TRANSMITTAL LETTER

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Copies:

Date:
April 30, 2018

Subject:
Livonia Transmission Plant
Q1 2018 Progress Report

Arcadis Project No.:
MI001322.0001

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1	4/30/2018			Q1 2018 Progress Report	

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ARCADIS Design & Consultancy for natural and built assets

FORD MOTOR COMPANY

QUARTERLY PROGRESS REPORT - 1Q 2018

Livonia Transmission Plant

This document is a DRAFT document that has not received approval from the Michigan Department of Environmental Quality (MDEQ). 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 the MDEQ.

April 30, 2018

QUARTERLY PROGRESS REPORT - 1Q 2018

Livonia Transmission Plant

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Our Ref.:

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1Q 2018: Activities

On-Site

1. Groundwater Sampling
2. Hydraulic Control System Performance Monitoring
   - ✓ Operating as Designed Since March 15, 2017
   - ✓ Discharge Compliance
3. LTP VI Mitigation System Design and Construction

Off-Site

1. Groundwater Sampling
2. Soil Gas Sampling

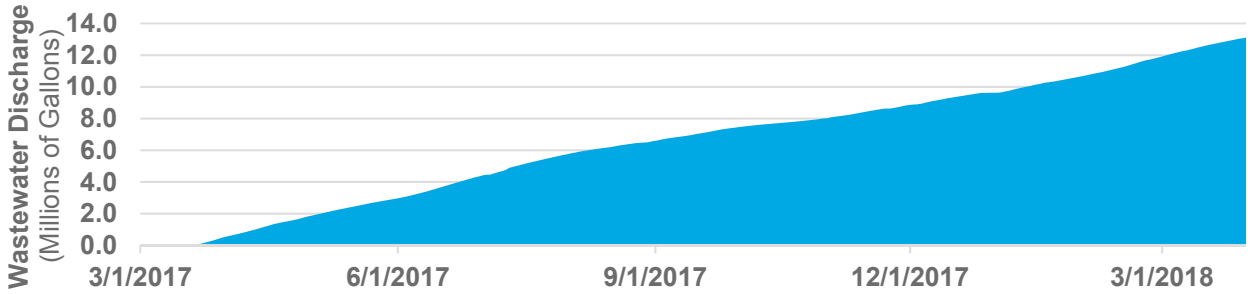
Total On-Site Samples

Period	Groundwater / Water	Soil/ Sediment	Soil Gas
1Q 2018	64	0	0
Total since Oct. 2015	607	328	152

Total Off-Site Samples

Period	Groundwater	Soil Gas
1Q 2018	20	24
Total since Oct. 2015	351	131

Hydraulic Control System – Total Treated Groundwater Discharged



Total Treated Groundwater: 13,108,615 Gallons

Key Dates

Document Submittal

Document	Date Submitted	Status
GW Work Plan	4/20/2017	Received
Off-Site VI Work Plan	4/21/2017	Received
Site Specific VIAC	8/9/2017	Approved
CSM	8/30/2017	Approved
QAPPs	8/30/2017	Received
HASP	8/30/2017	Received
Target Detection Limit Request RespAP	11/1717	Approved
3Q 2017 Progress Report	11/22/17	Received
Response to MDEQ Comments for the Conceptual Site Model	12/12/17	Received
Remedial Investigation RespAP	12/13/17	MDEQ Disapproved on March 9, 2018
4Q 2017 Progress Report	1/30/18	Received

Upcoming Dates

2018

May 7 On and Off-Site 2Q 2018 Groundwater Sampling

May 28 Off-Site 1Q 2018 Soil Gas Sampling

Regulatory Meetings

2018

January 22 Ford met with MDEQ

February 7 Ford met with MDEQ and MDHHS

CONTENTS

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TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
1Q 2018	first quarter of 2018
4Q 2017	fourth quarter of 2017
AOC	Area of Concern
ATNPC	Automatic Transmission New Product Center
Cis-1,2-DCE	cis-1,2-dichloroethene
COC	constituent of concern
CSM	conceptual site model
DO	dissolved oxygen
GLWA	Great Lakes Water Authority
gpd	gallons per day
gpm	gallons per minute
GWIC	groundwater in contact
HCS	hydraulic control system
LTP	Livonia Transmission Plant
µg/L	microgram per liter
MDEQ	Michigan Department of Environmental Quality
MDHHS	Michigan Department of Health and Human Services
mg/L	milligram per liter
mL	milliliter
mL/min	milliliter per minute
ORP	oxidation-reduction potential
PCE	tetrachloroethene
PLC	programmable logic controller
RespAP	Remedial Investigation Response Activity
RIASL	Residential Interim Action Screening Level
RRD	Remediation and Redevelopment Division
SSD	sub-slab depressurization
SVMP	soil vapor monitoring point
SVOC	semi-volatile organic compound
TCE	trichloroethene
TDL	Target Detection Limit
trans-1,2-DCE	trans-1,2-dichloroethene
TWM	Total Waste Manager
USEPA	United States Environmental Protection Agency
VC	vinyl chloride

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VI	vapor intrusion
VOC	volatile organic compound
WWTP	Wastewater Pre-Treatment Plant

1 INTRODUCTION

Purpose of This Report

Arcadis of Michigan LLC (Arcadis), on behalf of Ford Motor Company (Ford) has prepared this Progress Report (report) for the Livonia Transmission Plant (LTP) property (the site). This document was produced in compliance with a Consent Decree filed by the Michigan Department of Environmental Quality (MDEQ) on July 27, 2017 (No: 2:1712372-GAD-RSW). The purpose of this progress report is to summarize continued response activities completed voluntarily by Ford, both at the site and the area east of the site, since submittal of the conceptual site model (CSM) to the MDEQ on August 25, 2017 and initial Remedial Investigation Response Activity Plan (RespAP), submitted on December 13, 2017. This progress report includes activities completed from January 1 through March 31, 2018 (1Q 2018). Activities described in this 1Q 2018 report include:

- On- and off-site groundwater sampling
- Off-site soil gas sampling
- Hydraulic control system operation, evaluation, and optimization
- LTP vapor mitigation system construction.

In addition to the activities listed above, it is important to note that Ford voluntarily scheduled and attended a meeting with the MDEQ on January 22, 2018 and attended a meeting with the MDEQ and Michigan Department of Health and Human Services (MDHHS) on February 7, 2018, to review the activities associated with the RespAP.

This quarterly report primarily focuses on the seven constituents of concern (COCs) for the site including: 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene, (trans-1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride (VC), and 1,4-dioxane.

Groundwater analytical results continue to be stable for both on-site and off-site samples, and soil gas samples collected from the soil vapor monitoring points (SVMPs) in the residential neighborhood continue to show no exceedances of the Recommended Interim Action Screening Levels (RIASLs).

Background

The LTP has been active in manufacturing in some capacity since the 1950s. The site is located at 36200 Plymouth Road, Livonia, Michigan (**Figure 1**) and occupies 178 acres of land. The LTP building covers approximately 3 million square feet. The area surrounding the site includes light industrial, commercial, and residential properties. For the purposes of this report, data are presented based on their location as either on site or off site (**Figure 2**). On-site area of concern (AOC) locations include all areas within the site boundary including the LTP, Test Track, Waste Water Pre-Treatment Plant (WWTP), Automatic Transmission Plant New Product Center (ATNPC), associated outbuildings, and the Plymouth Road right-of-way. Off-site AOC locations include commercial and residential properties located east of the site, from Belden Court west to Stark Road, and from Plymouth Road north to the railroad right-of-way (**Figure 2**).

2 SUMMARY OF RESPONSE ACTIVITIES

The following table summarizes all response activities conducted at the AOC completed during 1Q 2018. Refer to the subsequent sections for further detail on each respective event and associated tables and figures.

Date	Activity	Tables	Figures
February 2018	On-Site Groundwater Sampling	1, 2	3, 4, 5, 6, 7
February 2018	Off-Site Groundwater Sampling	3, 4	3, 8, 9
February 2018	Off-Site Residential Soil Gas Sampling	5, 6, 7	10, 11, 12, 13
January through March 2018	Hydraulic Control System Monitoring	8, 9	NA

On-Site Groundwater Sampling

Arcadis completed site-wide groundwater gauging on February 5 and 6, 2018, which included 79 monitoring wells (**Figure 2**). Out of the 79 total monitoring wells on site, 71 were successfully gauged. The remaining eight monitoring wells (LMW-15-01, LMW-15-04, LMW-15-05, LMW-15-06, LMW-15-07, LMW-15-08, MW-1, and MW-27) either could not be located or were inaccessible at the time of the gauging. Each monitoring well was gauged from the top of casing using an electronic water level meter to within 0.01 foot. A summary of the on-site 1Q 2018 groundwater elevations is included on the on-site quarterly groundwater elevation summary table (**Table 1)**. Groundwater elevation contours and apparent groundwater flow for the 1Q 2018 are provided on **Figure 3**.

On-site groundwater sampling was completed from February 6 through 15, 2018. Groundwater was purged from the well at a low flow rate (100 to 300 milliliters per minute [mL/min]) until field parameters (conductivity, pH, turbidity, temperature, dissolved oxygen [DO], and oxygen reduction potential [ORP]) stabilized. Once field parameters stabilized, groundwater samples were collected into laboratory supplied bottles. On-site groundwater field sampling logs are provided for reference in **Appendix A**.

A total of 74 groundwater samples were collected and submitted on ice under chain-of-custody seal to TestAmerica Laboratories in Canton, Ohio (TestAmerica), including four duplicate samples and six trip blanks. All groundwater samples were submitted for analysis of volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method 8260B and 1,4-dioxane via USEPA Method 8260B-SIM on a standard turnaround time of 10 business days. The groundwater analytical results are discussed below.

Off-Site Groundwater Sampling

Arcadis completed off-site gauging on February 5, 2018, which included 20 monitoring wells (MW-72 through MW-87, illustrated on **Figure 2**). Each monitoring well was gauged from the top of casing using an electronic water level meter accurate to within 0.01 foot. A summary of the 1Q 2018 groundwater elevations is included on the off-site quarterly groundwater elevation summary table (**Table 3)**. Groundwater elevation contours and apparent groundwater flow are provided on **Figure 3**.

Off-site groundwater sampling was completed from February 6 through 8, 2018. Groundwater was purged from the well at a low flow rate (100 to 300 mL/min) until field parameters (conductivity, pH, turbidity, temperature, DO, and ORP) had stabilized. Once field parameters were stable, groundwater samples were collected into laboratory supplied bottles. Off-site groundwater field sampling logs are provided for reference in **Appendix B**.

A total of 23 groundwater samples were collected and submitted on ice under chain-of-custody seal to TestAmerica, including one duplicate sample and two trip blanks. All groundwater samples were submitted for analysis of the specific list of VOCs via USEPA Method 8260B and 1,4-dioxane via USEPA Method 8260B-SIM based on a standard turnaround time of 10 business days. The groundwater analytical results are discussed below.

Off-Site Soil Gas Sampling

Arcadis completed off-site soil gas sampling between February 19 and 21, 2018. Of the 43 total soil gas monitoring points installed east of the site, 24 soil gas samples were collected during the 1Q 2018 sampling event (**Figure 2**). Samples from SVMP-13 through SVMP-17, SVMP-20, and SVMP-21 could not be collected in 1Q 2018 due to saturated sample ports. SVMP-29 through SVMP-37 are located on residential properties and were not sampled in 1Q 2018, and SVMP-11 (installed in the City Right-Of-Way) was abandoned at the request of the adjacent property owner. All SVMPs not sampled in the 1Q 2018 have been sampled during previous events (i.e., June, September, and November 2017). The next quarterly sampling event is scheduled for May 2018, and all SVMPs (except for SVMP-11 and SVMP-29 through SVMP-37) will be sampled. The 24 SVMPs were analyzed for 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, VC, and 1,4-dioxane via USEPA Method TO-15 using 1-liter summa canisters and 20-minute flow controllers. Each location was purged of approximately 120 milliliters (mL) of air before sampling.

Several technical items were implemented to ensure that representative soil gas samples were collected from each sample point as described below.

- Tracer gas testing has been conducted during three rounds of soil gas sampling using a helium tracer at each location before sampling. Methods for tracer testing were the same as those presented in MDEQ VI Guidance Appendix F and in line with industry-accepted standards. As discussed in the MDEQ VI Guidance, a tracer gas can be used to verify that soil-gas samples are from the installed point and not from leaks in the sampling train. No unacceptable helium leak test results were noted during the three rounds of soil-gas sample collection through December 2017. Samples were deemed acceptable, as all exhibited concentrations of helium in purged soil gas less than 10% of the initial shroud concentration of helium, as presented in the MDEQ VI guidance. Tracer gas testing results are presented in **Table 5**.

- Very small screened intervals (1" screen within a 3" sand pack) were installed to allow for a thicker bentonite seal to the ground surface at each location.
- Soil-gas sampling has been conducted very slowly (i.e., 20-minute sample using a 1-liter canister) to avoid short-circuiting. This flow rate is four times slower than the maximum 200 ml/min included in the 2013 MDEQ VI Guidance. MDEQ suggests samples be collected at or below 200 ml/min "to minimize the potential for vacuum extraction of contaminants from the soil phase."
- Carbon dioxide and oxygen have been measured from each sample point directly after each round of sample collection. Concentrations of oxygen are slightly depressed from atmospheric conditions (i.e., 1 to 2% below atmospheric), while concentrations of carbon dioxide are slightly elevated (i.e., 3 to 6%). This is as expected due to the influence of microbial respiration in the vadose zone, which consumes oxygen and produces carbon dioxide (USEPA 2015[1]). Carbon dioxide and oxygen concentrations from the SMPS are presented in **Table 6**.

Ambient air temperature, percent humidity, and barometric pressure were recorded during the field event and are presented on **Appendix C**.

The soil gas samples were submitted under chain-of-custody protocols to Eurofins AirToxics Laboratory located in Folsom, California (Eurofins) for analysis of the specific list of VOCs via USEPA Method TO-15 based on a standard turnaround time of 10 business days. Soil gas analytical results are summarized in **Table 7,** and field sampling logs are provided for reference in **Appendix C**. The off-site soil gas results are discussed below.

Hydraulic Control System

System Overview

The hydraulic control system (HCS) was installed to intercept groundwater and mitigate the potential for impacted groundwater to continue migrating east of the HCS. HCS performance is monitored and evaluated in accordance with the USEPA guidance – A Systematic Approach for Evaluation of Capture Zone at Pump and Treat Systems (USEPA 2008). Ford began operation of the HCS on March 15, 2017.

The system is designed to extract groundwater via four horizontal wells (ESD-1, ESD-2, ESD-3, and ESD-4; see **Figure 2**), each equipped with a groundwater extraction pump. Each extraction well screen is 400 to 600 feet long; the combined length of the four wells extends across approximately 2,000 linear feet on a line approximately perpendicular to groundwater flow. Extracted groundwater is pumped to an above-grade treatment system, where it is treated by bag filters, an air stripper, and granular-activated carbon filters, before being discharged to the sanitary sewer under a permit with the Great Lakes Water Authority (GLWA). Details regarding design and operation of the system are provided in the Remedial System Operation and Maintenance Manual dated June 29, 2017, and in the CSM dated August 25, 2017.

