2023

Storm sewers in the work area were inspected daily for the presence of ZVI material. Inspections were completed to confirm that ZVI slurry was not present in the manholes downstream of the injection locations. There were no observations that material entered the sewer during the injections.

Proposed Schedule

Future performance monitoring will be completed in accordance with the ResAP IRA. The 4Q2023 performance monitoring event was completed on November 14, 2023. The next quarterly update letter will summarize the results of the 4Q2023 sampling event and will be submitted by January 31, 2024.

Enclosures:

Table 1 – ZVI Performance Monitoring Groundwater Analytical Data

Table 2 – ZVI Injection Log

Figure 1 – Site Location Map

Figure 2 – Site Layout

Figure 3 – Cross Section of Injection Area

Attachment 1 – Boring Logs

Attachment 2 – Groundwater Sampling Logs

Tables

Table 1
Baseline Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan



Location:		Michigan Non-Residential Drinking Water Criteria	MW-35	MW-43	MW-52	MW-211S	MW-212S	MW-213S	MW-234	MW-235
Date:	Unit		8/15/2023	8/15/2023	8/15/2023	8/15/2023	8/15/2023	8/15/2023	9/18/2023	9/18/2023
Semi-volatile Organic Compounds (SVOCs)										
1,4-Dioxane	µg/L	350	3.4	2.5	1.8 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)										
1,1-Dichloroethene	µg/L	7.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	< 1.0	< 1.0	< 1.0	< 1.0	2.6	0.58 J	< 1.0	1.6
Tetrachloroethene	µg/L	5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	1.6	< 1.0	1.5	< 1.0	0.82 J	0.48 J	< 1.0	11

See Notes on Last Page.

Table 1
Baseline Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan



Location:		MW-35	MW-43	MW-52	MW-211S	MW-212S	MW-213S	MW-234	MW-235
Date:	Unit	8/15/2023	8/15/2023	8/15/2023	8/15/2023	8/15/2023	8/15/2023	9/18/2023	9/18/2023
Low Flow Sampling Parameters									
Dissolved Oxygen	mg/L	0.15	1.19	0.00	0.14	1.48	0.18	0.06	0.14
ORP	mV	-243.9	-152.7	-132.1	31.3	-2.2	-20.7	-255.2	-61.9
pH	s.u.	7.73	7.62	7.22	7.40	7.19	7.12	10.04	7.10
Temperature	°C	16.7	17.0	16.5	19.4	19.4	20.4	18.7	17.6
Specific Conductivity	mS/cm	4.74	9.62	7.00	7.29	7.48	7.76	8.09	7.86
Turbidity	NTU	11.28	8.30	4.06	2.28	0.02	0.40	5.21	1.22

See Notes on Last Page.

Table 1
Baseline Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:

Results are compared to EGLE Part 201 Generic Cleanup Criteria, June 2018.

Bold Result denotes exceedance of EGLE Non-Residential Drinking Water Criteria.

< Denotes not detected above reporting limit.

Abbreviations:

°C	degrees celsius
µg/L	micrograms per liter
EGLE	Michigan Department of Environment, Great Lakes, and Energy
J	estimated result
mg/L	milligrams per liter
MW	monitoring well
mS/cm	millisiemens per centimeter
mV	millivolts
NTU	nephelometric turbidity units
s.u.	standard units

Analytical Methods:

8260B for Volatile Organic Compounds (VOCs)

Table 2
Injection Log
Ford Livonia Transmission Plant
36200 Plymouth Road
Wayne County, Michigan

DRAFT



BORING NAME	# OF FRACTURES	DATE	FRACTURE DEPTHS	GUAR GEL VOLUME (gallons)	ZVI USED (pounds)	CHASE VOLUME (gallons)	NOTES
INJ-01	1	9/26/2023	18	150	1,469	18	
INJ-02	2	9/26/2023	16	175	1,469	17	
INJ-03	1	9/26/2023	20	160	1,469	20	
INJ-04	2	9/25/2023	18	120	1,469	18	
		9/25/2023	16	150	1,469	19	
INJ-05	2	9/25/2023	20	160	1,469	18	
		9/25/2023	18	140	1,469	19	
		9/25/2023	22	160	1,469	18	
INJ-06	2	9/25/2023	16	140	1,469	18	
		9/25/2023	20	160	1,469	18	
INJ-07	3	9/25/2023	14	170	1,469	14	
		9/25/2023	18	150	1,469	18	
		9/25/2023	22	160	1,469	17	
INJ-08	3	9/21/2023	12	150	1,469	16	
		9/22/2023	16	170	1,469	16	
		9/22/2023	20	150	1,469	17	
INJ-09	3	9/21/2023	10	140	1,469	15	
		9/21/2023	14	155	1,469	20	
		9/22/2023	18	160	1,469	16	
INJ-10	3	9/21/2023	12	140	1,469	15	
		9/22/2023	16	160	1,469	16	
		9/22/2023	20	160	1,469	15	
INJ-11	3	9/21/2023	10	130	1,469	14	
		9/21/2023	14	145	1,469	16	
		9/22/2023	18	150	1,469	13	
INJ-12	2	9/21/2023	12	150	1,469	12	
		9/21/2023	16	140	1,469	13	
INJ-13	3	9/21/2023	10	160	1,469	14	
		9/21/2023	14	150	1,469	13	
		9/21/2023	18	120	1,469	14	18' made hydraulic connection to INJ-15
INJ-14	2	9/21/2023	12	140	1,469	13	
		9/21/2023	16	140	1,469	13	
INJ-15	2	9/21/2023	14	150	1,469	17	
		9/21/2023	18	150	1,469	13	
INJ-16	1	9/22/2023	16	140	1,469	18	
INJ-17	2	9/22/2023	14	150	1,469	18	
		9/22/2023	18	150	1,469	18	
INJ-18	1	9/22/2023	16	160	1,469	18	
INJ-19	2	9/22/2023	14	160	1,469	18	
		9/22/2023	18	140	1,469	18	
INJ-20	2	9/20/2023	16	190	1,469	18	
		9/20/2023	20	160	1,469	18	20' made hydraulic connection to INJ-22
INJ-21	3	9/19/2023	14	190	1,469	19	
		9/20/2023	18	250	1,469	18	
		9/20/2023	22	190	1,469	18	
INJ-22	2	9/19/2023	16	190	1,469	18	
		9/20/2023	20	190	1,469	18	
INJ-23	3	9/19/2023	14	185	1,469	19	
		9/19/2023	18	180	1,469	18	
		9/20/2023	22	200	1,469	18	
INJ-24	2	9/19/2023	16	140	1,469	18	
		9/20/2023	20	190	1,469	18	
INJ-25	3	9/18/2023	14	200	1,469	14	
		9/19/2023	18	300	1,469	13	
		9/19/2023	22	150	1,469	16	
INJ-26	2	9/18/2023	12	120	1,469	15	
		9/19/2023	16	150	1,469	16	
INJ-27	2	9/12/2023	10	155	1,469	20	
		9/13/2023	14	160	1,469	14	
INJ-28	1	9/19/2023	12	180	1,469	14	
INJ-29	2	9/13/2023	10	95	1,469	11	
		9/13/2023	15	145	1,469	14	14' interval would not take, moved to 15'.
INJ-30	2	9/19/2023	12	200	1,469	14	
		9/19/2023	16	150	1,469	16	
INJ-31	3	9/14/2023	10	150	1,469	12	
		9/14/2023	14	140	1,469	13	
		9/14/2023	18	200	1,469	15	
INJ-32	2	9/14/2023	12	160	1,469	13	
		9/14/2023	16	150	1,469	13	
INJ-33	3	9/13/2023	10	180	1,469	13	
		9/13/2023	14	160	1,469	13	
		9/13/2023	18	155	1,469	13	
INJ-34	3	9/14/2023	12	160	1,469	13	
		9/15/2023	16	130	1,469	13	
		9/15/2023	20	135	1,469	17	
INJ-35	4	9/12/2023	10	150	1,469	13	
		9/13/2023	14	160	1,469	13	
		9/13/2023	18	155	1,469	13	
		9/13/2023	22	150	1,469	15	
INJ-36	3	9/14/2023	12	140	1,469	13	
		9/15/2023	16	140	1,469	14	
		9/15/2023	20	150	1,469	18	
INJ-37	4	9/15/2023	10	150	1,469	17	
		9/15/2023	14	160	1,469	17	
		9/15/2023	18	160	1,469	19	
		9/18/2023	22	160	1,469	18	
INJ-38	4	9/15/2023	12	150	1,469	17	
		9/15/2023	16	150	1,469	17	
		9/15/2023	20	150	1,469	18	
		9/15/2023	24	150	1,469	18	
INJ-39	4	9/15/2023	10	140	1,469	18	
		9/18/2023	14	160	1,469	18	
		9/18/2023	18	150	1,469	18	
		9/18/2023	22	180	1,469	18	
		9/18/2023	12	200	1,469	17	
INJ-40	4	9/18/2023	16	150	1,469	17	
		9/18/2023	20	160	1,469	18	
		9/18/2023	24	180	1,469	20	

Table 2
 Injection Log
 Ford Livonia Transmission Plant
 36200 Plymouth Road
 Wayne County, Michigan

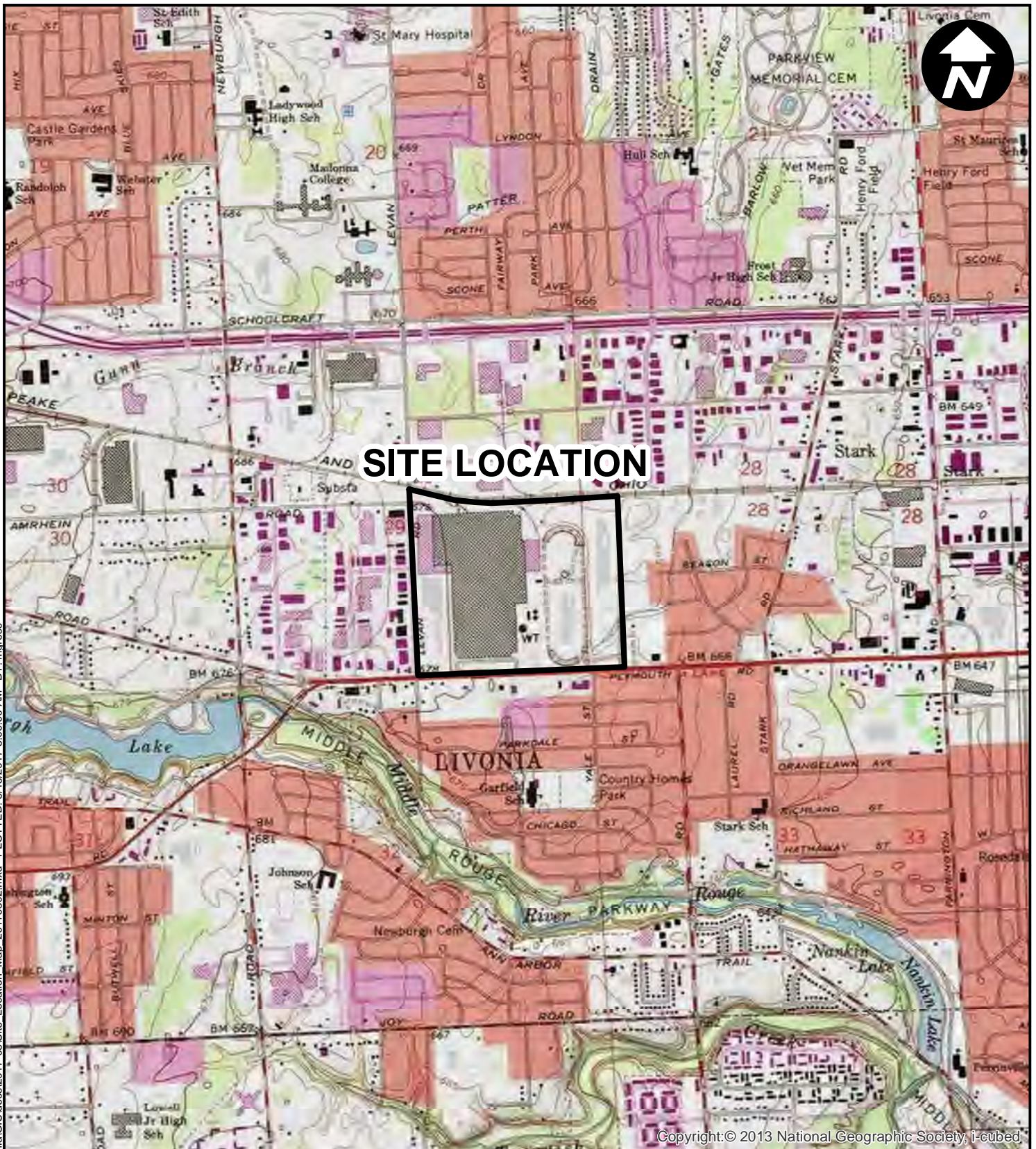
DRAFT



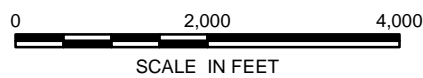
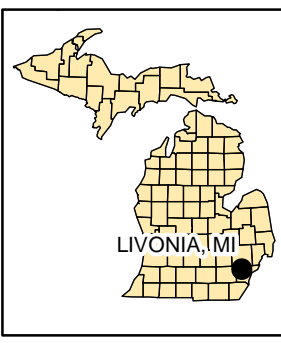
BORING NAME	# OF FRACTURES	DATE	FRACTURE DEPTHS	GUAR GEL VOLUME (gallons)	ZVI USED (pounds)	CHASE VOLUME (gallons)	NOTES
INJ-41	3	9/26/2023	14	200	1,469	15	
		9/26/2023	18	160	1,469	19	
		9/27/2023	22	130	1,469	14	
INJ-42	3	9/26/2023	16	130	1,469	15	
		9/26/2023	20	170	1,469	20	
		9/27/2023	24	140	1,469	14	
INJ-43	2	9/26/2023	18	170	1,469	17	
		9/27/2023	22	140	1,469	14	
INJ-44	2	9/26/2023	20	170	1,469	16	
		9/27/2023	24	140	1,469	15	
INJ-45	2	9/27/2023	14	130	1,469	12	
		9/27/2023	18	140	1,469	16	
INJ-46	2	9/26/2023	16	160	1,469	18	
		9/27/2023	20	140	1,469	13	
INJ-47	2	9/27/2023	14	160	1,469	13	
		9/27/2023	18	200	1,469	16	

Figures

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: M1001322.0001 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z: GISProjects\ENVI\Novi\Brighton_MLFordLivonia\GIS\docs\2017-08\Site_Location_Map_20170802.mxd PLOTTED: 8/16/2017 8:00:00 AM BY: mgatress