Remediation system equipment is operated by a programmable logic controller (PLC) unit that allows the remediation system to function without operator supervision. The HCS operates each horizontal well by

[1] United States Environmental Protection Agency (USEPA). 2015. Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites. June.

extracting groundwater to achieve the maximum drawdown available within each pumping well without dewatering the horizontal screen. Pumping in each well ceases when target drawdown is achieved and resumes when the water table begins to recharge.

System Operation and Performance Monitoring

The HCS performance is continually being evaluated and monitored. Treated water discharge volumes are documented daily and tabulated monthly. System shutdowns are documented and resolved as detailed below. Samples are collected each month to document permit compliance for sanitary discharge and air permitting.

As part of routine field activities, Arcadis periodically collects groundwater elevations from monitoring wells across the site, as well as pressure transducers installed at key monitoring wells and system well locations. Groundwater elevation trends, groundwater horizontal gradient, along with long-term groundwater analytical trends, will be the primary lines of evidence used to demonstrate effectiveness of the HCS.

3 SUMMARY OF RESPONSE ACTIVITY RESULTS

On-Site Groundwater Sampling

The results of the on-site monitoring well gauging indicate an apparent groundwater flow direction from west to east, locally influenced by the HCS. On-site groundwater elevation contours are presented on **Figure 3**. Additional monitoring wells are recommended in order to enable a better resolution of the hydraulic gradient. Details of the performance of the HCS are provided below.

The on-site monitoring well groundwater results are compared to Michigan Part 201 Non-residential Generic Cleanup Criteria (December 2013). The analytical results are summarized in **Table 2**. Compound concentrations of COCs exceeding Part 201 Criteria include cis-1,2-DCE, trans-1,2-DCE, TCE, and VC. Figures summarizing the exceedances of cis-1,2-DCE, trans-1,2-DCE, TCE, and VC are provided on **Figures 4 through 7**, respectively. All other site-specific compounds (1,1-DCE, PCE, and 1,4-dioxane) were either not detected at concentrations above the reporting limits or were detected at concentrations below Part 201 Criteria.

Off-Site Groundwater Sampling

The results of the off-site monitoring well gauging indicate an apparent groundwater flow direction from west to east. Off-site groundwater elevation contours are included on **Figure 3.**

The off-site monitoring well groundwater results are compared to the Part 201 Residential Generic Cleanup Criteria (December 2013) and the site-specific groundwater VI screening levels included as part of the Consent Decree, which became effective on July 27, 2017. However, the site-specific screening levels provided for TCE and VC where groundwater may be in contact (GWIC) with a structure are below typical target detection limits (TDLs) for these compounds. Therefore, Ford requested the use of the MDEQ Remediation and Redevelopment Division (RRD) TDLs for TCE and VC of 1.0 microgram per liter (µg/L) as the groundwater screening level protective of VI at residential structures where there is potential

for GWIC on November 17, 2017. The MDEQ approved the use of the TDLs for TCE and VC on December 20, 2017.

The off-site groundwater results are summarized in **Table 4**. Only VC was detected in off-site monitoring wells at concentrations above the 1.0 µg/L TDL. The results for TCE and VC are provided on **Figures 8 and 9**, respectively. All other site-specific compounds (1,1-DCE, cis-DCE, trans-DCE, PCE, and 1,4-dioxane) were either not detected at concentrations above the reporting limits or were detected at concentrations below respective Part 201 Residential Criterion.

Off-Site Soil Gas Monitoring

The soil gas analytical results from 1Q 2018 sampling are compared to site-specific RIASLs for residential properties provided by the MDEQ; these results are summarized in **Table 7.** There were no off-site exceedances of the RIASLs for any of the site COCs. Compound-specific results for detections of cis-DCE, PCE, TCE, and VC are provided on **Figures 10, 11, 12** and **13,** respectively. All other site-specific compounds (1,1-DCE, trans-DCE, and 1,4-dioxane) were not detected at concentrations above laboratory reporting limits; therefore, no figures were produced for these COCs. **Figures 10, 11, 12,** and **13** show not only current sampling data (1Q 2018) but also present results of previous rounds of sampling for comparison. Up to four rounds of samples have been collected from the SVMP locations since the inception of the sampling program in June 2016.

Four rounds of soil gas sampling have now been conducted off site through 1Q 2018 totaling 131 soil gas samples. Although sporadic low-level VOC detections have been noted, there have been no exceedances of the residential RIASLs provided by MDEQ for the site in any off-site soil gas sample collected from any depth interval. Based on the results of the helium tracer testing, carbon dioxide, and oxygen sampling conducted during each round of sampling, Ford believes that the results are representative and provide an accurate interpretation of off-site soil gas conditions. These soil gas sample results, coupled with the groundwater monitoring results for the site, continue to demonstrate that a clean water lens is present in most of the off-site area.

To enable the collection of building-specific information at select off-site locations, a VI RespAP was developed to evaluate the volatilization to indoor air pathway consistent with MDEQ VI guidance (2013). This VI RespAP was submitted under separate cover, on April 13, 2018, and is specifically designed to follow the process laid out in section 6.6(b)(i) of the Consent Decree, which requires a RespAP to “assess VI risks to identify any unacceptable human health risks from volatilization to indoor air.”

Hydraulic Control System Operation and Performance Monitoring

System Operation

The HCS operated with minimal maintenance downtime. **Exhibit 1** below describes the system shutdowns, approximate durations, and dates.

Exhibit 1: HCS Shutdown Summary

Date of Shutdown	Duration of Shutdown	Summary of Shutdown
19- Jan-18	Less than 24 hours	System manually shut down to perform maintenance activities on influent manifold. Total shutdown time was approximately 6.5 hours.
29- Jan-18	Less than 24 hours	System shut down due to components freezing on the catalytic oxidizer during extreme cold conditions with temperatures ranging from 13 to 31 degrees Fahrenheit. Restart of catalytic oxidizer occurred the following day. It was determined that condensation associated with the flow meter was freezing and causing the catalytic oxidizer to shut down due to improper air flow. Total shutdown time was approximately 13.5 hours. The temperature-sensitive areas of the catalytic oxidizer were heat-traced, improved insulation was installed, and the HCS resumed normal operation on January 30, 2018.
8- Feb-18	Less than 24 hours	Pumps manually shut off to pump water from backwash tote through the system. Total shutdown time was approximately 1.5 hours.
14- Feb-18	Less than 24 hours	System manually shut down to collect samples from carbon vessels (V-700-1 and V-700-2). System restarted, and operation resumed on the same day as the shutdown. Total shutdown time was approximately 4 hours.
15- Feb-18	Less than 24 hours	Pumps were offline intermittently throughout the day while field staff tested pumping rates. Total shutdown time was approximately 7.5 hours.
20- Feb-18	Less than 24 hours	Fouled effluent bag filters led to a high scrubber sump alarm, shutting the system down. Snowmelt and heavy rain led to increased flows that fouled the filters faster than they normally would have. Field staff replaced the bag filters and pumped treated water in the sump through the system. System restarted, and operation resumed on the same day as the shutdown. Total shutdown time was approximately 2.5 hours.
22- Feb-18	Less than 24 hours	Field staff shut down the system and catox to inspect the air stripper, then resumed normal operations. Total shutdown time was approximately 1 hour.
26- Feb-18 15- Mar-18 29- Mar-18	Less than 24 hours per day	Field staff shut down the system for a system backwash. Total shutdown time was less than 1 hour per day.
27-Feb-18	Less than 24 hours	Field staff shut down the system for quarterly air stripper cleaning. Total shutdown time was approximately 6 hours.
9- Mar-18	Less than 24 hours	Field staff turned off the pumps to drain the backwash tote, install a new ball valve, and conduct a system backwash. Normal operation resumed the same day. Total shutdown time was approximately 2.5 hours.
19- Mar-18	Less than 24 hours	Field staff shut down wells to empty the backwash tote. Total shutdown time was approximately 0.5 hour.
26- Mar-18	Less than 24 hours	Field staff shut down ESD-4 for check valve replacement. Field staff discovered a ruptured coupling underneath the system building where the pipes run to the surface. All wells were shut off while the broken part and influent bag filters were replaced, and the system was restarted. Total shutdown time was approximately 8 hours.

During the reporting period, groundwater was extracted from the horizontal wells in a manner to maintain continuous and consistent drawdown in each horizontal well. Discharge volumes and flowrates tabulated monthly during the reporting period are summarized in **Exhibit 2** below. Daily HCS discharge volumes and monthly discharge totals are provided in **Table 8** for the 1Q 2018 reporting period. The total volume of water collected and treated from March 15, 2017 through the 1Q 2018 is 13,108,615 gallons. Discharge has generally increased through the most recent 3 months of operation (January through March) due to increased recharge to the aquifer and increasing regional water levels.

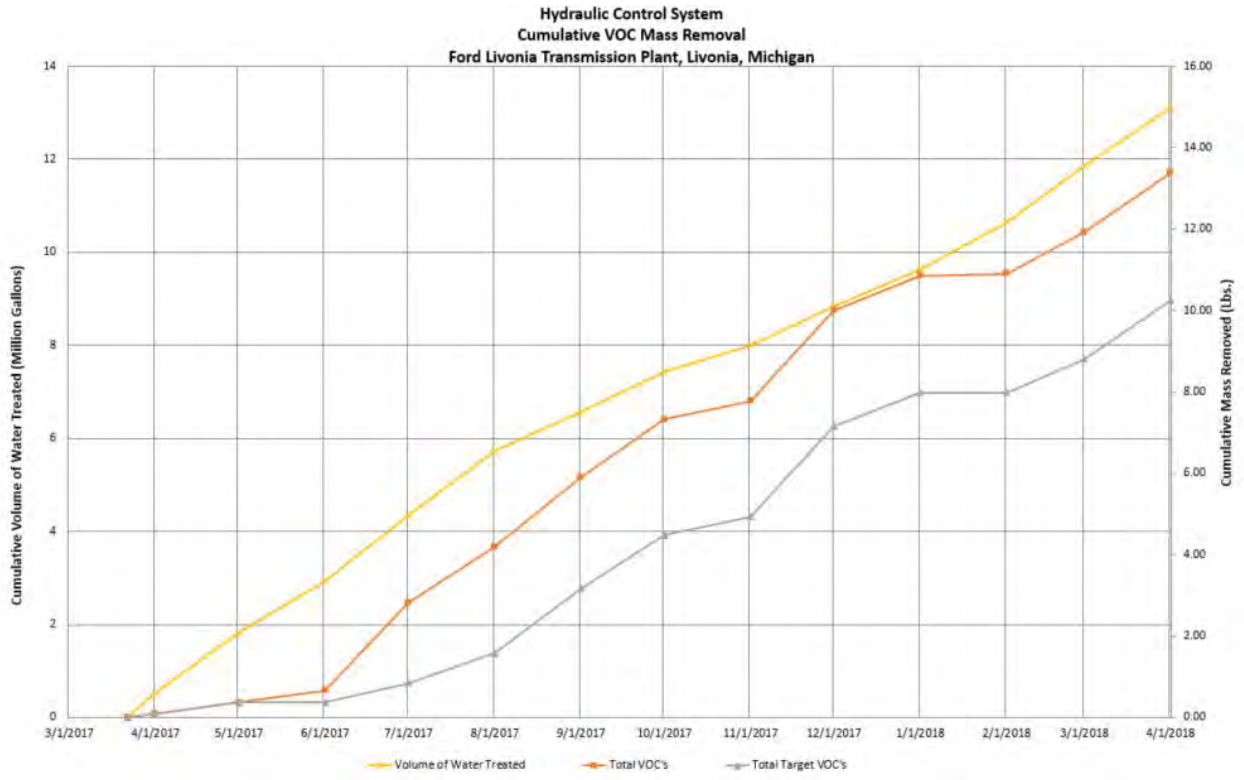
Exhibit 2: HCS Treated Discharge Water Volume and Flowrate Summary – 1Q 2018

Month	Volume Treated (Gallons)	Average Flowrate (GPM)
January	1,014,925	23
February	1,217,186	27
March	1,247,504	28

GPM = gallons per minute

Exhibit 3 below depicts the cumulative constituent-specific mass removal of the VOCs identified above through the 1Q 2018 reporting period. Vapor analytical concentrations are provided in Table 9.

Exhibit 3: HCS Mass Removal – 1Q 2018



Hydraulic Capture

HCS performance is being evaluated in general accordance with USEPA guidance – A Systematic Approach for Evaluation of Capture Zone at Pump and Treat Systems (USEPA 2008) to ensure that the system is capturing groundwater as designed and mitigating additional migration of impacted groundwater to the east of the HCS. Two lines of evidence will be used to evaluate system performance: groundwater elevation and groundwater analytical trends.

A groundwater elevation contour map, including the area around the HCS system, is provided as **Figure 3**. The February contour map uses a calculated pumping water level at each of the HCS wells (ESD-1 through ESD-4) to help determine groundwater gradient. The pumping water level is calculated using a pressure transducer reading collected from the southern end of each HCS well relative to the groundwater elevation observed at each well before system startup.

As shown on **Figure 3**, there is a relatively steep gradient observed west of the HCS as groundwater moves into the zone of influence and groundwater flux is captured by the system. The HCS operates relative to a set target drawdown. The system pumps until the target level is reached and then reduces to maintain the pumping water level. Due to seasonal fluctuations, the elevation of groundwater above the HCS varies. The average monthly pumping rates (~10 to 30 gpm) are consistent with the ambient groundwater flux values calculated for the site. There is an apparent groundwater divide beneath and east of the ATNPC building, with groundwater west of the divide flowing to the HCS and groundwater east of the divide flowing east; however, the extent of downgradient capture cannot be calculated due to limited performance well network coverage in this area. Installation of additional piezometers and pressure transducers is being evaluated for the area around the HCS system. Additional piezometers and groundwater elevation data will further support the evaluation of aquifer hydraulic response and HCS groundwater capture. Currently, the total groundwater extraction rates (**Exhibit 2**) are consistent with the calculated groundwater flux used as a basis of the HCS system design.

Groundwater Analytical Trends

To date, four rounds of groundwater samples have been collected from the performance monitoring wells since the HCS startup (second, third, fourth quarter 2017, and first quarter 2018). Analytical results for the quarterly events are included on **Figures 4 through 9**. To date, analytical results suggest that concentrations are stable downgradient of the HCS. As additional samples are collected, Ford will evaluate analytical trends in key monitoring wells downgradient of the HCS system. Observations and measurements to date indicate that the HCS system operates as designed and prevents further migration of groundwater impacts to the east of the HCS.

Summary of Compliance Actions

Monthly compliance sampling for the HCS GLWA discharge permit was completed each month. Samples were collected after treatment and before discharge. Samples were analyzed for constituents required by the discharge permit. **Exhibit 4** below depicts the sampling parameters, methods, and discharge limits monitored for compliance with the GLWA discharge permit.

Exhibit 4: GLWA Discharge Limitations for HCS

Parameter	Analytical Method	Discharge Limit
Cadmium (Cd)	USEPA 200.7 – Metals	1.0 milligrams per liter (mg/L)
Chromium (Cr)	USEPA 200.7 – Metals	25 mg/L
Copper (Cu)	USEPA 200.7 – Metals	2.5 mg/L
Lead (Pb)	USEPA 200.7 – Metals	1.0 mg/L
Nickel (Ni)	USEPA 200.7 – Metals	5.0 mg/L
Mercury (Hg)	USEPA 245.1 - Mercury	Non-Detect
Silver (Ag)	USEPA 200.7	1.0 mg/L

Parameter	Analytical Method	Discharge Limit
Zinc (Zn)	USEPA 200.7	7.3 mg/L
Total PCB	USEPA 608	Non-Detect
Total Toxic Organics	USEPA 624 - VOCs USEPA 625 – Semi-Volatile Organic Compounds (SVOCs) USEPA 625 Dioxin Screen USEPA 1613B – Dioxins and Furans	20 µg/L

In addition, the GLWA discharge permit limits discharge to 100,800 gallons per day (gpd) and/or 70 gpm. Discharge volumes are documented daily and tabulated monthly. Discharge volumes were within discharge limits during 1Q 2018. Tabulated discharge volumes for the 1Q 2018 reporting period are presented in **Table 8**.

During the reporting period, Arcadis collected vapor samples from the air stripper effluent before vapor treatment by the catalytic oxidizer. These samples were analyzed for VOCs using the USEPA Air Method TO-15 for documenting compliance with the Rule 290 air permitting exemption of the Michigan Air Pollution Control Rules. The vapor analytical data from the air stripper effluent are summarized in **Table 9**. The January 2018 vapor sample had lower than normal VOC concentrations.

Livonia Transmission Plant Vapor Mitigation System

In response to the presence of VOCs beneath the LTP building, Ford has designed and begun the installation of a sub-slab depressurization (SSD) system.

Construction of the SSD system began in September 2017. To date, the completed construction consists of nine sub-grade suction pits and associated above-grade vertical riser piping. Currently, the sub-grade suction pits are attached to a capped riser pipe with a closed valve. The installation of overhead conveyance piping is currently ongoing. The SSD system is schedule to be in operation by the 2Q 2018. Further information regarding the progress of the construction of the SSD system will be included in subsequent progress reports.

4 ACCESS AGREEMENTS

No additional agreements were needed to achieve Ford's objectives during the 1Q 2018 reporting period.

5 OTHER RELEVANT INFORMATION

Due Care Obligations

Response activities are ongoing and maintaining the due care obligation.

Official Communications

During the 1Q 2018 reporting period, Ford met with the MDEQ on January 22, 2018 and with the MDEQ and MDHHS on February 7, 2018, to provide an overview of the proposed Remedial Investigation (RI) response activities for the site. The overall objective of these meetings was to detail the tasks necessary to complete a comprehensive remedial investigation. The proposed response activities addressed data gaps identified in the initial CSM Report dated August 25, 2017. The response activities discussed in the meetings include:

- On-site and off-site vapor intrusion evaluation
- On-site source area investigation
- Utility corridor investigation
- Groundwater delineation to the north and to the east of LTP
- On-site and off-site routine groundwater and soil gas monitoring.

Further details regarding the response activities identified above were detailed in the VI and RI RespAPs submitted to the MDEQ on April 13, 2018.

Public Outreach

Ford currently has an active website that allows the general public access to project updates. The website link is: http://www.fordlivoniabostonbeaconproject.com. Ford is currently working to update the existing website to organize the documents in a manner that matches the Consent Decree.

List of Reporting Documents

A list of all reporting documents submitted through the 1Q 2018 reporting period is included in **Exhibit 5** below.

Exhibit 5: Submitted Reporting Documents – 1Q 2018

Report Title	Submission Date
4Q 2017 Progress Report	January 30, 2018

6 WASTE MANAGEMENT

All investigation-derived waste, construction debris, or other waste is properly stored in labelled containers (e.g., 55-gallon drum, frac tank) pending off-site disposal. All waste is managed by Ford and Veolia Environmental Services (Veolia). Veolia is the Total Waste Manager (TWM) for the site.

7 PROPOSED SCHEDULE

Future response activities are scheduled as follows:

Exhibit 6: Response Activity Schedule

Response Activity	Proposed Schedule	Anticipated Completion
2Q 2018 On-site groundwater sampling	Week of May 7, 2018	May 16, 2018
2Q 2018 Off-site groundwater sampling	Week of May 7, 2018	May 16, 2018
2Q 2018 Off-site soil gas sampling	Week of May 28, 2018	June 1, 2018
HCS performance monitoring	Monthly intervals	Ongoing

TABLES

Table 1
On-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
LMW-15-01	673.98	7-12	11/16/15	8.42	11.36	12	2.94	664.97
			11/25/15	8.44	11.35	12	2.91	664.96
			11/30/15	8.38	11.36	12	2.98	665.01
			12/08/15	8.35	11.35	12	3.00	665.03
			11/06/17	Could Not Open[2]				
			02/05/18					
LMW-15-02	673.90	7-12	11/16/15	7.70	10.10	12	2.40	665.72
			11/25/15	7.68	9.83	12	2.15	665.79
			11/30/15	7.66	9.84	12	2.18	665.80
			12/09/15	7.60	9.76	12	2.16	665.86
			11/06/17	8.39	11.13	NM	2.74	664.96
			02/05/18	8.54	11.02	NM	2.48	664.86
LMW-15-03	670.18	7-12	11/16/15	6.01	7.46	12	1.45	663.88
			11/25/15	5.92	7.04	12	1.12	664.04
			11/30/15	5.81	6.94	12	1.13	664.14
			12/11/15	5.83	7.26	12	1.43	664.06
			11/06/17	6.36	7.49	NM	1.13	663.59
			02/05/18	6.62	8.41	NM	1.79	663.20
LMW-15-04	673.92	6-11	11/16/15	7.10	8.79	11	1.69	666.48
			11/25/15	7.10	8.79	11	1.69	666.48
			11/30/15	7.06	8.79	11	1.73	666.52
			12/09/15	7.00	8.86	11	1.86	666.55
			11/06/17	Could Not Open[2]				
			02/05/18					
LMW-15-05	673.93	7-12	11/16/15	8.50	10.20	12	1.70	665.09
			11/25/15	8.50	9.99	12	1.49	665.14
			11/30/15	8.47	9.98	12	1.51	665.16
			12/08/15	8.42	9.92	12	1.50	665.21
			11/06/17	Could Not Locate[3]				
			02/05/18					
LMW-15-06	673.93	7-12	11/16/15	6.92	8.82	12	1.90	666.63
			11/25/15	6.89	8.52	12	1.63	666.72
			11/30/15	6.74	8.39	12	1.65	666.86
			12/09/15	6.62	8.40	12	1.78	666.96
			11/06/17	Could Not Open[2]				
			02/05/18					
LMW-15-07	673.52	7-12	11/16/15	NP	7.70	12	NM	665.82
			11/25/15	NP	7.32	12	NM	666.20
			11/30/15	7.14	7.15	12	0.01	666.38
			12/11/15	7.08	7.09	12	0.01	666.44
			11/06/17	7.43	7.53	NM	0.10	666.07
			02/05/18	Could Not Locate[3]				

See Notes on Last Page.

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On-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
LMW-15-08	673.88	7.5-12.5	11/16/15	NP	6.30	12.5	NM	667.58
			11/25/15	6.25	6.26	12.5	0.01	667.63
			11/30/15	6.12	6.13	12.5	0.01	667.76
			12/11/15	6.09	6.10	12.5	0.01	667.79
			11/06/17	Could Not Open[2]				
			02/05/18					
LMW-15-09	673.93	7-12	11/16/15	7.82	10.62	12	2.80	665.55
			11/25/15	7.76	10.51	12	2.75	665.62
			11/30/15	7.72	10.32	12	2.60	665.69
			12/10/15	7.73	10.38	12	2.65	665.67
			11/06/17	8.29	NA	11.75	3.71	NA**
			02/05/18	8.58	10.50	NM	1.92	664.96
LMW-15-10	673.89	7-12	11/16/15	8.40	9.26	12	0.86	665.32
			11/25/15	8.32	9.13	12	0.81	665.41
			11/30/15	8.24	8.96	12	0.72	665.51
			12/10/15	8.18	8.79	12	0.61	665.59
			11/06/17	8.69	9.50	NM	0.81	665.04
			02/05/18	8.50	8.85	NM	0.35	665.32
MW-15-59D	675.17	94-99	01/07/16	NP	21.83	99	NM	653.34
			01/19/16	NP	21.91	99	NM	653.26
			04/19/17	NP	21.37	99.37	NM	653.80
			07/24/17	NP	28.71	100.80	NM	646.46
			11/06/17	NP	24.48	100.65	NM	650.69
			02/05/18	NP	21.44	100.01	NM	653.73
MW-15-60D	675.75	93-98	01/07/16	NP	19.47	100	NM	656.28
			01/19/16	NP	19.71	100	NM	656.04
			04/19/17	NP	18.65	99.50	NM	657.10
			07/24/17	NP	24.09	99.92	NM	651.66
			11/06/17	NP	20.63	99.92	NM	655.12
			02/05/18	NP	19.61	99.42	NM	656.14
MW-15-61D	670.03	88-93	01/07/16	NP	76.49	93	NM	593.54
			01/08/16	NP	88.02	93	NM	582.01
			01/19/16	NP	73.23	93	NM	596.80
			01/20/16	NP	89.31	93	NM	580.72
			01/26/16	NP	84.09	93	NM	585.94
			01/27/16	NP	82.42	93	NM	587.61
			01/28/16	NP	80.71	93	NM	589.32
			04/19/17	NP	24.71	93.87	NM	645.32
			07/24/17	NP	24.74	94.09	NM	645.29
			11/06/17	NP	26.58	94.72	NM	643.45
			02/06/18	NP	25.79	94.71	NM	644.24

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36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-1	670.77	14-19	04/17/17	NP	3.82	18.61	NM	666.95
			07/24/17	NP	3.57	18.44	NM	667.20
			11/06/17	NP	3.93	18.78	NM	666.84
			02/05/18	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]
MW-2	673.80	15.5-20.5	05/12/16	NP	6.35	19.52	NM	667.45
			04/17/17	NP	6.91	19.45	NM	666.89
			07/24/17	NP	6.99	19.44	NM	666.81
			11/06/17	NP	7.24	19.50	NM	666.56
			02/05/18	NP	7.42	19.55	NM	666.38
MW-3	673.61	14-19	05/12/16	NP	5.82	18.79	NM	667.79
			04/17/17	NP	7.09	18.72	NM	666.52
			07/24/17	NP	7.29	18.43	NM	666.32
			11/06/17	NP	7.61	18.80	NM	666.00
			02/05/18	NP	7.70	18.87	NM	665.91
MW-4	673.85	15.5-20.5	05/13/16	NP	7.15	20.20	NM	666.70
			04/17/17	NP	7.57	20.09	NM	666.28
			07/24/17	NP	7.61	19.93	NM	666.24
			11/06/17	NP	7.94	20.05	NM	665.91
			02/05/18	NP	8.50	20.16	NM	665.35
MW-5*	674.40	15.5-20.5	05/13/16	NP	6.49	21.73	NM	667.91
			07/24/17	NP	NM	NM	NM	NM
			11/06/17	NP	7.51	19.71	NM	666.89
			02/05/18	NP	7.70	19.54	NM	666.70
MW-7	670.89	18-23	07/24/17	NP	4.79	22.39	NM	666.10
			11/06/17	NP	5.24	22.56	NM	665.65
			02/06/18	NP	4.48	22.50	NM	666.41
MW-9	671.18	19.5-24.5	05/09/16	NP	5.82	24.34	NM	665.36
			04/17/17	NP	6.79	24.34	NM	664.39
			07/24/17	NP	5.88	24.29	NM	665.30
			11/06/17	NP	6.38	24.53	NM	664.80
			02/05/18	NP	6.40	24.35	NM	664.78
MW-10	673.78	16.5-21.5	05/13/16	NP	8.16	20.81	NM	665.62
			04/17/17	NP	8.15	20.81	NM	665.63
			07/24/17	NP	8.58	20.76	NM	665.20
			11/06/17	NP	6.00	20.84	NM	667.78
			02/05/18	NP	9.01	15.89	NM	664.77
MW-14	671.24	15-20	07/24/17	NP	6.63	19.53	NM	664.61
			11/06/17	NP	7.01	19.61	NM	664.23
			02/05/18	NP	7.29	19.80	NM	663.95

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Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-18	670.41	13-18	05/09/16	NP	6.29	17.89	NM	664.12
			04/17/17	NP	6.67	17.90	NM	663.74
			07/24/17	NP	6.92	17.70	NM	663.49
			11/06/17	NP	7.31	17.80	NM	663.10
			02/06/18	NP	7.45	17.85	NM	662.96
MW-19	669.65	15-20	05/13/16	LNAPL				
			04/17/17					
			07/24/17					
			11/06/17	NP	5.91	19.85	NM	663.74
			02/05/18	NP	6.23	19.84	NM	663.42
MW-20	669.33	13.5-18.5	07/24/17	NP	6.29	16.98	NM	663.04
			11/06/17	NP	6.52	16.84	NM	662.81
			02/05/18	NP	6.68	16.62	NM	662.65
MW-21*	670.76	13.5-18.5	05/13/16	Could Not Open[2]				
			04/17/17					
			07/24/17					
			11/06/17					
			02/06/18	NP	7.95	17.74	NM	662.81
MW-22	670.18	16.5-21.5	05/10/16	NP	6.18	20.83	NM	664.00
			04/17/17	NP	7.13	21.41	NM	663.05
			07/24/17	NP	7.53	20.42	NM	662.65
			11/06/17	NP	7.51	20.51	NM	662.67
			02/05/18	NP	7.61	20.48	NM	662.57
MW-23	669.24	15-20	05/09/16	NP	6.23	19.82	NM	663.01
			04/17/17	NP	6.67	19.79	NM	662.57
			07/24/17	NP	6.69	19.72	NM	662.55
			11/06/17	NP	6.60	19.72	NM	662.64
			02/06/18	NP	6.93	NM	NM	662.31
MW-24	675.48	19-24	04/17/17	NP	9.32	23.85	NM	666.16
			07/24/17	NP	10.01	23.90	NM	665.47
			11/06/17	NP	10.40	23.76	NM	665.08
			02/05/18	NP	10.37	23.99	NM	665.11
MW-25	675.04	16-21	04/17/17	NP	5.35	20.54	NM	669.69
			07/24/17	NP	6.34	20.52	NM	668.70
			11/06/17	NP	6.51	20.38	NM	668.53
			02/05/18	NP	6.55	20.52	NM	668.49
MW-26	673.39	4.5-14.5	07/24/17	NP	5.96	14.09	NM	667.43
			11/06/17	NP	6.09	14.10	NM	667.30
			02/05/18	NP	6.08	14.05	NM	667.31