Copyright:© 2013 National Geographic Society, i-cubed



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

SITE LOCATION MAP

SOURCE:
USGS 7.5 MINUTE TOPOGRAPHIC MAP
NORTHVILLE AND WAYNE QUADRANGLES

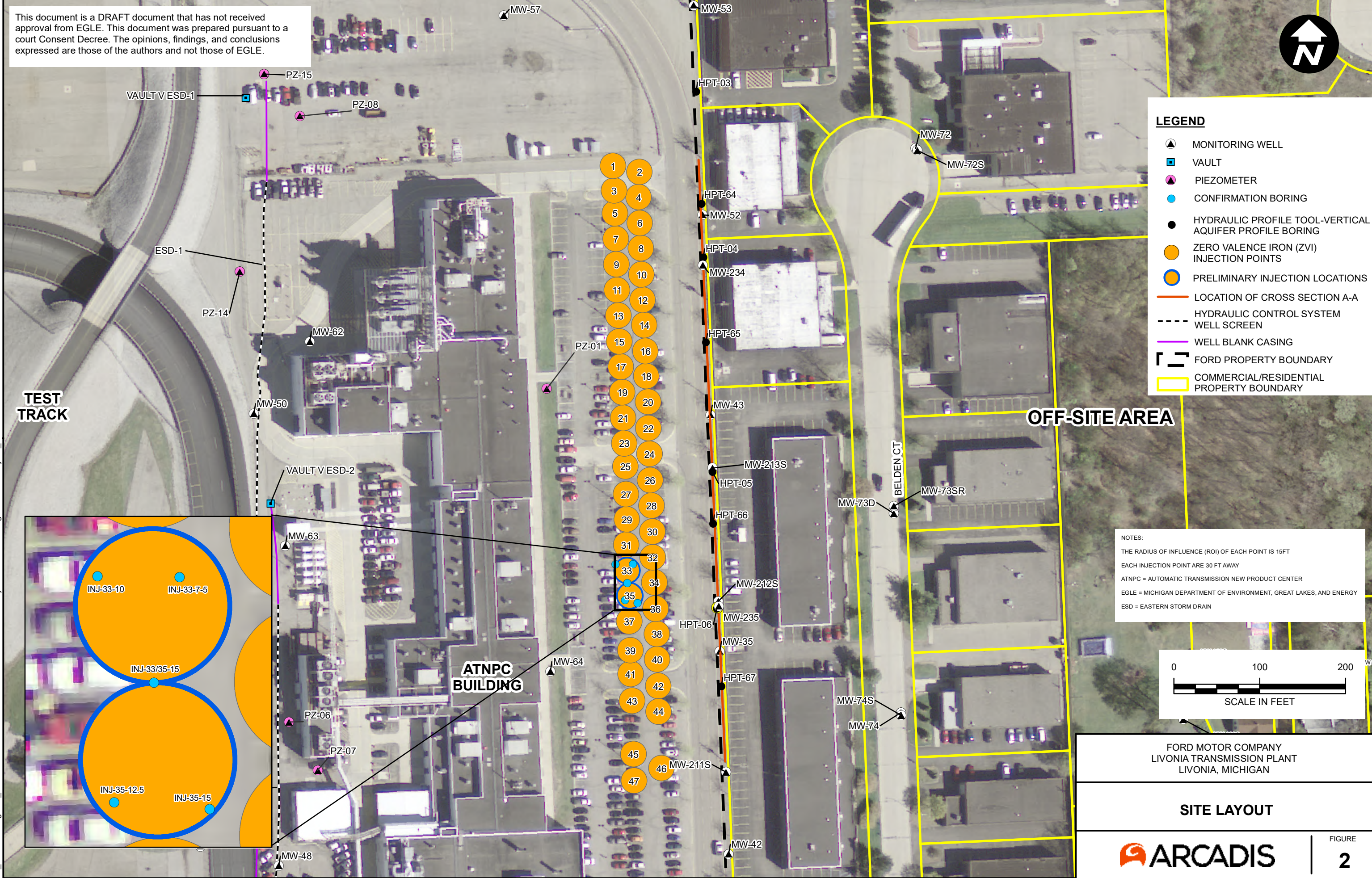


FIGURE
1

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.

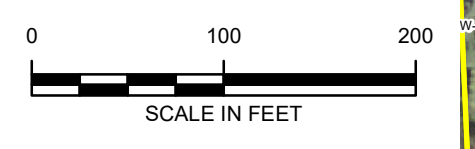


CITY: Novi; DIV: ENV; DB: MG; PIC: R. ELLIS; PM: K. HINSKEY; PROJECT NUMBER: 30080642; COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet; T:_ENV\Novi\Brighton_MIFord\Livonia\GIS\docs\GEC\2023\Ford LTP- ZVI Injection Locations\Figure 2 - Site Layout_LTP_RevDRA.mxd; PLOTTED: 12/19/2023 11:39:57 AM; BY: AKENS



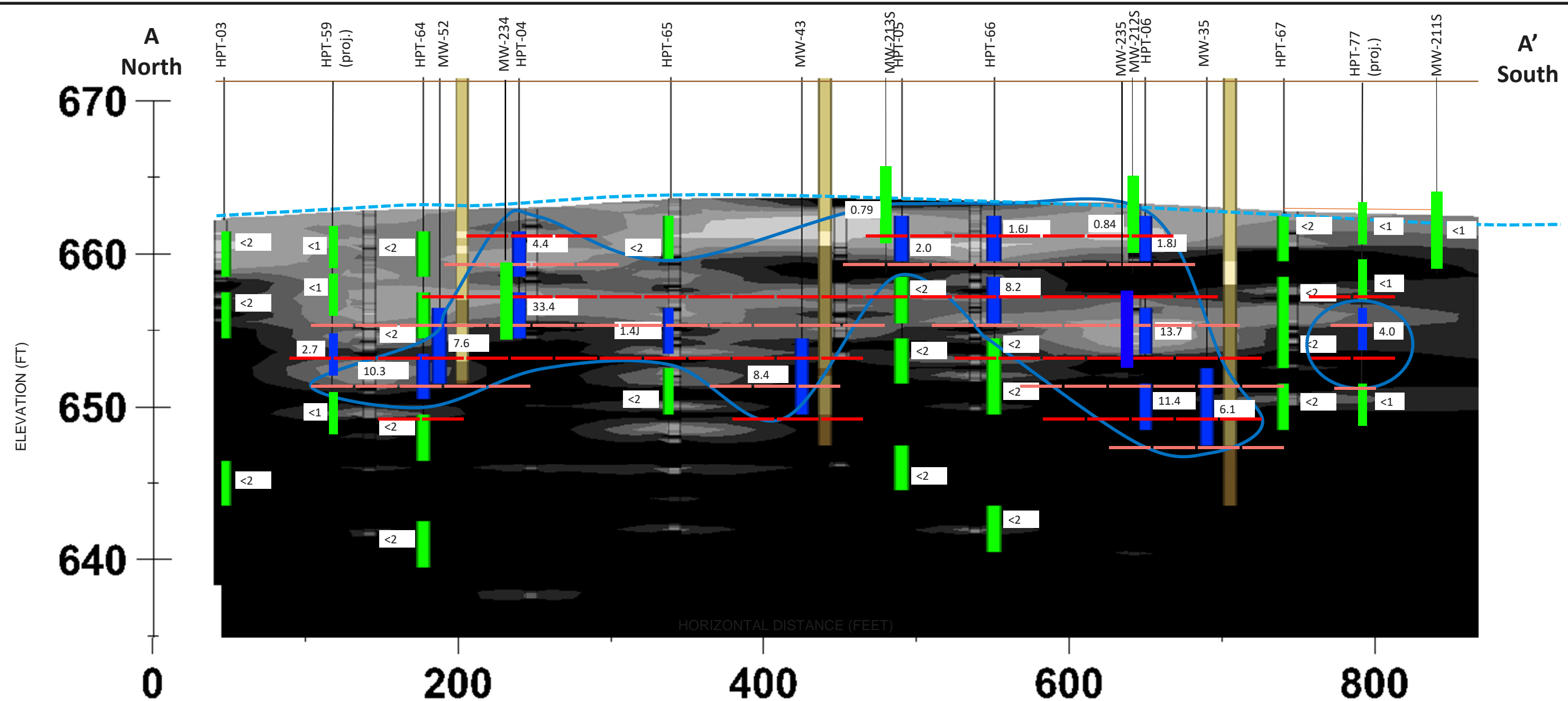
- LEGEND**
- ▲ MONITORING WELL
 - VAULT
 - ▲ PIEZOMETER
 - CONFIRMATION BORING
 - HYDRAULIC PROFILE TOOL-VERTICAL AQUIFER PROFILE BORING
 - ZERO VALENCE IRON (ZVI) INJECTION POINTS
 - PRELIMINARY INJECTION LOCATIONS
 - LOCATION OF CROSS SECTION A-A
 - - - HYDRAULIC CONTROL SYSTEM WELL SCREEN
 - WELL BLANK CASING
 - ▭ FORD PROPERTY BOUNDARY
 - ▭ COMMERCIAL/RESIDENTIAL PROPERTY BOUNDARY