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Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-27*	671.66	4-14	07/24/17	Could Not Locate[3]				
			11/06/17					
			02/05/18					
MW-28	668.15	2-12	05/09/16	NP	3.21	11.81	NM	664.94
			04/17/17	NP	3.78	11.69	NM	664.37
			07/24/17	NP	4.61	11.73	NM	663.54
			11/06/17	NP	4.81	11.68	NM	663.34
			02/05/18	NP	4.63	11.65	NM	663.52
MW-29	669.45	5-15	05/13/16	NP	4.10	14.85	NM	665.35
			04/17/17	NP	4.53	14.84	NM	664.92
			07/24/17	NP	5.41	14.90	NM	664.04
			11/06/17	NP	6.65	15.81	NM	662.80
			02/05/18	NP	5.52	14.84	NM	663.93
MW-30	670.70	19-24	05/09/16	NP	9.37	24.82	NM	661.33
			04/17/17	NP	9.86	24.78	NM	660.84
			07/24/17	NP	9.93	24.73	NM	660.77
			11/06/17	NP	10.47	24.84	NM	660.23
			02/05/18	NP	10.31	24.69	NM	660.39
MW-31	670.82	17-22	05/09/16	NP	9.96	21.75	NM	660.86
			04/17/17	NP	10.13	21.78	NM	660.69
			07/24/17	NP	10.19	21.69	NM	660.63
			11/06/17	NP	10.65	21.92	NM	660.17
			02/05/18	NP	10.70	21.48	NM	660.12
MW-32	670.43	18-23	05/09/16	NP	9.64	22.92	NM	660.79
			04/17/17	NP	9.52	22.91	NM	660.91
			07/24/17	NP	9.71	22.71	NM	660.72
			11/06/17	NP	10.18	23.03	NM	660.25
			02/05/18	NP	10.17	22.78	NM	660.26
MW-33	669.94	14-19	05/09/16	NP	8.68	18.76	NM	661.26
			04/17/17	NP	8.76	18.75	NM	661.18
			07/24/17	NP	8.84	19.72	NM	661.10
			11/06/17	NP	8.58	19.08	NM	661.36
			02/05/18	NP	8.63	18.74	NM	661.31
MW-34	670.49	16.5-21.5	05/09/16	NP	7.98	21.21	NM	662.51
			04/17/17	NP	8.83	21.30	NM	661.66
			07/24/17	NP	9.45	21.23	NM	661.04
			11/06/17	NP	10.02	21.65	NM	660.47
			02/05/18	NP	9.73	21.35	NM	660.76

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Well ID	TOC Elevation [(1)] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-35	669.44	19.5-24.5	05/09/16	NP	6.62	24.48	NM	662.82
			04/17/17	NP	7.16	24.63	NM	662.28
			07/24/17	NP	8.55	24.44	NM	660.89
			11/06/17	NP	9.11	24.45	NM	660.33
			02/05/18	NP	8.63	24.50	NM	660.81
MW-36	676.39	20-25	07/24/17	NP	9.49	24.75	NM	666.90
			11/06/17	NP	10.98	24.88	NM	665.41
			02/05/18	NP	10.15	24.91	NM	666.24
MW-37	671.24	18-23	07/24/17	NP	8.14	24.75	NM	663.10
			11/06/17	NP	8.26	23.18	NM	662.98
			02/05/18	NP	8.33	22.80	NM	662.91
MW-38	671.79	15-20	04/17/17	NP	8.23	19.55	NM	663.56
			07/24/17	NP	8.69	23.69	NM	663.10
			11/06/17	NP	8.53	19.75	NM	663.26
			02/05/18	NP	8.67	19.65	NM	663.12
MW-39	672.19	19.5-24.5	04/19/17	NP	11.08	24.14	NM	661.11
			07/24/17	NP	11.41	23.92	NM	660.78
			11/06/17	NP	11.64	24.36	NM	660.55
			02/05/18	NP	11.63	24.30	NM	660.56
MW-40	670.65	15-20	05/09/16	NP	9.94	19.72	NM	660.71
			04/19/17	NP	9.98	19.72	NM	660.67
			07/24/17	NP	10.10	19.66	NM	660.55
			11/06/17	NP	10.58	19.75	NM	660.07
			02/05/18	NP	10.62	19.43	NM	660.03
MW-41	670.34	16-21	05/09/16	NP	8.20	20.97	NM	662.14
			04/19/17	NP	8.97	20.99	NM	661.37
			07/24/17	NP	9.39	20.78	NM	660.95
			11/06/17	NP	9.96	21.25	NM	660.38
			02/05/18	NP	9.75	20.85	NM	660.59
MW-42	670.10	16-21	05/09/16	NP	7.29	11.52	NM	662.81
			04/19/17	NP	8.01	20.48	NM	662.09
			07/24/17	NP	9.13	20.43	NM	660.97
			11/06/17	NP	9.76	20.77	NM	660.34
			02/05/18	NP	9.32	20.55	NM	660.78
MW-43	669.24	17-22	05/09/16	NP	6.34	21.85	NM	662.90
			04/19/17	NP	6.80	26.82	NM	662.44
			07/24/17	NP	8.34	21.79	NM	660.90
			11/06/17	NP	8.92	21.98	NM	660.32
			02/05/18	NP	8.42	21.80	NM	660.82

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Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-44	671.48	16-21	05/09/16	NP	6.59	17.42	NM	664.89
			04/19/17	NP	7.48	19.95	NM	664.00
			07/24/17	NP	8.38	20.93	NM	663.10
			11/06/17	NP	8.55	20.74	NM	662.93
			02/05/18	NP	8.51	20.90	NM	662.97
MW-45	670.83	15-20	05/09/16	NP	14.22	19.81	NM	656.61
			04/19/17	NP	11.45	19.67	NM	659.38
			07/24/17	NP	11.07	19.76	NM	659.76
			11/06/17	NP	9.82	19.75	NM	661.01
			02/05/18	NP	10.30	19.72	NM	660.53
MW-46	670.84	16-21	05/09/16	NP	8.42	20.45	NM	662.42
			04/19/17	NP	10.61	20.30	NM	660.23
			07/24/17	NP	10.33	19.78	NM	660.51
			11/06/17	NP	9.76	19.81	NM	661.08
			02/05/18	NP	10.20	19.81	NM	660.64
MW-47	671.33	16-21	05/09/16	NP	7.53	11.92	NM	663.80
			04/19/17	NP	9.88	20.76	NM	661.45
			07/24/17	NP	10.11	19.96	NM	661.22
			11/06/17	NP	9.87	19.98	NM	661.46
			02/05/18	NP	10.11	19.98	NM	661.22
MW-48	670.98	17-22	05/09/16	NP	6.33	21.76	NM	664.65
			04/19/17	NP	8.93	21.62	NM	662.05
			07/24/17	NP	9.70	20.42	NM	661.28
			11/06/17	NP	9.33	20.34	NM	661.65
			02/05/18	NP	10.08	20.35	NM	660.90
MW-49	669.07	12.5-17.5	05/12/16	NP	6.57	17.31	NM	662.50
			04/19/17	NP	7.03	17.31	NM	662.04
			07/24/17	NP	6.94	17.37	NM	662.13
			11/06/17	NM	NM	NM	NM	NM
			02/05/18	NP	7.32	17.44	NM	661.75
MW-50	670.16	16-21	05/09/16	NP	5.42	20.34	NM	664.74
			04/19/17	NP	6.77	20.23	NM	663.39
			07/24/17	NP	8.16	18.42	NM	662.00
			11/06/17	NP	8.15	18.81	NM	662.01
			02/05/18	NP	8.47	18.44	NM	661.69
MW-51	671.07	15-20	04/19/17	NP	6.12	19.04	NM	664.95
			07/24/17	NP	7.82	18.92	NM	663.25
			11/06/17	NP	7.58	18.91	NM	663.49
			02/05/18	NP	7.89	18.95	NM	663.18

See Notes on Last Page.

Table 1
On-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-52	669.16	15-20	05/09/16	NP	6.39	19.81	NM	662.77
			04/19/17	NP	6.59	19.76	NM	662.57
			07/24/17	NP	8.33	19.75	NM	660.83
			11/06/17	NP	8.87	19.83	NM	660.29
			02/05/18	NP	8.43	19.57	NM	660.73
MW-53	668.59	16-21	05/09/16	NP	6.05	20.85	NM	662.54
			04/18/17	NP	6.03	20.83	NM	662.56
			07/24/17	NP	7.92	20.63	NM	660.67
			11/06/17	NP	8.35	21.08	NM	660.24
			02/05/18	NP	7.98	20.68	NM	660.61
MW-54	668.49	16-21	04/19/17	NP	6.01	20.86	NM	662.48
			07/24/17	NP	8.08	20.52	NM	660.41
			11/06/17	NP	8.17	20.71	NM	660.32
			02/05/18	NP	7.96	20.56	NM	660.53
MW-55	670.04	15-20	04/19/17	NP	6.84	19.82	NM	663.20
			07/24/17	NP	8.95	19.56	NM	661.09
			11/06/17	NP	8.98	20.03	NM	661.06
			02/05/18	NP	8.78	19.64	NM	661.26
MW-56	670.26	16-21	04/19/17	NP	6.67	20.69	NM	663.59
			07/24/17	NP	8.18	20.58	NM	662.08
			11/06/17	NP	8.37	20.76	NM	661.89
			02/05/18	NP	8.08	20.59	NM	662.18
MW-57	668.93	17-22	04/19/17	NP	5.89	21.72	NM	663.04
			07/24/17	NP	7.83	21.63	NM	661.10
			11/06/17	NP	8.12	21.83	NM	660.81
			02/06/18	NP	7.86	21.80	NM	661.07
MW-58	668.73	15-20	05/09/16	NP	3.51	19.74	NM	665.22
			04/19/17	NP	4.28	19.72	NM	664.45
			07/24/17	NP	5.68	18.70	NM	663.05
			11/06/17	NP	5.78	19.69	NM	662.95
			02/05/18	NP	5.63	19.40	NM	663.10
MW-62	671.06	16.3-21.3	04/20/17	NP	7.89	21.13	NM	663.17
			07/24/17	NP	10.11	21.01	NM	660.95
			11/06/17	NP	9.43	21.14	NM	661.63
			02/05/18	NP	9.46	21.15	NM	661.60
MW-63	669.96	7-12	04/20/17	NP	7.32	11.75	NM	662.64
			07/24/17	NP	8.45	11.78	NM	661.51
			11/06/17	NP	8.18	11.80	NM	661.78
			02/05/18	NP	8.77	11.80	NM	661.19

See Notes on Last Page.

Table 1
On-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-64	671.09	15-20	04/20/17	NP	8.55	21.1	NM	662.54
			07/24/17	NP	9.83	20.05	NM	661.26
			11/06/17	NP	10.20	20.36	NM	660.89
			02/06/18	NP	10.14	20.19	NM	660.95
MW-65	671.98	16-21	04/20/17	NP	8.26	21.18	NM	663.72
			07/24/17	NP	9.87	21.11	NM	662.11
			11/06/17	NP	9.68	21.11	NM	662.30
			02/05/18	NP	10.05	21.16	NM	661.93
MW-66	669.83	15-20	04/20/17	NP	6.55	19.49	NM	663.28
			07/24/17	NP	7.81	19.35	NM	662.02
			11/06/17	NP	7.51	19.23	NM	662.32
			02/05/18	NP	8.03	19.06	NM	661.80
MW-67	671.32	9-14	04/20/17	NP	9.44	13.97	NM	661.88
			07/24/17	NP	9.84	13.84	NM	661.48
			11/06/17	NP	9.76	14.01	NM	661.56
			02/05/18	NP	10.00	14.02	NM	661.32
MW-68	670.71	15-20	04/20/17	NP	9.39	21.85	NM	661.32
			07/24/17	NP	9.55	19.86	NM	661.16
			11/06/17	NP	9.51	19.85	NM	661.20
			02/05/18	NP	9.68	19.85	NM	661.03
MW-69	670.27	15-20	04/20/17	NP	9.71	19.91	NM	660.56
			07/24/17	NP	NM	NM	NM	NM
			11/06/17	NP	9.91	19.98	NM	660.36
			02/05/18	NP	9.78	20.01	NM	660.49
MW-70	671.36	15-20	04/20/17	NP	11.46	20.14	NM	659.90
			07/24/17	NP	11.02	20.18	NM	660.34
			11/06/17	NP	10.23	20.15	NM	661.13
			02/05/18	NP	10.74	20.12	NM	660.62
MW-71	671.04	15-20	04/20/17	NP	12.45	20.16	NM	658.59
			07/24/17	NP	11.84	20.22	NM	659.20
			11/06/17	NP	10.74	20.21	NM	660.30
			02/05/18	NP	11.13	20.18	NM	659.91
PW-16-01	670.23	9.7-19.7	07/24/17	NP	9.04	21.58	NM	661.19
			11/06/17	NP	8.45	21.58	NM	661.78
			02/05/18	NP	8.70	21.62	NM	661.53
PW-16-02	669.97	6-21	07/24/17	NP	6.77	8.36	NM	663.20
			11/06/17	NP	6.54	23.79	NM	663.43
			02/05/18	NP	6.65	24.55	NM	663.32

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Table 1
On-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation [1] (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
TW-16-01	669.53	12-17	07/24/17	NP	8.36	16.80	NM	661.17
			11/06/17	NP	7.68	16.64	NM	661.85
			02/05/18	NP	7.91	16.87	NM	661.62
TW-16-02	669.43	12-17	04/20/17	NP	4.48	18.85	NM	664.95
			07/24/17	NP	8.00	17.14	NM	661.43
			11/06/17	NP	7.48	17.17	NM	661.95
			02/05/18	NP	7.71	17.15	NM	661.72
TW-16-03	669.34	9-19	07/24/17	NP	6.10	18.65	NM	663.24
			11/06/17	NP	6.00	18.65	NM	663.34
			02/05/18	NP	6.05	18.75	NM	663.29
TW-16-04	669.80	9-19	04/20/17	NP	4.90	19.02	NM	664.90
			07/24/17	NP	6.46	18.93	NM	663.34
			11/06/17	NP	6.36	18.93	NM	663.44
			02/05/18	NP	6.43	18.73	NM	663.37

Notes:
Water level measurements collected from top of well casing.
[1] TOC elevation re-surveyed on October 12-13, and/or November 20, 2017 by Geodetic Designs Inc.
[2] Arcadis plans to evaluate the monitoring well and determine if maintenance or repairs can be made in 1Q 2018.
[3] Arcadis plans to use available technologioes to locate the monitoring well in 1Q 2018.
[4] MW-1 submerged under water during the 1Q 2018 sampling event.
* Monitoring well TOC could not be re-surveyed due to access.
** Unable to calculate a corrected groundwater elevation due LNAPL thickness throughout well screen.