NOTES:
 THE RADIUS OF INFLUENCE (ROI) OF EACH POINT IS 15FT
 EACH INJECTION POINT ARE 30 FT AWAY
 ATNPC = AUTOMATIC TRANSMISSION NEW PRODUCT CENTER
 EGLE = MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
 ESD = EASTERN STORM DRAIN

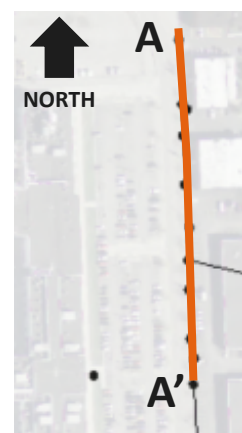


FORD MOTOR COMPANY
 LIVONIA TRANSMISSION PLANT
 LIVONIA, MICHIGAN

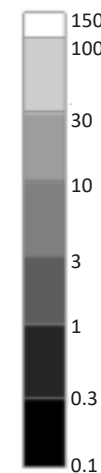
SITE LAYOUT



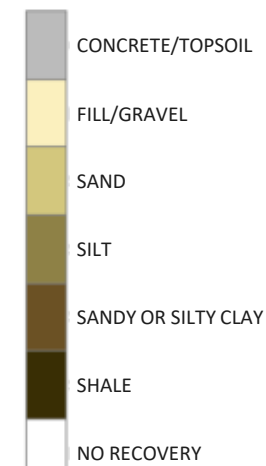
CROSS SECTION LOCATION MAP



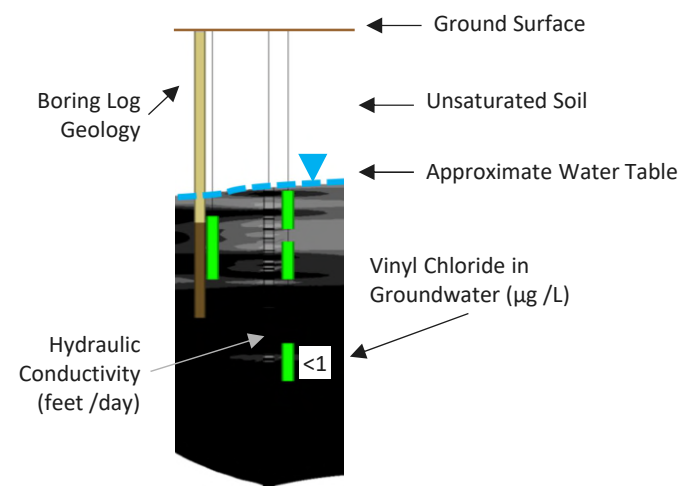
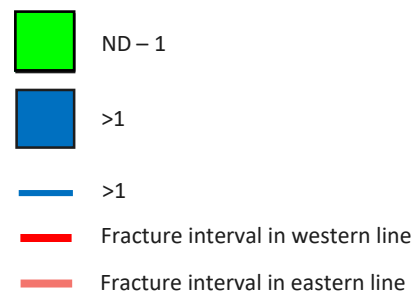
3D Interpolation of Hydraulic Conductivity (feet/day)



Boring Log Geology



Vinyl Chloride Groundwater Concentration (µg/L)



- Notes:
 1. µg /L = Micrograms per Liter
 2. Vertical Exaggeration = 10X
 3. The Michigan Department of Environmental Quality Residential Drinking Water criteria for Vinyl Chloride is 1.0 µg/L

FORD MOTOR COMPANY
 LIVONIA TRANSMISSION PLANT
 LIVONIA, MICHIGAN

CROSS SECTION A-A' – VINYL CHLORIDE AND HYDRAULIC CONDUCTIVITY

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

Attachment 1

Boring Logs

Boring No.: MW-234

Soil Boring Log

Sheet: 1 of 1

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S.Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S.Turner
 Project Location: Livonia, MI Weather Conditions: 58° F, Sunny

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1				0.0		(0.0-0.5') SAND, fine to medium; and CLAY, no plasticity, no dilatancy; well sorted; moist; dark yellowish brown (10YR 4/6).	8.0" Flush Mount (0.0-2.0') Filter Pack Sand	
2		60		0.0	(0.5-0.8') ASPHALT.			
3				0.0	(0.8-7.0') SAND, medium, subrounded to subangular; little clay, no plasticity; little silt, rapid dilatancy; well sorted; moist to wet; dark yellowish brown (10YR 4/6).			
4				0.0				
5				0.0				
6				0.0			(2.0-11.0') Bentonite Pellets	
7		42		0.0	Note: Boring appears wet at 7.0' bgs.			
8				0.0	(7.0-7.3') FILL.			
9				0.0	(7.3-10.0') SAND, very fine to medium, subrounded to subangular; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; grayish brown (10YR 5/2).			
10				0.0				
11				0.0		(10.0-14.5') GRANULES, subrounded to subangular; and SAND, medium to very coarse, subrounded to subangular; poorly sorted; wet; grayish brown (10YR 5/2).	(11.0-20.0') Filter Pack Sand	
12		52		0.0				
13				0.0				
14				0.0				
15				0.0				
16				0.0		(14.5-19.0') SAND, very fine to medium, subrounded to subangular; little silt, rapid dilatancy; little clay, no plasticity; well sorted; wet; grayish brown (10YR 5/2).	(12.0-17.0') 2.0" diameter Stainless Steel 0.010 Slot Well Screen	
17		56		0.0				
18				0.0				
19				0.0				
20				0.0		(19.0-20.0') SILT and CLAY, low to medium plasticity, slow dilatancy; stiff; wet; grayish brown (10YR 5/2). End of boring at 20.0' bgs.		

Drilling Co.: Fibertec Sampling Method: 5' Macrocore
 Driller: B. Wilson Sampling Interval: Continuous
 Drilling Method: Hand Auger / Direct Push Water Level Start (ft. bgs.): 7.0
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Hand Auger to 5.0' bgs. Surface Elev.: NA
 North Coord.: NA
 East Coord.: NA

SOIL BORING LOG - 2013 G:\COMMON\FORDLIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD LTP BORING LOGS - 112723.GPJ ARCADIS 2013.GDT 11/29/23



Boring No.: MW-235

Soil Boring Log

Sheet: 1 of 1

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S.Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S.Turner
 Project Location: Livonia, MI Weather Conditions: 58° F, Sunny

Depth (feet)	Sample Interval	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1				0.0		(0.0-0.8') SAND, fine to medium; and CLAY, no plasticity, no dilatancy; well sorted; moist; dark yellowish brown (10YR 4/6).	8.0" Flush Mount (0.0-2.0') Filter Pack Sand	
2			0.0		(0.8-1.2') ASPHALT.			
3		60		0.0	(1.2-10.0') SAND, medium, subrounded to subangular; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; dark yellowish brown (10YR 4/6).			
4				0.0				
5				0.0				
6				0.0				
7				0.0				
8		57		0.0		Note: Boring appears wet at 8.0' bgs.	(2.0-13.0') Bentonite Pellets	
9				0.0				
10				0.0				
11				0.0		(10.0-16.0') GRANULES, subrounded to subangular; and SAND, medium to very coarse, subrounded to subangular; poorly sorted; wet; grayish brown (10YR 5/2).		
12				0.0				
13		55		0.0			(13.0-20.0') Filter Pack Sand	
14				0.0				
15				0.0				
16				0.0			(14.0-19.0') 2.0" diameter Stainless Steel 0.010 Slot Well Screen	
17				0.0		(16.0-20.0') SILT, no plasticity, rapid dilatancy; some very fine to medium sand, subrounded to subangular; well sorted; medium stiff; wet; grayish brown (10YR 5/2).		
18		52		0.0				
19				0.0				
20				0.0		End of boring at 20.0' bgs.		

Drilling Co.: Fibertec Sampling Method: 5' Macrocore
 Driller: B. Wilson Sampling Interval: Continuous
 Drilling Method: Hand Auger / Direct Push Water Level Start (ft. bgs.): 8.0
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Hand Auger to 5.0' bgs. Surface Elev.: NA
 North Coord.: NA
 East Coord.: NA

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP_BORING_LOGS_112723.GPJ ARCADIS 2013.GDT 11/29/23

Soil Boring Log

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S. Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S. Turner
 Project Location: Livonia, MI Weather Conditions: 73° F, Sunny

Depth (feet)	Sample Interval	Blow Counts	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1							(0.0-0.7') ASPHALT		
2							(0.7-5.0') NOTE: AIR KNIFE		
3			0						
4									
5									
6							(5.0-10.0') SAND, medium, subangular to subround; little clay, no plasticity, rapid dilatancy; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; no odor; dark yellowish brown (10YR 4/6).		
7							NOTE: ZVI fracture observed at 9'.		
8			42						
9									
10									
11							(10.0-13.0') GRANULES and SAND, medium to very coarse, subangular to subround; poorly sorted; wet; no odor; grayish brown (10YR 5/2).		
12							NOTE: Unconsolidated ZVI observed at 13'.		
13			52						
14							(13.0-20.0') SAND, very fine to medium, subangular to subround; little silt, no plasticity, rapid dilatancy; little clay, no plasticity, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2).		
15							NOTE: ZVI observed at 18'.		
16									
17									
18			56						
19									
20									

Drilling Co.: W. Walter Sampling Method: 5' Macrocore
 Driller: Ron Sampling Interval: Continuous
 Drilling Method: Air Knife / Direct Push Water Level Start (ft. bgs.): 7
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Air Knife to 5.0' bgs. Surface Elev.: _____
 North Coor.: _____
 East Coor.: _____

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP BORING LOGS_112723.GPJ ARCADIS 2013.GDT 12/19/23

Soil Boring Log

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S. Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S. Turner
 Project Location: Livonia, MI Weather Conditions: 73° F, Sunny

Depth (feet)	Sample Interval	Blow Counts	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1					NM		(0.0-0.7') ASPHALT		
2			0		NM		(0.7-5.0') NOTE: AIR KNIFE		
3					NM				
4					NM				
5					NM				
6					0.0		(5.0-9.5') SAND, medium, subangular to subround; little clay, no plasticity, rapid dilatancy; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; no odor; dark yellowish brown (10YR 4/6).		
7					0.0				
8			42		0.0				
9					0.0				
10					0.0				
11					0.0		(9.5-13.0') GRANULES and SAND, medium to very coarse, subangular to subround, poorly sorted; wet; no odor; grayish brown (10YR 5/2). NOTE: ZVI fracture observed at 9.5'. Trace ZVI at 6.5'. Trace ZVI at 7'		
12					0.0				
13			18		0.0				
14					0.0		(13.0-20.0') SAND, very fine to medium, subangular to subround; little silt, no plasticity, rapid dilatancy; little clay, no plasticity, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2). NOTE: Trace ZVI observed at 15'. ZVI observed at 18'.		
15					0.0				
16					0.0				
17					0.0				
18			12		0.0				
19					0.0				
20					0.0				

Drilling Co.: W. Walter Sampling Method: 5' Macrocore
 Driller: Ron Sampling Interval: Continuous
 Drilling Method: Air Knife / Direct Push Water Level Start (ft. bgs.): 7
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Air Knife to 5.0' bgs. Surface Elev.: _____
 North Coor.: _____
 East Coor.: _____

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP BORING LOGS_112723.GPJ ARCADIS 2013.GDT 12/19/23

Soil Boring Log

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S. Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S. Turner
 Project Location: Livonia, MI Weather Conditions: 73° F, Sunny

Depth (feet)	Sample Interval	Blow Counts	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1					NM		(0.0-0.7') ASPHALT		
2					NM		(0.7-5.0') NOTE: AIR KNIFE		
3			0		NM				
4					NM				
5					NM				
6					0.0		(5.0-9.0') SAND, medium, subangular to subround; little clay, no plasticity, rapid dilatancy; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; no odor; dark yellowish brown (10YR 4/6).		
7					0.0				
8			42		0.0				
9					0.0				
10					0.0		(9.0-13.0') GRANULES and SAND, medium to very coarse, subangular to subround; poorly sorted; wet; no odor; grayish brown (10YR 5/2). NOTE: ZVI fracture observed at 8.5'. Trace ZVI observed at 9.5'.		
11					0.0				
12					0.0				
13			18		0.0		(13.0-22.0') SAND, very fine to medium, subangular to subround; little silt, no plasticity, rapid dilatancy; little clay, no plasticity, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2). NOTE: ZVI observed at 18'.		
14					0.0				
15					0.0				
16					0.0				
17					0.0				
18			12		0.0				
19					0.0				
20					0.0				
21					0.0				
22					0.0				
23					0.0		(22.0-25.0') SILT, low plasticity, slow dilatancy; some clay, low plasticity, slow dilatancy; dry to moist; medium stiff; grayish brown (10YR 5/2). NOTE: Trace ZVI observed at 22'.		
24					0.0				
25					0.0				

Drilling Co.: W. Walter Sampling Method: 5' Macrocore
 Driller: Ron Sampling Interval: Continuous
 Drilling Method: Air Knife / Direct Push Water Level Start (ft. bgs.): 7
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Air Knife to 5.0' bgs. Surface Elev.: _____
 North Coord.: _____
 East Coord.: _____

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP BORING LOGS_112723.GPJ ARCADIS 2013.GDT 12/19/23

Soil Boring Log

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S. Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S. Turner
 Project Location: Livonia, MI Weather Conditions: 73° F, Sunny