Abbreviations:

ft.	Feet
ft. amsl	Feet above mean sea level
ft. bgs	Feet below ground surface
ft. btoc	Feet below top of casing
LNAPL	Light non-aqueous phase liquid
NM	Not measured
NP	No product detected
TOC	Top of casing

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-1 14-19			MW-2 15.5-20.5				MW-3 14-19			
				4/26/2017	7/28/2017	11/10/2017	4/27/2017	8/3/2017	11/9/2017	2/13/2018	4/27/2017	8/3/2017	11/9/2017	2/13/2018
Semi-volatile Organic Compounds (SVOCs)														
1,4-Dioxane	µg/L	37	2,800	< 2.0	< 2.0	< 2.0	1.5 J	1.8 J	4.5	4.4	0.67 J	0.79 J	0.57 J	< 2.0
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 130	< 250	< 330	< 330	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	1.0 J	< 10	< 250	< 500	< 670	< 670	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 250	< 500	< 670	< 670	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	4.0 J	< 10	< 250	< 500	< 670	< 670	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 130	< 250	< 330	< 330	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	**630**	**1,200**	**1,000**	**1,400**	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 130	< 250	< 330	< 330	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 50	< 100	< 130	< 130	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 250	< 500	< 670	< 670	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 250	< 500	< 670	< 670	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-1 14-19			MW-2 15.5-20.5				MW-3 14-19			
				4/26/2017	7/28/2017	11/10/2017	4/27/2017	8/3/2017	11/9/2017	2/13/2018	4/27/2017	8/3/2017	11/9/2017	2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 50	< 100	< 130	< 130	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	**200**	**270**	**260**	**390**	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 25	< 50	< 67	< 67	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	**200**	**160**	**140**	**210**	< 1.0	< 1.0	< 1.0	< 1.0
Gases														
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other														
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-4 15.5-20.5				MW-5 15.5-20.5			MW-7 18-23		
				4/27/2017	8/3/2017	11/9/2017	2/13/2018	8/3/2017	11/9/2017	2/13/2018	7/31/2017	11/10/2017	2/12/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	1.1 J	0.78 J	< 20	0.38 J	0.35 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5,000	< 5,000	< 5,000	< 8,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10,000	< 10,000	< 10,000	< 17,000	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10,000	< 10,000	< 10,000	< 17,000	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10,000	< 10,000	< 10,000	< 17,000	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5,000	< 5,000	< 5,000	< 8,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	**32,000**	**27,000**	**21,000**	**26,000**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5,000	< 5,000	< 5,000	< 8,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2,000	< 2,000	< 2,000	< 3,300	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10,000	< 10,000	< 10,000	< 17,000	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10,000	< 10,000	< 10,000	< 17,000	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-4 15.5-20.5				MW-5 15.5-20.5			MW-7 18-23		
				4/27/2017	8/3/2017	11/9/2017	2/13/2018	8/3/2017	11/9/2017	2/13/2018	7/31/2017	11/10/2017	2/12/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2,000	< 2,000	< 2,000	< 3,300	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	**1,200**	**1,100**	**850 J**	**1,100 J**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1,000	< 1,000	< 1,000	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	**21,000**	**18,000**	**19,000**	**23,000**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**570 J**	**640 J**	**470 J**	< 1,700	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:		Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-9			MW-10				MW-14		
Screen Interval (ft. bgs):				19.5-24.5			16.5-21.5				15-20		
Date:	Unit			7/28/2017	11/10/2017	2/12/2018	4/27/2017	8/4/2017	11/9/2017	2/13/2018	7/28/2017	11/10/2017	2/12/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	8.6	11	12	5.9	4.5	5.6	4.4	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 250	< 330	< 500	< 1,000	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 500	< 670	< 1,000	< 2,000	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 500	< 670	< 1,000	< 2,000	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 500	< 670	< 1,000	< 2,000	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 250	< 330	< 500	< 1,000	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 250	< 330	< 500	< 1,000	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 100	< 130	< 200	< 400	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 500	< 670	< 1,000	< 2,000	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 500	< 670	< 1,000	< 2,000	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-9 19.5-24.5			MW-10 16.5-21.5				MW-14 15-20		
				7/28/2017	11/10/2017	2/12/2018	4/27/2017	8/4/2017	11/9/2017	2/13/2018	7/28/2017	11/10/2017	2/12/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 100	< 130	< 200	< 400	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 50	< 67	< 100	< 200	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**5.5**	**7.1**	**4.6**	**1,200**	**2,100**	**2,000**	**1,900**	< 1.0	< 1.0	< 1.0
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-15-59D 94-99				MW-15-60D 93-98				MW-15-61D 88-93			
				4/26/2017	8/1/2017	11/15/2017	2/6/2018	4/26/2017	8/1/2017	11/15/2017	2/6/2018	4/26/2017	8/1/2017	11/15/2017	2/6/2018
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	NA	< 2.0	< 2.0	< 2.0	NA	< 2.0	< 2.0	< 2.0	NA	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.57 J	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	1.6 J	< 5.0	< 5.0	< 5.0	0.51 J	< 5.0	< 5.0	< 5.0	0.91 J	0.58 J	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	0.86 J	0.58 J	0.62 J	0.76 J	< 1.0	< 1.0	< 1.0	< 1.0	0.48 J	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.50 J	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-15-59D 94-99				MW-15-60D 93-98				MW-15-61D 88-93			
				4/26/2017	8/1/2017	11/15/2017	2/6/2018	4/26/2017	8/1/2017	11/15/2017	2/6/2018	4/26/2017	8/1/2017	11/15/2017	2/6/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.27 J	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	0.35 J	0.46 J	0.30 J	0.31 J	< 1.0	0.33 J	< 1.0	< 1.0	< 1.0	0.28 J	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	0.25 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Gases															
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other															
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-18 13-18 4/21/2017	MW-18 13-18 7/28/2017	MW-18 13-18 11/10/2017	MW-18 13-18 2/14/2018	MW-19 15-20 11/14/2017	MW-19 15-20 2/14/2018	MW-20 13.5-18.5 7/31/2017	MW-20 13.5-18.5 11/10/2017	MW-20 13.5-18.5 2/12/2018	MW-21 13.5-18.5 2/13/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	< 2.0	< 2.0	< 2.0	< 2.0	**120**	**130**	< 2.0	< 2.0	< 2.0	25
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	6.3	4.8	< 1.0	< 1.0	< 1.0	< 1,000
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	0.49 J	0.52 J	< 1.0	< 1.0	< 1.0	< 1,000
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0.81 J	< 10,000
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	2.2 J	< 10,000
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	8.9	6.5	< 1.0	< 1.0	< 1.0	< 1,000
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	1.1	0.94 J	< 1.0	< 1.0	< 1.0	**20,000**
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-18 13-18 4/21/2017	MW-18 13-18 7/28/2017	MW-18 13-18 11/10/2017	MW-18 13-18 2/14/2018	MW-19 15-20 11/14/2017	MW-19 15-20 2/14/2018	MW-20 13.5-18.5 7/31/2017	MW-20 13.5-18.5 11/10/2017	MW-20 13.5-18.5 2/12/2018	MW-21 13.5-18.5 2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.0	< 1.0	< 1.0	< 1.0	**460 J**
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	1.8	1.5	< 1.0	< 1.0	< 1.0	**5,400**
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-22 16.5-21.5				MW-23 15-20			MW-24 19-24			
				4/25/2017	8/2/2017	11/7/2017	2/6/2018	8/3/2017	11/7/2017	2/6/2018	4/26/2017	8/2/2017	11/10/2017	2/14/2018
Semi-volatile Organic Compounds (SVOCs)														
1,4-Dioxane	µg/L	37	2,800	32	26	**49**	22	0.50 J	< 20	< 20	< 2.0	0.26 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	200	89	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 310	< 500	< 250	< 710	< 5,000	< 10,000	< 5,000	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 630	< 1,000	< 500	< 1,400	< 10,000	< 20,000	< 10,000	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 630	< 1,000	< 500	< 1,400	< 10,000	< 20,000	< 10,000	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 630	< 1,000	< 500	< 1,400	< 10,000	< 20,000	< 10,000	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 310	< 500	< 250	< 710	< 5,000	< 10,000	< 5,000	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	**130**	**210**	25 J	**200**	**21,000**	**78,000**	**33,000**	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	**140 J**	< 500	< 250	**120 J**	< 5,000	< 10,000	**750 J**	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 130	< 200	< 100	< 290	< 2,000	< 4,000	< 2,000	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 630	< 1,000	< 500	< 1,400	< 10,000	< 20,000	< 10,000	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 630	< 1,000	< 500	< 1,400	< 10,000	< 20,000	< 10,000	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-22 16.5-21.5				MW-23 15-20			MW-24 19-24			
				4/25/2017	8/2/2017	11/7/2017	2/6/2018	8/3/2017	11/7/2017	2/6/2018	4/26/2017	8/2/2017	11/10/2017	2/14/2018
Methyl-tert-butylether	µg/L	40	7,100	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 130	< 200	< 100	< 290	< 2,000	< 4,000	< 2,000	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 63	< 100	< 50	< 140	**1,200**	**4,100**	**1,800**	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 63	< 100	< 50	< 140	< 1,000	< 2,000	< 1,000	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 63	< 100	< 50	< 140	**5,300**	**25,000**	**11,000**	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**2,300**	**2,100**	**1,600**	**1,500**	**1,100**	**2,400**	**820 J**	< 1.0	< 1.0	< 1.0	< 1.0
Gases														
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other														
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-25 16-21				MW-26 4.5-14.5		MW-28 2-12		
				4/21/2017	8/2/2017	11/14/2017	2/13/2018	8/4/2017	11/14/2017	8/3/2017	11/8/2017	2/7/2018
Semi-volatile Organic Compounds (SVOCs)												
1,4-Dioxane	µg/L	37	2,800	0.75 J	1.1 J	0.86 J	0.68 J	0.25 J	< 2.0	0.44 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	26	25
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	12	10
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.71 J	1.6	0.90 J
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	0.91 J	0.50 J
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-25 16-21				MW-26 4.5-14.5		MW-28 2-12		
				4/21/2017	8/2/2017	11/14/2017	2/13/2018	8/4/2017	11/14/2017	8/3/2017	11/8/2017	2/7/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.68 J	0.59 J	0.45 J
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Gases												
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other												
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-29 5-15				MW-30 19-24				MW-31 17-22			
				4/26/2017	8/4/2017	11/14/2017	2/14/2018	4/25/2017	7/27/2017	11/9/2017	2/13/2018	4/21/2017	7/28/2017	11/10/2017	2/14/2018
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	1.4 J	3.8	9.0	0.90 J	10	11	13	12	< 2.0	0.47 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-29 5-15				MW-30 19-24				MW-31 17-22			
				4/26/2017	8/4/2017	11/14/2017	2/14/2018	4/25/2017	7/27/2017	11/9/2017	2/13/2018	4/21/2017	7/28/2017	11/10/2017	2/14/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.68 J	0.84 J	< 1.0
Gases															
Ethane	µg/L	NS	NS	NA	NA	NA	NA	< 0.50	NA	0.31 J	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	< 0.50	NA	< 1.0	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	65	NA	360	NA	NA	NA	NA	NA
Other															
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	2.6	NA	2.5	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	< 1.0	NA	< 0.10	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	52	NA	53	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	2.1	NA	2.4	NA	NA	NA	NA	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	< 100	NA	**3,700**	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	**630**	NA	**3,700**	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	**77**	NA	**150**	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	**70**	NA	**150**	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:				MW-32			MW-33			MW-34			
Screen Interval (ft. bgs):				18-23			14-19			16.5-21.5			
Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	7/28/2017	11/7/2017	2/12/2018	7/28/2017	11/8/2017	2/14/2018	4/24/2017	7/27/2017	11/9/2017	2/13/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	0.28 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	8.3	6.1	6.6	7.4
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	0.31 J	0.37 J	< 1.0	< 1.0	< 1.0	< 1.0	0.37 J	0.35 J	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-32 18-23			MW-33 14-19			MW-34 16.5-21.5			
				7/28/2017	11/7/2017	2/12/2018	7/28/2017	11/8/2017	2/14/2018	4/24/2017	7/27/2017	11/9/2017	2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	0.67 J	< 1.0	< 1.0	< 1.0	< 1.0	0.52 J	1.5	2.0	0.97 J
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-35 19.5-24.5			MW-36 20-25			MW-37 18-23		
				7/27/2017	11/7/2017	2/14/2018	7/28/2017	11/10/2017	2/15/2018	8/1/2017	11/10/2017	2/12/2018
Semi-volatile Organic Compounds (SVOCs)												
1,4-Dioxane	µg/L	37	2,800	4.9	4.6	4.3	< 2.0	< 2.0	< 2.0	0.37 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-35 19.5-24.5			MW-36 20-25			MW-37 18-23		
				7/27/2017	11/7/2017	2/14/2018	7/28/2017	11/10/2017	2/15/2018	8/1/2017	11/10/2017	2/12/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**3.5**	**2.4**	**4.5**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Gases												
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other												
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-38 15-20				MW-39 20-25				MW-40 20-25	
				4/26/2017	7/28/2017	11/8/2017	2/15/2018	4/26/2017	7/28/2017	11/7/2017	2/15/2018	7/28/2017	11/15/2017
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.7	3.2
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-38 15-20				MW-39 20-25				MW-40 20-25	
				4/26/2017	7/28/2017	11/8/2017	2/15/2018	4/26/2017	7/28/2017	11/7/2017	2/15/2018	7/28/2017	11/15/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.41 J	0.48 J
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.77 J	1.8
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-41 16-21				MW-42 16-21				MW-43 17-22			
				4/24/2017	7/27/2017	11/9/2017	2/13/2018	4/24/2017	7/27/2017	11/9/2017	2/13/2018	4/27/2017	7/27/2017	11/9/2017	2/13/2018
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	1.9 J	1.4 J	2.2	0.77 J	1.3 J	1.8 J	2.4	1.8 J	3.6	3.5	3.5	2.2
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	1.9	1.8	2.3	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
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Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-41 16-21				MW-42 16-21				MW-43 17-22			
				4/24/2017	7/27/2017	11/9/2017	2/13/2018	4/24/2017	7/27/2017	11/9/2017	2/13/2018	4/27/2017	7/27/2017	11/9/2017	2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**3.2**	1.9	**2.4**	**2.1**	0.81 J	0.99 J	1.0	0.81 J	**8.4**	**3.0**	**2.2**	**8.0**
Gases															
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	0.48 J	NA	0.74 J	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 0.50	NA	0.27 J	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	190	NA	210	NA
Other															
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	4.4	NA	4.3	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 0.50	NA	< 0.20	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	220	NA	**260**	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	4	NA	4.3	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	**1,700**	NA	**2,800**	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	**2,500**	NA	**3,900**	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	**210**	NA	**190**	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	**210**	NA	**200**	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-44 16-21				MW-45 15-20				MW-46 16-21			
				4/25/2017	8/2/2017	11/7/2017	2/6/2018	4/24/2017	8/1/2017	11/13/2017	2/12/2018	4/24/2017	7/31/2017	11/13/2017	2/12/2018
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	12	7.1	12	9.0	4.1	2.5	< 2.0	< 2.0	21	0.83 J	3.7	11
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	1.9 J	2.8	3.6	2.4
1,1-Dichloroethene	µg/L	7.0	130	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	0.78 J	0.90 J	0.46 J
1,2,3-Trimethylbenzene	µg/L	130	ID	< 31	< 50	< 100	< 33	< 2,500	< 2,500	< 330	< 500	< 25	< 5.0	< 13	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	0.55 J
1,2-Dichloropropane	µg/L	5.0	230	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 63	< 100	< 200	< 67	< 5,000	< 5,000	< 670	< 1,000	< 50	< 10	< 25	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 63	< 100	< 200	< 67	< 5,000	< 5,000	< 670	< 1,000	< 50	< 10	< 25	< 10
Acetone	µg/L	2,100	1,700	< 63	< 100	< 200	< 67	< 5,000	< 5,000	< 670	< 1,000	< 50	< 10	< 25	< 10
Benzene	µg/L	5.0	200	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Bromodichloromethane	µg/L	80	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Bromoform	µg/L	80	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Bromomethane	µg/L	29	35	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 31	< 50	< 100	< 33	< 2,500	< 2,500	< 330	< 500	< 25	< 5.0	< 13	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
CFC-11	µg/L	7,300	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
CFC-12	µg/L	4,800	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Chlorobenzene	µg/L	100	25	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Chloroethane	µg/L	1,700	1,100	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Chloroform	µg/L	80	350	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Chloromethane	µg/L	1,100	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 6.3	< 10	< 20	< 6.7	**10,000**	**8,100**	**2,100**	**1,800**	21	15	22	14
cis-1,3-Dichloropropene	µg/L	NA	NA	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Cyclohexane	µg/L	NA	ID	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Dichloromethane	µg/L	5.0	1,500	**8.3 J**	< 50	**18 J**	4.1 J	**330 J**	< 2,500	< 330	< 500	4.1 J	< 5.0	< 13	< 5.0
Diethyl ether	µg/L	10	ID	< 13	< 20	< 40	< 13	< 1,000	< 1,000	< 130	< 200	< 10	< 2.0	< 5.0	< 2.0
Ethylbenzene	µg/L	74	18	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Methyl Acetate	µg/L	NA	NA	< 63	< 100	< 200	< 67	< 5,000	< 5,000	< 670	< 1,000	< 50	< 10	< 25	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 63	< 100	< 200	< 67	< 5,000	< 5,000	< 670	< 1,000	< 50	< 10	< 25	< 10
Methylcyclohexane	µg/L	NA	NA	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-44 16-21				MW-45 15-20				MW-46 16-21			
				4/25/2017	8/2/2017	11/7/2017	2/6/2018	4/24/2017	8/1/2017	11/13/2017	2/12/2018	4/24/2017	7/31/2017	11/13/2017	2/12/2018
Methyl-tert-butylether	µg/L	40	7,100	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Styrene (Monomer)	µg/L	100	80	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	7.9	< 1.0	< 2.5	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Toluene	µg/L	790	270	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Total Xylenes	µg/L	280	41	< 13	< 20	< 40	< 13	< 1,000	< 1,000	< 130	< 200	< 10	< 2.0	< 5.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	1.6 J	2.6	2.7	1.7
trans-1,3-Dichloropropene	µg/L	NA	NA	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Trichloroethene	µg/L	5.0	200	< 6.3	< 10	< 20	< 6.7	< 500	< 500	< 67	< 100	< 5.0	< 1.0	< 2.5	< 1.0
Vinyl chloride	µg/L	2.0	13	**230**	**380**	**520**	**210**	**7,600**	**5,400**	**1,500**	**1,200**	**150**	**13**	**57**	**38**
Gases															
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other															
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-47 16-21			MW-48 17-22				MW-49 12.5-17.5		
				4/24/2017	7/31/2017	11/10/2017	4/21/2017	8/1/2017	11/14/2017	2/12/2018	4/21/2017	7/28/2017	2/13/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	0.72 J	0.62 J	0.52 J	< 2.0	9.5	2.1	7.7	12	9.4	7.0
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 5.0	2.2 J	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,1,2-Trichloroethane	µg/L	5.0	330	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,1-Dichloroethane	µg/L	2,500	740	3.7 J	3.5 J	4.6 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,1-Dichloroethene	µg/L	7.0	130	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2,3-Trimethylbenzene	µg/L	130	ID	< 25	< 20	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 10,000	< 5,000	< 8,300
1,2,4-Trichlorobenzene	µg/L	70	99	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2,4-Trimethylbenzene	µg/L	63	17	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2-Dibromoethane	µg/L	0.05	5.7	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2-Dichlorobenzene	µg/L	600	13	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2-Dichloroethane	µg/L	5.0	360	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,2-Dichloropropane	µg/L	5.0	230	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,3,5-Trimethylbenzene	µg/L	72	45	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,3-Dichlorobenzene	µg/L	19	28	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
1,4-Dichlorobenzene	µg/L	75	17	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
-2Butanone (MEK)	µg/L	38,000	2,200	< 50	< 40	< 100	< 10	< 10	< 10	< 10	< 20,000	< 10,000	< 17,000
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 50	< 40	< 100	< 10	< 10	< 10	< 10	< 20,000	< 10,000	< 17,000
Acetone	µg/L	2,100	1,700	< 50	< 40	< 100	< 10	< 10	5.1 J	< 10	< 20,000	< 10,000	< 17,000
Benzene	µg/L	5.0	200	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Bromodichloromethane	µg/L	80	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Bromoform	µg/L	80	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Bromomethane	µg/L	29	35	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Carbon Disulfide	µg/L	2,300	ID	< 25	< 20	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 10,000	< 5,000	< 8,300
Carbon Tetrachloride	µg/L	5.0	45	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
CFC-11	µg/L	7,300	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
CFC-12	µg/L	4,800	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Chlorobenzene	µg/L	100	25	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Chlorodibromomethane	µg/L	80	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Chloroethane	µg/L	1,700	1,100	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Chloroform	µg/L	80	350	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Chloromethane	µg/L	1,100	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
cis-1,2-Dichloroethene	µg/L	70	620	69	69	**79**	< 1.0	< 1.0	< 1.0	< 1.0	**43,000**	**29,000**	**20,000**
cis-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Cyclohexane	µg/L	NA	ID	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Dichloromethane	µg/L	5.0	1,500	3.4 J	< 20	< 50	< 5.0	< 5.0	< 5.0	< 5.0	**1,100 J**	< 5,000	< 8,300
Diethyl ether	µg/L	10	ID	< 10	< 8.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4,000	< 2,000	< 3,300
Ethylbenzene	µg/L	74	18	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Isopropylbenzene	µg/L	2,300	28	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Methyl Acetate	µg/L	NA	NA	< 50	< 40	< 100	< 10	< 10	< 10	< 10	< 20,000	< 10,000	< 17,000
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 50	< 40	< 100	< 10	< 10	< 10	< 10	< 20,000	< 10,000	< 17,000
Methylcyclohexane	µg/L	NA	NA	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700

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Table 2
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Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-47 16-21			MW-48 17-22				MW-49 12.5-17.5		
				4/24/2017	7/31/2017	11/10/2017	4/21/2017	8/1/2017	11/14/2017	2/12/2018	4/21/2017	7/28/2017	2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Styrene (Monomer)	µg/L	100	80	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Tetrachloroethene	µg/L	5.0	60	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Toluene	µg/L	790	270	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Total Xylenes	µg/L	280	41	< 10	< 8.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4,000	< 2,000	< 3,300
trans-1,2-Dichloroethene	µg/L	100	1,500	7.1	8.6	9.3 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
trans-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Trichloroethene	µg/L	5.0	200	< 5.0	< 4.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2,000	< 1,000	< 1,700
Vinyl chloride	µg/L	2.0	13	**120**	**110**	**220**	0.85 J	**11**	**5.2**	**3.8**	**10,000**	**9,800**	**8,400**
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-50 16-21				MW-51 15-20				MW-52 15-20		
				4/21/2017	7/31/2017	11/13/2017	2/12/2018	4/25/2017	8/3/2017	11/9/2017	2/8/2018	7/27/2017	11/10/2017	2/13/2018
Semi-volatile Organic Compounds (SVOCs)														
1,4-Dioxane	µg/L	37	2,800	1.5 J	2.2	0.68 J	0.78 J	0.75 J	1.2 J	1.1 J	1.1 J	1.3 J	0.68 J	1.2 J
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	200	89	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 5.0	< 4.0	< 5.0	< 5.0	0.41 J	0.72 J	0.70 J	0.84 J	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 25	< 20	< 25	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 50	< 40	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 50	< 40	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 50	< 40	< 50	< 50	< 10	< 10	< 10	< 10	2.2 J	< 10	< 10
Benzene	µg/L	5.0	200	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 25	< 20	< 25	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	13	15	23	22	< 1.0	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 25	< 20	< 25	3.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 10	< 8.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 50	< 40	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 50	< 40	< 50	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-50 16-21				MW-51 15-20				MW-52 15-20		
				4/21/2017	7/31/2017	11/13/2017	2/12/2018	4/25/2017	8/3/2017	11/9/2017	2/8/2018	7/27/2017	11/10/2017	2/13/2018
Methyl-tert-butylether	µg/L	40	7,100	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 10	< 8.0	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 5.0	< 4.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**48**	**140**	**150**	**76**	0.57 J	0.97 J	0.47 J	< 1.0	**7.0**	**9.1**	**4.0**
Gases														
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other														
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-53 16-21 4/24/2017	MW-53 16-21 7/27/2017	MW-53 16-21 11/8/2017	MW-53 16-21 2/7/2018	MW-54 16-21 7/27/2017	MW-54 16-21 11/8/2017	MW-54 16-21 2/7/2018	MW-55 15-20 7/27/2017	MW-55 15-20 11/8/2017	MW-55 15-20 2/7/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	1.1 J	2.0	0.61 J	1.1 J	1.5 J	2.0	2.7	1.2 J	1.4 J	0.96 J
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-53 16-21 4/24/2017	MW-53 16-21 7/27/2017	MW-53 16-21 11/8/2017	MW-53 16-21 2/7/2018	MW-54 16-21 7/27/2017	MW-54 16-21 11/8/2017	MW-54 16-21 2/7/2018	MW-55 15-20 7/27/2017	MW-55 15-20 11/8/2017	MW-55 15-20 2/7/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	0.63 J	< 1.0	< 1.0	0.88 J	1.5	1.2	0.84 J	0.65 J	< 1.0
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:				MW-56				MW-57			MW-58		
Screen Interval (ft. bgs):				16-21				17-22			15-20		
Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	4/24/2017	7/28/2017	11/8/2017	2/14/2018	7/27/2017	11/7/2017	2/9/2018	7/28/2017	11/8/2017	2/7/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	3.8	2.7	2.2	1.6 J	4.6	4.9	4.9	10	8.0	9.6
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	1.8 J	< 10	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-56 16-21				MW-57 17-22			MW-58 15-20		
				4/24/2017	7/28/2017	11/8/2017	2/14/2018	7/27/2017	11/7/2017	2/9/2018	7/28/2017	11/8/2017	2/7/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.59 J	< 1.0	< 1.0	< 1.0
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-62 16.3-21.3				MW-63 7-12				
				4/21/2017	7/31/2017	11/13/2017	2/6/2018	4/21/2017	5/25/2017	7/31/2017	11/13/2017	2/7/2018
Semi-volatile Organic Compounds (SVOCs)												
1,4-Dioxane	µg/L	37	2,800	2.8	3.7	3.7	2.1	19	NA	0.36 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 50	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 100	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 100	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 100	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 50	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	1.6	< 1.0	0.30 J	0.30 J	< 1,000	< 1,000	< 100	< 10	1.7
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 50	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000	< 2,000	< 200	< 20	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	5.6 J	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 100	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 100	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-62 16.3-21.3				MW-63 7-12				
				4/21/2017	7/31/2017	11/13/2017	2/6/2018	4/21/2017	5/25/2017	7/31/2017	11/13/2017	2/7/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	**13,000**	**13,000**	**3,900**	**320**	0.23 J
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000	< 2,000	< 200	< 20	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 10	< 1.0
Vinyl chloride	µg/L	2.0	13	1.3	< 1.0	1.0	1.3	< 1,000	< 1,000	< 100	< 10	< 1.0
Gases												
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other												
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals												
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:				MW-64				MW-65				MW-66			
Screen Interval (ft. bgs):		Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	15-20				16-21				15-20			
Date:	Unit			4/24/2017	7/27/2017	11/7/2017	2/9/2018	4/25/2017	8/2/2017	11/8/2017	2/6/2018	4/25/2017	8/2/2017	11/13/2017	2/12/2018
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	< 2.0	0.32 J	< 2.0	< 2.0	3.8	3.1	3.8	3.4	0.76 J	0.99 J	0.49 J	1.3 J
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 20	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 20	< 40	< 20	< 20	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 20	< 40	< 20	< 20	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 20	< 40	< 20	< 20	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 20	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	0.37 J	0.31 J	0.30 J	3.3	4.1	3.9	4.1	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 20	< 10	1.5 J	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 8.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 20	< 40	< 20	< 20	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 20	< 40	< 20	< 20	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-64 15-20				MW-65 16-21				MW-66 15-20			
				4/24/2017	7/27/2017	11/7/2017	2/9/2018	4/25/2017	8/2/2017	11/8/2017	2/6/2018	4/25/2017	8/2/2017	11/13/2017	2/12/2018
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 8.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**2.4**	**4.8**	**7.0**	**6.7**	**61**	**49**	**48**	**36**	**5.6**	**5.4**	**3.0**	**2.7**
Gases															
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other															
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-67 9-14				MW-68 15-20				MW-69 15-20		
				4/21/2017	7/31/2017	11/14/2017	2/12/2018	4/24/2017	8/1/2017	11/10/2017	2/12/2018	4/25/2017	11/10/2017	2/14/2018
Semi-volatile Organic Compounds (SVOCs)														
1,4-Dioxane	µg/L	37	2,800	1.8 J	0.33 J	< 2.0	< 2.0	0.40 J	0.69 J	0.73 J	0.54 J	12	35	23
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	200	89	2.3 J	2.0 J	2.1 J	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 10	1.0 J	< 5.0	< 3.3	1.6	1.7	3.7	2.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	0.39 J	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 50	< 20	< 25	< 17	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,2,4-Trichlorobenzene	µg/L	70	99	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/L	600	13	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/L	5.0	360	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/L	5.0	230	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/L	19	28	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/L	75	17	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
-2Butanone (MEK)	µg/L	38,000	2,200	< 100	< 40	< 50	< 33	< 10	< 10	< 10	< 10	< 10	< 10	< 10
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 100	< 40	< 50	< 33	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 100	< 40	< 50	< 33	< 10	< 10	< 10	< 10	4.4 J	< 10	< 10
Benzene	µg/L	5.0	200	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Disulfide	µg/L	2,300	ID	< 50	< 20	< 25	< 17	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Tetrachloride	µg/L	5.0	45	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-11	µg/L	7,300	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
CFC-12	µg/L	4,800	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	1,700	1,100	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	47	36	15	9.6	20	18	13	13	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	µg/L	NA	NA	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	5.0	1,500	< 50	< 20	< 25	1.8 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 20	< 8.0	< 10	< 6.7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 100	< 40	< 50	< 33	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 100	< 40	< 50	< 33	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-67 9-14				MW-68 15-20				MW-69 15-20		
				4/21/2017	7/31/2017	11/14/2017	2/12/2018	4/24/2017	8/1/2017	11/10/2017	2/12/2018	4/25/2017	11/10/2017	2/14/2018
Methyl-tert-butylether	µg/L	40	7,100	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 20	< 8.0	< 10	< 6.7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 10	2.4 J	1.7 J	1.1 J	1.9	1.9	1.5	1.8	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 10	< 4.0	< 5.0	< 3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	**94**	**91**	**110**	**83**	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	**14**	< 4.0	< 5.0	< 3.3	**12**	**2.1**	**18**	**2.5**	**2.8**	< 1.0	< 1.0
Gases														
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other														
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-70 15-20				MW-71 15-20				PW-16-01 9.7-19.7		
				4/24/2017	8/1/2017	11/13/2017	2/12/2018	4/24/2017	8/1/2017	11/13/2017	2/12/2018	8/2/2017	11/7/2017	2/7/2018
Semi-volatile Organic Compounds (SVOCs)														
1,4-Dioxane	µg/L	37	2,800	0.76 J	0.68 J	1.1 J	0.91 J	4.3	1.4 J	0.72 J	0.57 J	< 2.0	14	0.76 J
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	200	89	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,1,2-Trichloroethane	µg/L	5.0	330	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,1-Dichloroethane	µg/L	2,500	740	2.4 J	3.3 J	3.4 J	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,1-Dichloroethene	µg/L	7.0	130	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2,3-Trimethylbenzene	µg/L	130	ID	< 33	< 50	< 50	< 67	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1,000	< 71
1,2,4-Trichlorobenzene	µg/L	70	99	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2,4-Trimethylbenzene	µg/L	63	17	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2-Dibromoethane	µg/L	0.05	5.7	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2-Dichlorobenzene	µg/L	600	13	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2-Dichloroethane	µg/L	5.0	360	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,2-Dichloropropane	µg/L	5.0	230	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,3,5-Trimethylbenzene	µg/L	72	45	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,3-Dichlorobenzene	µg/L	19	28	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
1,4-Dichlorobenzene	µg/L	75	17	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
-2Butanone (MEK)	µg/L	38,000	2,200	< 67	< 100	< 100	< 130	< 10	< 10	< 10	< 10	< 10	< 2,000	< 140
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 67	< 100	< 100	< 130	< 10	< 10	< 10	< 10	< 10	< 2,000	< 140
Acetone	µg/L	2,100	1,700	< 67	< 100	< 100	< 130	< 10	< 10	< 10	< 10	< 10	< 2,000	< 140
Benzene	µg/L	5.0	200	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Bromodichloromethane	µg/L	80	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Bromoform	µg/L	80	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Bromomethane	µg/L	29	35	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Carbon Disulfide	µg/L	2,300	ID	< 33	< 50	< 50	< 67	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1,000	< 71
Carbon Tetrachloride	µg/L	5.0	45	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
CFC-11	µg/L	7,300	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
CFC-12	µg/L	4,800	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Chlorobenzene	µg/L	100	25	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Chlorodibromomethane	µg/L	80	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Chloroethane	µg/L	1,700	1,100	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	0.55 J	< 200	< 14
Chloroform	µg/L	80	350	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Chloromethane	µg/L	1,100	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
cis-1,2-Dichloroethene	µg/L	70	620	**190**	**200**	**200**	**230**	< 1.0	< 1.0	0.39 J	0.37 J	2.2	**550**	**82**
cis-1,3-Dichloropropene	µg/L	NA	NA	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Cyclohexane	µg/L	NA	ID	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Dichloromethane	µg/L	5.0	1,500	**8.9 J**	< 50	< 50	< 67	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1,000	**11 J**
Diethyl ether	µg/L	10	ID	< 13	< 20	< 20	< 27	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 29
Ethylbenzene	µg/L	74	18	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Isopropylbenzene	µg/L	2,300	28	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Methyl Acetate	µg/L	NA	NA	< 67	< 100	< 100	< 130	< 10	< 10	< 10	< 10	< 10	< 2,000	< 140
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 67	< 100	< 100	< 130	< 10	< 10	< 10	< 10	< 10	< 2,000	< 140
Methylcyclohexane	µg/L	NA	NA	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-70 15-20				MW-71 15-20				PW-16-01 9.7-19.7		
				4/24/2017	8/1/2017	11/13/2017	2/12/2018	4/24/2017	8/1/2017	11/13/2017	2/12/2018	8/2/2017	11/7/2017	2/7/2018
Methyl-tert-butylether	µg/L	40	7,100	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Styrene (Monomer)	µg/L	100	80	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	0.35 J	< 200	< 14
Tetrachloroethene	µg/L	5.0	60	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Toluene	µg/L	790	270	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Total Xylenes	µg/L	280	41	< 13	< 20	< 20	< 27	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 29
trans-1,2-Dichloroethene	µg/L	100	1,500	3.8 J	4.2 J	5.1 J	4.4 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	5.4 J
trans-1,3-Dichloropropene	µg/L	NA	NA	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Trichloroethene	µg/L	5.0	200	< 6.7	< 10	< 10	< 13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 14
Vinyl chloride	µg/L	2.0	13	**120**	**100**	**140**	**160**	< 1.0	0.68 J	0.83 J	0.59 J	**24**	**5,300**	**160**
Gases														
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other														
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals														
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	PW-16-02 6-21			TW-16-01 12-17			TW-16-02 12-17			
				8/3/2017	11/8/2017	2/14/2018	8/2/2017	11/7/2017	2/7/2018	4/25/2017	8/2/2017	11/7/2017	2/14/2018
Semi-volatile Organic Compounds (SVOCs)													
1,4-Dioxane	µg/L	37	2,800	0.51 J	< 2.0	< 2.0	0.32 J	< 2.0	< 2.0	7.2	3.9	5.8	3.9
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	µg/L	200	89	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,1,2-Trichloroethane	µg/L	5.0	330	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,1-Dichloroethane	µg/L	2,500	740	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,1-Dichloroethene	µg/L	7.0	130	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2,3-Trimethylbenzene	µg/L	130	ID	< 25	< 5.0	< 5.0	< 50	< 63	< 170	< 3,100	< 2,500	< 2,000	< 5,000
1,2,4-Trichlorobenzene	µg/L	70	99	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2,4-Trimethylbenzene	µg/L	63	17	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2-Dibromoethane	µg/L	0.05	5.7	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2-Dichlorobenzene	µg/L	600	13	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2-Dichloroethane	µg/L	5.0	360	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,2-Dichloropropane	µg/L	5.0	230	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,3,5-Trimethylbenzene	µg/L	72	45	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,3-Dichlorobenzene	µg/L	19	28	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
1,4-Dichlorobenzene	µg/L	75	17	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
-2Butanone (MEK)	µg/L	38,000	2,200	< 50	< 10	< 10	< 100	< 130	< 330	< 6,300	< 5,000	< 4,000	< 10,000
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 50	< 10	< 10	< 100	< 130	< 330	< 6,300	< 5,000	< 4,000	< 10,000
Acetone	µg/L	2,100	1,700	< 50	< 10	< 10	< 100	< 130	< 330	< 6,300	< 5,000	< 4,000	< 10,000
Benzene	µg/L	5.0	200	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Bromodichloromethane	µg/L	80	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Bromoform	µg/L	80	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Bromomethane	µg/L	29	35	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Carbon Disulfide	µg/L	2,300	ID	< 25	< 5.0	< 5.0	< 50	< 63	< 170	< 3,100	< 2,500	< 2,000	< 5,000
Carbon Tetrachloride	µg/L	5.0	45	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
CFC-11	µg/L	7,300	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
CFC-12	µg/L	4,800	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Chlorobenzene	µg/L	100	25	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Chlorodibromomethane	µg/L	80	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Chloroethane	µg/L	1,700	1,100	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Chloroform	µg/L	80	350	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Chloromethane	µg/L	1,100	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
cis-1,2-Dichloroethene	µg/L	70	620	63	2.3	12	17	32	34	**5,200**	**3,100**	**6,000**	**3,500**
cis-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Cyclohexane	µg/L	NA	ID	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Dichloromethane	µg/L	5.0	1,500	< 25	< 5.0	< 5.0	< 50	**10 J**	**23 J**	**1,200 J**	< 2,500	< 2,000	< 5,000
Diethyl ether	µg/L	10	ID	< 10	< 2.0	< 2.0	< 20	< 25	< 67	< 1,300	< 1,000	< 800	< 2,000
Ethylbenzene	µg/L	74	18	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Isopropylbenzene	µg/L	2,300	28	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Methyl Acetate	µg/L	NA	NA	< 50	< 10	< 10	< 100	< 130	< 330	< 6,300	< 5,000	< 4,000	< 10,000
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 50	< 10	< 10	< 100	< 130	< 330	< 6,300	< 5,000	< 4,000	< 10,000
Methylcyclohexane	µg/L	NA	NA	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	PW-16-02 6-21			TW-16-01 12-17			TW-16-02 12-17			
				8/3/2017	11/8/2017	2/14/2018	8/2/2017	11/7/2017	2/7/2018	4/25/2017	8/2/2017	11/7/2017	2/14/2018
Methyl-tert-butylether	µg/L	40	7,100	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Styrene (Monomer)	µg/L	100	80	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Tetrachloroethene	µg/L	5.0	60	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Toluene	µg/L	790	270	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Total Xylenes	µg/L	280	41	< 10	< 2.0	< 2.0	< 20	< 25	< 67	< 1,300	< 1,000	< 800	< 2,000
trans-1,2-Dichloroethene	µg/L	100	1,500	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
trans-1,3-Dichloropropene	µg/L	NA	NA	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Trichloroethene	µg/L	5.0	200	< 5.0	< 1.0	< 1.0	< 10	< 13	< 33	< 630	< 500	< 400	< 1,000
Vinyl chloride	µg/L	2.0	13	**160**	2.0	**18**	**210**	**320**	**380**	**15,000**	**12,000**	**13,000**	**9,100**
Gases													
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other													
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals													
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	TW-16-03 9-19			TW-16-04 9-19			
				8/3/2017	11/8/2017	2/14/2018	4/25/2017	8/3/2017	11/8/2017	2/14/2018
Semi-volatile Organic Compounds (SVOCs)										
1,4-Dioxane	µg/L	37	2,800	0.54 J	< 2.0	< 2.0	1.7 J	0.81 J	0.89 J	< 2.0
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane	µg/L	200	89	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,1,2-Trichloroethane	µg/L	5.0	330	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,1-Dichloroethane	µg/L	2,500	740	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,1-Dichloroethene	µg/L	7.0	130	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2,3-Trimethylbenzene	µg/L	130	ID	< 20	< 17	< 50	< 20	< 20	< 33	< 33
1,2,4-Trichlorobenzene	µg/L	70	99	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2,4-Trimethylbenzene	µg/L	63	17	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2-Dibromo-3-chloropropane	µg/L	0.2	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2-Dibromoethane	µg/L	0.05	5.7	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2-Dichlorobenzene	µg/L	600	13	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2-Dichloroethane	µg/L	5.0	360	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,2-Dichloropropane	µg/L	5.0	230	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,3,5-Trimethylbenzene	µg/L	72	45	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,3-Dichlorobenzene	µg/L	19	28	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
1,4-Dichlorobenzene	µg/L	75	17	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
-2Butanone (MEK)	µg/L	38,000	2,200	< 40	< 33	< 100	< 40	< 40	< 67	< 67
-4Methyl-2-Pentanone	µg/L	5,200	ID	< 40	< 33	< 100	< 40	< 40	< 67	< 67
Acetone	µg/L	2,100	1,700	< 40	< 33	< 100	< 40	< 40	< 67	< 67
Benzene	µg/L	5.0	200	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Bromodichloromethane	µg/L	80	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Bromoform	µg/L	80	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Bromomethane	µg/L	29	35	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Carbon Disulfide	µg/L	2,300	ID	< 20	< 17	< 50	< 20	< 20	< 33	< 33
Carbon Tetrachloride	µg/L	5.0	45	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
CFC-11	µg/L	7,300	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
CFC-12	µg/L	4,800	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Chlorobenzene	µg/L	100	25	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Chlorodibromomethane	µg/L	80	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Chloroethane	µg/L	1,700	1,100	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Chloroform	µg/L	80	350	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Chloromethane	µg/L	1,100	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
cis-1,2-Dichloroethene	µg/L	70	620	37	36	40	20	18	23	25
cis-1,3-Dichloropropene	µg/L	NA	NA	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Cyclohexane	µg/L	NA	ID	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Dichloromethane	µg/L	5.0	1,500	< 20	< 17	< 50	4.4 J	< 20	< 33	< 33
Diethyl ether	µg/L	10	ID	< 8.0	< 6.7	< 20	< 8.0	< 8.0	< 13	< 13
Ethylbenzene	µg/L	74	18	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Isopropylbenzene	µg/L	2,300	28	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Methyl Acetate	µg/L	NA	NA	< 40	< 33	< 100	< 40	< 40	< 67	< 67
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 40	< 33	< 100	< 40	< 40	< 67	< 67
Methylcyclohexane	µg/L	NA	NA	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Nonresidential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	TW-16-03 9-19			TW-16-04 9-19			
				8/3/2017	11/8/2017	2/14/2018	4/25/2017	8/3/2017	11/8/2017	2/14/2018
Methyl-tert-butylether	µg/L	40	7,100	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Styrene (Monomer)	µg/L	100	80	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Tetrachloroethene	µg/L	5.0	60	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Toluene	µg/L	790	270	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Total Xylenes	µg/L	280	41	< 8.0	< 6.7	< 20	< 8.0	< 8.0	< 13	< 13
trans-1,2-Dichloroethene	µg/L	100	1,500	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
trans-1,3-Dichloropropene	µg/L	NA	NA	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Trichloroethene	µg/L	5.0	200	< 4.0	< 3.3	< 10	< 4.0	< 4.0	< 6.7	< 6.7
Vinyl chloride	µg/L	2.0	13	**100**	**77**	**95**	**150**	**120**	**100**	**77**
Gases										
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA
Other										
Carbon, Dissolved	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	µg/L	10	NS	NA	NA	NA	NA	NA	NA	NA
Sulfate	µg/L	250	NS	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA
Metals										
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:
Results are compared to the Michigan Department of Environmental Quality Part 201 Generic Cleanup Criteria, December 31, 2013.
< denotes not deteced above reporting limit.