Depth (feet)	Sample Interval	Blow Counts	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1					NM		(0.0-0.7') ASPHALT		
2					NM		(0.7-5.0') NOTE: AIR KNIFE		
3			0		NM				
4					NM				
5					NM				
6					0.0		(5.0-9.0') SAND, medium, subangular to subround; little clay, no plasticity, rapid dilatancy; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; no odor; dark yellowish brown (10YR 4/6). NOTE: ZVI fractures observed at 8', 9', 9.2', 10.5', 12', 13'.		
7					0.0				
8			42		0.0				
9					0.0				
10					0.0				
11					0.0		(13.5-16.0') GRANULES and SAND, medium to very coarse, subangular to subround; poorly sorted; wet; no odor; grayish brown (10YR 5/2).		
12					0.0				
13			52		0.0				
14					0.0				
15					0.0		(16.0-21.0') SAND, very fine to medium, subangular to subround; little silt, no plasticity, rapid dilatancy; little clay, no plasticity, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2). NOTE: ZVI observed at 18'.		
16					0.0				
17					0.0				
18			56		0.0				
19					0.0				
20					0.0		(21.0-25.0') CLAY, high plasticity, slow dilatancy; some silt, high plasticity, slow dilatancy; moist; soft; grayish brown (10YR 5/2).		
21					0.0				
22					0.0				
23					0.0				
24					0.0				
25					0.0				

Drilling Co.: W. Walter Sampling Method: 5' Macrocore
 Driller: Ron Sampling Interval: Continuous
 Drilling Method: Air Knife / Direct Push Water Level Start (ft. bgs.): 7
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Air Knife to 5.0' bgs. Surface Elev.: _____
 North Coord.: _____
 East Coord.: _____

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP BORING LOGS_112723.GPJ ARCADIS 2013.GDT 12/19/23

Soil Boring Log

Project Name: Ford Livonia Transmission Plant Date Started: 09/13/2023 Logger: S. Turner
 Project Number: 30167538 Date Completed: 09/13/2023 Editor: S. Turner
 Project Location: Livonia, MI Weather Conditions: 73° F, Sunny

Depth (feet)	Sample Interval	Blow Counts	Recovery (in.)	Sample ID	PID (ppm)	USCS Class	Description	Construction Details	Well
1					NM		(0.0-0.7') ASPHALT		
2					NM		(0.7-5.0') NOTE: AIR KNIFE		
3			0		NM				
4					NM				
5					NM				
6					0.0		(5.0-10.0') SAND, medium, subangular to subround; little clay, no plasticity, rapid dilatancy; little silt, no plasticity, rapid dilatancy; well sorted; moist to wet; no odor; grayish brown (10YR 5/2). NOTE: ZVI fractures observed at 9'.		
7					0.0				
8			42		0.0				
9					0.0				
10					0.0				
11					0.0		(10.0- 13.5') GRANULES and SAND, medium to very coarse, subangular to subround; poorly sorted; wet; no odor; grayish brown (10YR 5/2).		
12					0.0				
13			52		0.0				
14					0.0		(13.5-21.0') SAND, very fine to medium, subangular to subround; little silt, no plasticity, rapid dilatancy; little clay, no plasticity, rapid dilatancy; well sorted; wet; grayish brown (10YR 5/2). NOTE: ZVI fracture observed at 14.5' and 19'.		
15					0.0				
16					0.0				
17					0.0				
18			56		0.0				
19					0.0				
20					0.0				
21					0.0		(21.0-25.0') CLAY, high plasticity, slow dilatancy; some silt, high plasticity, slow dilatancy; moist; soft; grayish brown (10YR 5/2).		
22					0.0				
23					0.0				
24					0.0				
25					0.0				

Drilling Co.: W. Walter Sampling Method: 5' Macrocore
 Driller: Ron Sampling Interval: Continuous
 Drilling Method: Air Knife / Direct Push Water Level Start (ft. bgs.): 7
 Drilling Fluid: None Water Level Finish (ft. btoc.): NA
 Remarks: ' / ft = feet; " / in = inch; bgs = below ground surface. Converted to Well: Yes No
Air Knife to 5.0' bgs. Surface Elev.: _____
 North Coor.: _____
 East Coor.: _____

SOIL BORING LOG - 2013 G:\COMMON\FORD\LIVONIA\03 NOTES AND DATA\BORING LOGS\MASTER_FORD_LTP BORING LOGS_112723.GPJ ARCADIS 2013.GDT 12/19/23

Attachment B

Groundwater Sampling Logs



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	Ford LTP	Weather	MW-35	Date	08-15-2023
Project Name/Location	Ford LTP			64.0 degrees F and Cloudy. The wind is blowing N/NE at 9.2 mph.			
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	19.5-24.5	Casing Diameter (in.)	2	Well Material	PVC
Static Water Level (ft-bmp)	8.65	Total Depth (ft-bmp)	24.10	Water Column (ft.)	15.45	Gallons in Well	2.51
		Pump Intake (ft-bmp)	22.00	Purge Method	Low-Flow	Sample Method	Grab
		Well Volumes Purged	0.56	Replicate/Code No.	--	Sampled by	Joseph Fojtik
Sample Time:	Label	11:15	Volume Purged	1.40 gallons			
	Purge Start	10:33					
	Purge End	11:17					

mf

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
10:35	0	150	8.78	0.00	7.76	5.05	66.00	0.82	16.7	-97.0	Clear, Small Black Particulates	No Odor
10:40	5	150	8.78	0.20	7.74	5.00	38.00	0.38	17.1	-173.4	Clear	No Odor
10:45	5	150	8.78	0.40	7.73	4.97	23.00	0.29	16.8	-200.7	Clear	No Odor
10:50	5	150	8.78	0.60	7.74	4.94	21.00	0.22	16.8	-213.0	Clear	No Odor
10:55	5	150	8.78	0.80	7.74	4.84	11.30	0.17	16.7	-228.5	Clear	No Odor
11:00	5	150	8.78	1.00	7.74	4.85	11.64	0.16	16.7	-234.8	Clear	No Odor
11:05	5	150	8.78	1.20	7.74	4.86	11.12	0.14	16.7	-240.6	Clear	No Odor
11:10	5	150	8.78	1.40	7.73	4.74	11.28	0.15	16.7	-243.9	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, E	Well Locked at Arrival:	n/a
Well Location:	Good	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a
Well Completion:			



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	Ford LTP	Weather	MW-43	Date	08-15-2023	
Project Name/Location				64.0 degrees F and Cloudy. The wind is blowing NE at 9.2 mph.				
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	17.0-22.0	Casing Diameter (in.)	2	Well Material	PVC	
Static Water Level (ft-bmp)	8.04	Total Depth (ft-bmp)	21.75	Water Column (ft.)	13.71	Gallons in Well	2.23	
		Pump Intake (ft-bmp)	19.50	Purge Method	Low-Flow	Sample Method	Grab	
		Well Volumes Purged	0.70					
Sample Time:	Label	11:00	Volume Purged	1.56 gallons	Replicate/Code No.	MW-43-MS_081523, MW-43-MSD_081523	Sampled by	Kent Kasper
	Purge Start	09:54						
	Purge End	11:10						