Bold	Result denotes exceedance of Non-Residential Drinking Water Criteria.
Shaded	Result denotes exceedance of Groundwater Surface Water Interface Criteria.

Abbreviations:

ft. bgs	Feet below ground surface
ID	Insufficient data to develop criterion
J	Estimated result
NA	Not Analyzed/Not Available
NS	No Standard
mg/l	Milligrams per liter
µg/l	Micrograms per liter

This document is a DRAFT document that has not received approval from the Michigan Department of Environmental Quality (MDEQ). 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 the MDEQ.

Table 3
Off-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-72	668.81	15-20	05/22/17	NP	6.98	19.31	NM	661.83
			07/24/17	NP	8.60	19.60	NM	660.21
			11/06/17	NP	9.20	19.54	NM	659.61
			02/05/18	NP	8.58	19.86	NM	660.23
MW-73S	666.89	7-12	05/22/17	NP	4.72	11.31	NM	662.17
			07/24/17	NP	6.38	11.48	NM	660.51
			11/06/17	NP	6.94	11.42	NM	659.95
			02/05/18	NP	6.30	11.62	NM	660.59
MW-73D	667.08	13.5-18.5	05/22/17	NP	4.98	17.21	NM	662.10
			07/24/17	NP	6.64	17.47	NM	660.44
			11/06/17	NP	7.22	17.38	NM	659.86
			02/05/18	NP	6.54	17.52	NM	660.54
MW-74	668.02	14-19	05/22/17	NP	5.94	18.52	NM	662.08
			07/24/17	NP	7.47	18.81	NM	660.55
			11/06/17	NP	8.12	18.76	NM	659.90
			02/05/18	NP	7.49	18.85	NM	660.53
MW-75S	666.86	5-10	05/22/17	NP	5.16	9.23	NM	661.70
			07/24/17	NP	6.15	9.48	NM	660.71
			11/06/17	NP	6.83	9.43	NM	660.03
			02/05/18	NP	6.56	9.82	NM	660.30
MW-75D	666.89	12-17	05/22/17	NP	5.20	16.59	NM	661.69
			07/24/17	NP	6.19	16.78	NM	660.70
			11/06/17	NP	6.81	17.80	NM	660.08
			02/05/18	NP	6.59	16.83	NM	660.30
MW-76	670.10	15-20	05/22/17	NP	9.43	19.44	NM	660.67
			07/24/17	NP	10.05	19.73	NM	660.05
			11/06/17	NP	10.73	19.66	NM	659.37
			02/05/18	NP	10.89	19.71	NM	659.21
MW-77	660.56	9-14	05/22/17	NP	4.59	13.45	NM	655.97
			07/24/17	NP	5.90	13.75	NM	654.66
			11/06/17	NP	6.30	13.67	NM	654.26
			02/05/18	NP	5.43	13.75	NM	655.13
MW-78	657.23	7-12	05/22/17	NP	1.78	11.47	NM	655.45
			07/24/17	NP	3.55	11.79	NM	653.68
			11/06/17	NP	3.50	11.72	NM	653.73
			02/05/18	NP	3.09	11.80	NM	654.14

See Notes on Last Page.