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
09:55	0	100	8.20	0.00	7.58	9.80	13.30	1.34	16.9	-103.5	Clear	No Odor
10:00	5	100	8.20	0.13	7.60	9.73	7.28	0.39	17.2	-128.9	Clear	No Odor
10:05	5	100	8.19	0.26	7.61	9.64	12.30	0.21	17.3	-137.0	Clear	No Odor
10:10	5	100	8.12	0.39	7.61	9.59	8.34	0.25	17.8	-140.4	Clear	No Odor
10:15	5	100	8.20	0.52	7.62	9.57	9.35	0.09	17.2	-145.5	Clear	No Odor
10:20	5	100	8.20	0.65	7.62	9.56	7.61	0.03	17.1	-147.8	Clear	No Odor
10:25	5	100	8.20	0.78	7.62	9.58	4.84	0.03	17.2	-149.1	Clear	No Odor
10:30	5	100	8.12	0.91	7.62	9.56	7.41	0.04	17.5	-149.3	Clear	No Odor
10:35	5	100	8.19	1.04	7.62	9.64	6.03	0.06	17.3	-149.9	Clear	No Odor
10:40	5	100	8.19	1.17	7.62	9.61	6.01	0.02	17.3	-150.7	Clear	No Odor
10:45	5	100	8.18	1.30	7.62	9.63	7.68	0.01	17.2	-151.0	Clear	No Odor
10:50	5	100	8.18	1.43	7.62	9.64	7.00	0.00	17.3	-151.5	Clear	No Odor
10:55	5	100	8.18	1.56	7.62	9.62	8.30	1.19	17.0	-152.7	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	9	HCL
1,4-dioxane	40 mL Glass	9	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, E	Well Locked at Arrival:	n/a
Well Location:	Good	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	Ford LTP	Weather	MW-52	Date	08-15-2023
Project Name/Location	Ford LTP			64.0 degrees F and Cloudy. The wind is blowing NE at 12.8 mph.			
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	15.0-20.0	Casing Diameter (in.)	2	Well Material	PVC
Static Water Level (ft-bmp)	8.20	Total Depth (ft-bmp)	19.74	Water Column (ft.)	11.54	Gallons in Well	1.88
		Pump Intake (ft-bmp)	17.50	Purge Method	Low-Flow	Sample Method	Grab
		Well Volumes Purged	0.62	Replicate/Code No.	--	Sampled by	Kent Kasper
Sample Time:	Label	09:30	Volume Purged	1.17 gallons			
	Purge Start	08:38					
	Purge End	09:33					

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
08:40	0	100	8.31	0.00	7.07	6.47	13.00	0.30	16.7	22.1	Clear, Small Brown Particulates	No Odor
08:45	5	100	8.31	0.13	7.19	6.57	12.70	0.31	16.7	-88.2	Clear, Small Brown Particulates	No Odor
08:50	5	100	8.31	0.26	7.20	6.61	7.67	0.12	16.7	-104.4	Clear	No Odor
08:55	5	100	8.31	0.39	7.22	6.64	7.37	0.11	16.7	-117.4	Clear	No Odor
09:00	5	100	8.31	0.52	7.22	6.70	7.95	0.10	16.6	-123.7	Clear	No Odor
09:05	5	100	8.31	0.65	7.22	6.73	6.72	0.05	16.6	-127.2	Clear	No Odor
09:10	5	100	8.31	0.78	7.23	6.79	6.16	0.03	16.5	-129.3	Clear	No Odor
09:15	5	100	8.31	0.91	7.23	6.87	4.78	0.01	16.5	-130.6	Clear	No Odor
09:20	5	100	8.31	1.04	7.22	6.98	4.66	0.01	16.5	-131.3	Clear	No Odor
09:25	5	100	8.31	1.17	7.22	7.00	4.06	0.00	16.5	-132.1	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, E	Well Locked at Arrival:	n/a
Well Location:	Good	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a
Well Completion:			



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	MW-211S	Date	08-15-2023
Project Name/Location	Ford LTP		Weather	64.0 degrees F and Cloudy. The wind is blowing NE at 12.8 mph.	
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	7.0-12.0	Casing Diameter (in.)	2
Static Water Level (ft-bmp)	8.60	Total Depth (ft-bmp)	11.89	Water Column (ft.)	3.29
		Pump Intake (ft-bmp)	10.10	Purge Method	Low-Flow
		Well Volumes Purged	2.11	Well Material	PVC
		Volume Purged	1.12 gallons	Gallons in Well	0.53
Sample Time:	Label	09:30	Replicate/Code No.	--	Sampled by
	Purge Start	08:52			Sommer Guy
	Purge End	09:35			

Sommer Guy

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
08:54	0	150	8.67	0.00	7.12	6.71	5.20	0.88	19.4	80.8	Clear, Small Orange Particulates	No Odor
08:59	5	150	8.63	0.20	7.24	6.83	7.87	0.41	19.5	61.0	Clear, Small Orange Particulates	No Odor
09:04	5	140	8.65	0.40	7.28	6.89	3.49	0.28	19.4	52.4	Clear, Small Orange Particulates	No Odor
09:09	5	140	8.63	0.58	7.30	6.96	2.66	0.23	19.4	46.8	Clear, Small Orange Particulates	No Odor
09:14	5	140	8.63	0.76	7.35	7.14	0.96	0.19	19.3	39.7	Clear	No Odor
09:19	5	140	8.63	0.94	7.36	7.22	4.19	0.16	19.4	35.6	Clear	No Odor
09:24	5	140	8.62	1.12	7.40	7.29	2.28	0.14	19.4	31.3	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, NE	Well Locked at Arrival:	n/a
Well Location:	Good	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a
Well Completion:			



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	MW-212S	Date	08-15-2023
Project Name/Location	Ford LTP		Weather	64.0 degrees F and Cloudy. The wind is blowing NE at 9.2 mph.	
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	6.5-11.5	Casing Diameter (in.)	2
Static Water Level (ft-bmp)	8.17	Total Depth (ft-bmp)	11.12	Water Column (ft.)	2.95
		Pump Intake (ft-bmp)	9.67	Purge Method	Low-Flow
		Well Volumes Purged	3.75	Well Material	PVC
		Volume Purged	1.80 gallons	Gallons in Well	0.48
Sample Time:	Label	11:00	Replicate/Code No.	--	Sampled by
	Purge Start	10:03			Nolan Schendel
	Purge End	11:06			

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
10:05	0	140	8.17	0.00	7.04	9.49	9.18	4.10	19.7	27.8	Clear, Small Orange Particulates	No Odor
10:10	5	140	8.18	0.18	7.05	9.38	3.10	2.33	19.6	21.3	Clear, Small Orange Particulates	No Odor
10:15	5	140	8.18	0.36	7.07	9.23	1.65	2.10	19.6	16.7	Clear	No Odor
10:20	5	140	8.17	0.54	7.08	8.90	1.03	2.01	19.5	12.9	Clear	No Odor
10:25	5	140	8.17	0.72	7.12	8.55	0.22	2.01	19.5	9.1	Clear	No Odor
10:30	5	140	8.18	0.90	7.14	8.19	0.05	1.75	19.5	5.7	Clear	No Odor
10:35	5	140	8.17	1.08	7.15	8.00	0.02	1.70	19.4	8.0	Clear	No Odor
10:40	5	140	8.18	1.26	7.16	7.82	0.02	1.63	19.4	2.1	Clear	No Odor
10:45	5	140	8.18	1.44	7.17	7.65	0.02	1.55	19.4	0.3	Clear	No Odor
10:50	5	140	8.18	1.62	7.18	7.55	0.04	1.48	19.4	-0.9	Clear	No Odor
10:55	5	140	8.17	1.80	7.19	7.48	0.02	1.48	19.4	-2.2	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, NE	Well Locked at Arrival:	n/a
Well Location:	Good, Missing bolts	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a
Well Completion:			



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No.	30167538.401.01	Well ID	MW-213S	Date	08-15-2023
Project Name/Location	Ford LTP		Weather	64.9 degrees F and Cloudy. The wind is blowing N/NE at 8.1 mph.	
Measuring Pt. Description	Top of Casing	Screen Setting (ft-bmp)	6.0-11.0	Casing Diameter (in.)	2
Static Water Level (ft-bmp)	7.89	Total Depth (ft-bmp)	10.84	Water Column (ft.)	2.95
		Pump Intake (ft-bmp)	9.39	Purge Method	Low-Flow
		Well Volumes Purged	3.33	Well Material	PVC
		Volume Purged	1.60 gallons	Gallons in Well	0.48
Sample Time:	Label	12:52	Replicate/Code No.	--	Sampled by
	Purge Start	11:54			Nolan Schendel
	Purge End	13:01			

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
12:05	0	150	7.92	0.00	7.03	9.42	7.77	0.33	20.3	27.6	Clear	No Odor
12:10	5	150	7.92	0.20	7.05	9.04	5.18	0.32	20.2	21.2	Clear	No Odor
12:15	5	150	7.92	0.40	7.09	8.78	3.11	0.28	20.2	14.5	Clear	No Odor
12:20	5	150	7.92	0.60	7.08	8.47	2.34	0.24	20.2	5.7	Clear	No Odor
12:25	5	150	7.92	0.80	7.09	8.24	1.67	0.22	20.2	-1.3	Clear	No Odor
12:30	5	150	7.90	1.00	7.09	8.13	1.05	0.21	20.3	-8.5	Clear	No Odor
12:35	5	150	7.90	1.20	7.10	7.98	1.06	0.19	20.4	-10.8	Clear	No Odor
12:40	5	150	7.89	1.40	7.11	7.83	0.35	0.18	20.4	-16.7	Clear	No Odor
12:45	5	150	7.92	1.60	7.12	7.76	0.40	0.18	20.4	-20.7	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

* Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments: none

Well Casing Volumes	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
Gallons/Foot	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information	Onsite, NE	Well Locked at Arrival:	n/a
Well Location:	Good	Well Locked at Departure:	n/a
Condition of Well:	Flush mount	Lock Functioning:	n/a
Well Completion:			



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No. 30080642.401.01 Well ID Ford LTP MW-234 Date 9-18-23
 Project Name/Location Ford LTP Weather 70F, sunny
 Measuring Pt. Description Top of Casing Screen Setting (ft-bmp) 12-17 Casing Diameter (in.) 2 Well Material PVC
 Static Water Level (ft-bmp) 7.97 Total Depth (ft-bmp) 14.73 Water Column (ft.) 6.76 Gallons in Well 1.10
 Pump Intake (ft-bmp) 14.50 Purge Method Low-Flow Sample Method Grab
 Well Volumes Purged 1.20

Sample Time: Label 11:20 Volume Purged 1.32 gallons Replicate/Code No. -- Sampled by Seth Turner
 Purge Start 10:15
 Purge End 11:25

ST

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
10:15	0	150	7.97	0.00	7.94	12.33	13.90	0.32	17.9	-64.9	Clear	No Odor
10:20	3	150	7.97	0.12	7.94	12.33	10.60	0.32	17.9	-64.9	Clear	No Odor
10:25	5	150	7.97	0.32	9.91	8.30	8.50	0.05	18.3	-229.6	Clear, Yellow	No Odor
10:30	5	150	7.97	0.52	10.00	8.22	6.18	0.03	18.3	-240.6	Clear, Yellow	No Odor
10:35	5	150	7.97	0.72	10.00	8.22	5.05	0.03	18.3	-240.6	Clear, Yellow	No Odor
10:40	5	150	7.97	0.92	10.03	8.14	5.12	0.03	18.5	-247.2	Clear, Yellow	No Odor
10:45	5	150	7.97	1.12	10.00	8.13	5.13	0.03	18.5	-249.2	Clear, Yellow	No Odor
10:50	5	150	7.97	1.32	10.04	8.09	5.21	0.06	18.7	-255.2	Clear, Yellow	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

*Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments None

Well Casing Volumes	1" = 0.04	1.25" = 0.06	1.5" = 0.09	2" = 0.16	2.5" = 0.26	3" = 0.37	3.5" = 0.50	4" = 0.65	6" = 1.47
Gallons/foot									

Well Information

Well Location: On-site Well Locked at Arrival: n/a
 Condition of Well: Good Well Locked at Departure: n/a
 Well Completion: Flush mount Lock Functioning: n/a



SHALLOW LOW-FLOW GROUNDWATER SAMPLING FORM

Page 1 of 1

Project No. 30080642.401.01 Well ID Ford LTP MW-235 Date 9-18-23
 Project Name/Location Ford LTP Weather 65F, sunny
 Measuring Pt. Description Top of Casing Screen Setting (ft-bmp) 14-19 Casing Diameter (in.) 2 Well Material PVC
 Static Water Level (ft-bmp) 8.27 Total Depth (ft-bmp) 17.72 Water Column (ft.) 9.45 Gallons in Well 1.54
 Pump Intake (ft-bmp) 16.50 Purge Method Low-Flow Sample Method Grab
 Well Volumes Purged 1.56

Sample Time: Label 10:00 Volume Purged 2.4 gallons Replicate/Code No. -- Sampled by Seth Turner
 Purge Start 8:52
 Purge End 10:05

ST

Time	Minutes Elapsed between Readings	Flow Rate (mL/min) [100-300 mL/min]	Depth to Water (ft) [± 0.3]	Total Gallons Purged	pH [± 0.1]	Cond. (mS/cm) [± 3%]	Turbidity (NTU) [± 10%*]	DO (mg/L) [± 10%]	Temp. (°C) [± 3%]	Redox (mV) [± 10mV]	Appearance	
											Color	Odor
8:55	0	150	8.27	0.00	6.89	6.01	60.40	0.92	18.6	50.3	Turbid	No Odor
9:00	5	150	8.27	0.20	7.05	6.07	69.80	0.41	18.3	-13.9	Turbid	No Odor
9:05	5	150	8.27	0.40	7.08	6.19	67.80	0.27	18.2	-39.3	Turbid	No Odor
9:10	5	150	8.27	0.60	7.14	6.14	51.40	0.55	18.6	-50.8	Turbid	No Odor
9:15	5	150	8.27	0.80	7.11	7.30	42.90	0.29	18.2	-57.5	Turbid	No Odor
9:20	5	150	8.27	1.00	7.10	7.74	38.60	0.17	17.7	-49.9	Clear	No Odor
9:25	5	150	8.27	1.20	7.09	7.75	35.50	0.16	17.8	52.2	Clear	No Odor
9:30	5	150	8.27	1.40	7.10	7.79	27.90	0.15	17.6	-55.6	Clear	No Odor
9:35	5	150	8.27	1.60	7.10	7.81	19.80	0.16	17.7	-59.6	Clear	No Odor
9:40	5	150	8.27	1.80	7.10	7.82	15.30	0.16	17.5	-60.7	Clear	No Odor
9:45	5	150	8.27	2.00	7.10	7.84	9.62	0.16	17.5	-61.4	Clear	No Odor
9:50	5	150	8.27	2.20	7.10	7.84	3.88	0.14	17.6	-61.6	Clear	No Odor
9:55	5	150	8.27	2.40	7.10	7.86	1.22	0.14	17.6	-61.9	Clear	No Odor
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--

*Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC	40 mL Glass	3	HCL
1,4-dioxane	40 mL Glass	3	HCL

Comments None

Well Casing Volumes	1" = 0.04	1.25" = 0.06	1.5" = 0.09	2" = 0.16	2.5" = 0.26	3" = 0.37	3.5" = 0.50	4" = 0.65	6" = 1.47
Gallons/Foot									

Well Information
 Well Location: Onsite Well Locked at Arrival: n/a
 Condition of Well: Good Well Locked at Departure: n/a
 Well Completion: Flush mount Lock Functioning: n/a