Table 3
Off-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-79S	663.10	5-10	05/22/17	NP	4.15	9.49	NM	658.95
			07/24/17	NP	6.37	9.76	NM	656.73
			11/06/17	NP	6.56	9.71	NM	656.54
			02/05/18	NP	5.46	9.78	NM	657.64
MW-79D	663.35	10-15	05/22/17	NP	4.20	14.38	NM	659.15
			07/24/17	NP	6.45	14.66	NM	656.90
			11/06/17	NP	6.62	14.60	NM	656.73
			02/05/18	NP	5.51	14.69	NM	657.84
MW-80S	656.08	7-12	05/22/17	NP	2.41	11.29	NM	653.67
			07/24/17	NP	4.19	11.50	NM	651.89
			11/06/17	NP	3.41	11.53	NM	652.67
			02/05/18	NP	2.86	11.81	NM	653.22
MW-81	657.32	8-13	05/22/17	NP	6.05	12.40	NM	651.27
			07/24/17	NP	7.24	12.70	NM	650.08
			11/06/17	NP	8.27	12.63	NM	649.05
			02/05/18	NP	7.29	12.71	NM	650.03
MW-82S	658.63	9-14	05/22/17	NP	6.93	13.12	NM	651.70
			07/24/17	NP	8.24	11.50	NM	650.39
			11/06/17	NP	9.08	13.34	NM	649.55
			02/05/18	NP	8.32	13.44	NM	650.31
MW-82D	658.45	18-23	05/22/17	NP	7.34	22.45	NM	651.11
			07/24/17	NP	8.50	22.80	NM	649.95
			11/06/17	NP	9.41	22.72	NM	649.04
			02/05/18	NP	8.65	22.81	NM	649.80
MW-83	660.09	8-13	05/22/17	NP	6.46	12.11	NM	653.63
			07/24/17	NP	7.61	12.44	NM	652.48
			11/06/17	NP	8.08	12.46	NM	652.01
			02/05/18	NP	7.53	12.48	NM	652.56
MW-84	662.50	8-13	05/22/17	NP	3.26	12.28	NM	659.24
			07/24/17	NP	5.19	12.59	NM	657.31
			11/06/17	NP	5.54	12.52	NM	656.96
			02/05/18	NP	4.60	12.60	NM	657.90
MW-85	658.85	8-13	05/22/17	NP	4.71	12.43	NM	654.14
			07/24/17	NP	6.12	12.75	NM	652.73
			11/06/17	NP	6.34	12.70	NM	652.51
			02/05/18	NP	5.53	12.76	NM	653.32

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Table 3
Off-Site Groundwater Elevations
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Well ID	TOC Elevation (ft. amsl)	Screen Interval (ft. bgs)	Gauging Date	Depth to LNAPL (ft. btoc)	Depth to Water (ft. btoc)	Total Depth (ft.)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-86	666.11	12-17	05/22/17	NP	6.25	16.35	NM	659.86
			07/24/17	NP	8.07	16.66	NM	658.04
			11/06/17	NP	8.70	16.58	NM	657.41
			02/05/18	NP	7.87	16.72	NM	658.24
MW-87	668.89	14-19	05/22/17	NP	9.41	18.55	NM	659.48
			07/24/17	NP	10.65	18.85	NM	658.24
			11/06/17	NP	11.42	18.79	NM	657.47
			02/05/18	NP	11.06	18.86	NM	657.83

Notes:
Water level measurements collected from top of well casing.
MW-81 and MW-83 were re-surveyed on November 20, 2017 by Geodetic Designs Inc.

Abbreviations:

ft.	Feet
ft. amsl	Feet above mean sea level
ft. bgs	Feet below ground surface
ft. btoc	Feet below top of casing
LNAPL	Light non-aqueous phase liquid
NM	Not measured
NP	No product detected
TOC	Top of casing

This document is a DRAFT document that has not received approval from the Michigan Department of Environmental Quality (MDEQ). 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 the MDEQ.

Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-72 15-20				MW-73D 13.5-18.5			
				5/22/2017	7/26/2017	11/7/2017	2/6/2018	5/22/2017	7/26/2017	11/7/2017	2/6/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	1.1 J	0.53 J	0.97 J	0.78 J	3.2	3.1	2.8	1.5 J
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	0.45 J	0.50 J	0.43 J
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	**3.9**	**2.9**	**1.6**	**1.3**	**1.1**	0.85 J	**1.3**	0.79 J
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA

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Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-73S 7-12 5/22/2017	MW-73S 7-12 7/26/2017	MW-73S 7-12 11/7/2017	MW-73S 7-12 2/6/2018	MW-74 14-19 5/23/2017	MW-74 14-19 7/26/2017	MW-74 14-19 11/7/2017	MW-74 14-19 2/6/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	1.5 J	1.3 J	0.66 J
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	1.9	1.8	1.3	NA	< 1.0	< 1.0	0.42 J
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	0.40 J	0.48 J	0.48 J	0.33 J	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	**1.6**	**1.3**	**1.9**	**1.1**	< 1.0	**2.7**	**2.4**	**2.0**
Metals											
Iron, Dissolved	µg/L	300	NS	**3,900**	NA	**1,200**	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	**3,900**	NA	**1,200**	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	**1,200**	NA	**940**	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	**1,200**	NA	**890**	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	< 1.0	NA	< 0.10 J	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	80	NA	89	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	6.1	NA	4.8	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	5.2	NA	4.6	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	24	NA	NA	NA	NA	NA

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Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-75D 12-17				MW-75S 5-10			
				5/23/2017	7/26/2017	11/8/2017	2/6/2018	5/23/2017	7/26/2017	11/8/2017	2/6/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	1.9 J	1.8 J	1.8 J	0.91 J	< 2.0	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	**6.4**	**3.7**	**4.9 J**	**1.9**	0.45 J	< 1.0	< 1.0	< 1.0
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	< 100	NA	**330**	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	210	NA	**350**	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	**63**	NA	42	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	**70**	NA	42	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	**21**	NA	8.0 J	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	89	NA	110	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	4.6	NA	13	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	3.6	NA	13	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	0.95 J	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	< 1.0	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	3,200	NA

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Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:		Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-76				MW-77			
Screen Interval (ft. bgs):				15-20				9-14			
Date:	Unit			5/23/2017	7/26/2017	11/8/2017	2/6/2018	5/25/2017	7/26/2017	11/10/2017	2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	< 2.0	< 2.0	< 2.0	< 2.0	NA	0.32 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	3.9	4.0	2.2	NA	0.67 J	0.73 J	0.66 J
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	0.54 J	0.49 J	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	0.87 J	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	0.51 J	0.45 J	< 1.0	< 1.0
Metals											
Iron, Dissolved	µg/L	300	NS	**340**	NA	270	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	**480**	NA	280	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	**760**	NA	**760**	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	**800**	NA	**770**	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	1.2 J	NA	3.3 J	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	120	NA	160	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	1.1	NA	4.1	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	0.90 J	NA	1.3	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	1.5	NA	NA	NA	NA	NA

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Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-78 7-12 5/25/2017	MW-78 7-12 7/25/2017	MW-78 7-12 11/9/2017	MW-78 7-12 2/8/2018	MW-79D 10-15 5/24/2017	MW-79D 10-15 7/25/2017	MW-79D 10-15 11/9/2017	MW-79D 10-15 2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	< 2.0	< 2.0	NA	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	**3.2**	**4.1**	**3.6**	**1.9**
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA

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Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-79S 5-10 5/24/2017	MW-79S 5-10 7/25/2017	MW-79S 5-10 11/9/2017	MW-79S 5-10 2/8/2018	MW-80S 7-12 5/24/2017	MW-80S 7-12 7/25/2017	MW-80S 7-12 11/8/2017	MW-80S 7-12 2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	< 2.0	< 2.0	NA	0.52 J	0.55 J	0.33 J
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	**4.6**	**7.1**	**7.6**	**2.9**
Metals											
Iron, Dissolved	µg/L	300	NS	**990**	NA	**2,500**	NA	**600**	NA	**3,600**	NA
Iron, Total	µg/L	300	NS	**1,100**	NA	**2,900**	NA	**530**	NA	**3,600**	NA
Manganese, Dissolved	µg/L	50	NS	**110**	NA	**200**	NA	**200**	NA	**230**	NA
Manganese, Total	µg/L	50	NS	**120**	NA	**200**	NA	**190**	NA	**230**	NA
Anions											
Nitrate-N	mg/L	10	NS	0.063 J	NA	< 0.10	NA	< 0.10	NA	< 0.10	NA
Sulfate	mg/L	250	NS	41	NA	69	NA	97	NA	110	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	4.1	NA	4.9	NA	5.6	NA	5.7	NA
Total Organic Carbon	mg/L	NS	NS	3.1	NA	4.4	NA	4.5	NA	5.2	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	< 1.0	NA
Ethene	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	< 1.0	NA
Methane	µg/L	NS	NS	NA	NA	6.6	NA	NA	NA	55	NA

See Notes on Last Page.

Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-81 8-13 5/26/2017	MW-81 8-13 7/25/2017	MW-81 8-13 11/9/2017	MW-81 8-13 2/6/2018	MW-82D 18-23 5/24/2017	MW-82D 18-23 7/25/2017	MW-82D 18-23 11/8/2017	MW-82D 18-23 2/6/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	< 2.0	< 2.0	NA	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA

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Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-82S 9-14 5/24/2017	MW-82S 9-14 7/25/2017	MW-82S 9-14 11/8/2017	MW-82S 9-14 2/6/2018	MW-83 8-13 5/26/2017	MW-83 8-13 7/25/2017	MW-83 8-13 11/9/2017	MW-83 8-13 2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	< 2.0	< 2.0	NA	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals											
Iron, Dissolved	µg/L	300	NS	180	NA	**710**	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	**380**	NA	**720**	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	**510**	NA	**390**	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	**550**	NA	**380**	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	< 0.10	NA	< 0.10 J	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	**470**	NA	**270**	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	2.7	NA	4.8	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	2.1	NA	2.2	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	< 1.0	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	10	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:		Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-84				MW-85			
Screen Interval (ft. bgs):				8-13				8-13			
Date:	Unit			5/25/2017	7/25/2017	11/9/2017	2/8/2018	5/25/2017	7/25/2017	11/7/2017	2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	< 2.0	< 2.0	NA	0.29 J	< 2.0	0.41 J
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	**8.6**	**7.3**	**7.3**	**5.5**
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Screen Interval (ft. bgs): / Date:	Unit	Residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-86 12-17 5/25/2017	MW-86 12-17 7/26/2017	MW-86 12-17 11/10/2017	MW-86 12-17 2/8/2018	MW-87 14-19 5/23/2017	MW-87 14-19 7/26/2017	MW-87 14-19 11/10/2017	MW-87 14-19 2/8/2018
Semi-volatile Organic Compounds (SVOCs)											
1,4-Dioxane	µg/L	7.2*	2,800	NA	0.99 J	0.87 J	< 2.0	NA	< 2.0	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)											
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	< 1.0	< 1.0	NA	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals											
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA
Anions											
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)											
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Gases											
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

Table 4
Off-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:
All results are compared to the Michigan Department of Environmental Quality (MDEQ) Proposed Part 201 Generic Cleanup Criteria (September 2016).
Bolded Result exceeds residential Drinking Water criteria
< Result not detected above reporting limit.

Footnote:
* Residential Drinking Water Criteria for 1,4-dioxane is derived from the MDEQ Proposed Rule Changes (September 2016) and Emergency Rules (October 27, 2016).
** Groundwater results for Trichloroethene and Vinyl Chloride are compared to the published MDEQ Remediation and Redevelopment Division (RRD) Target Detection Limit (TDL) of 1.0 µg/l.

Abbreviations:
ft. bgs feet below ground surface
J Estimated Result
mg/l milligrams per liter
NA Not Analyzed
NS No Standard
µg/l micrograms per liter

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Table 5
Soil Vapor Monitoring Point Helium Tracer Test Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location ID	June 2017		September 2017		November 2017		February 2018	
	Helium Pre Sample (ppm)	Helium Post Sample (ppm)	Helium Pre Sample (ppm)	Helium Post Sample (ppm)	Helium Pre Sample (ppm)	Helium Post Sample (ppm)	Helium Pre Sample (ppm)	Helium Post Sample (ppm)
SVMP-1-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-1-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-2-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-2-8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-3-3.5	50	75	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-3-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-4-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-5-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-6-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-7-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-8-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-9-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-10-3	0.0	1,475	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-11-3.5	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-12-3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-13-2	250	4,750	0.0	0.0	0.0	0.0	NS	NS
SVMP-14-2	225	0.0	0.0	0.0	0.0	0.0	NS	NS
SVMP-15-2	2,450	3,800	0.0	0.0	0.0	0.0	NS	NS
SVMP-16-2	450	1,725	0.0	0.0	0.0	0.0	NS	NS
SVMP-17-2	4,675	2,925	0.0	0.0	0.0	NA	NS	NS
SVMP-18-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-19-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA
SVMP-20-3	0.0	850	0.0	0.0	NS	NS	NS	NS
SVMP-21-2	0.0	0.0	0.0	0.0	0.0	0.0	NS	NS
SVMP-22-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-23-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-24-4	0.0	0.0	0.0	0.0	800	0.0	0.0	0.0
SVMP-25-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-25-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-26-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-27-4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-28-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SVMP-29-3.5	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-29-7.5	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-30-4	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-31-5.5	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-32-3	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-32-6	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-33-4	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-34-4	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-35-4	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-36-4	0.0	0.0	NS	NS	NS	NS	NS	NS
SVMP-37-2.5	0.0	0.0	NS	NS	NS	NS	NS	NS

See Notes on Last Page.

Table 5
Soil Vapor Monitoring Point Helium Tracer Test Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:

Helium tracer test readings collected using a Helium Leak Detector MGD-2002.

Shroud concentrations ranged from 30-40% helium during all sampling events.

As discussed in the MDEQ VI Guidance, a tracer gas can be used to verify that soil-gas samples are from the installed point and not from leaks in the sampling train.

No unacceptable helium leak test results were noted during the June 2017 , September 2017, November 2017, or February 2018 sampling events.

Samples were deemed acceptable, as all exhibited concentrations of helium in purged soil gas less than 10% of the initial shroud concentration of helium, as presented in the MDEQ VI guidance.

SVMP-11 abandoned after the initial sampling event per the adjacent property owners request.

SVMP-29 through SVMP-37 are located on residential properties and were therefore only sampled during the initial sampling event.

SVMP-17 and SVMP-20 were not sampled during the November 2017 sampling event due to saturated screens.

SVMP-13 through SVMP-17, SVMP-20, and SVMP-21 were not sampled during the February 2018 sampling event due to saturated screens.

Abbreviations:

MDEQ	Michigan Department of Environmental Quality
NA	Not analyzed
NS	Not sampled
ppm	parts per million
SVMP	Soil Vapor Monitoring Point
VI	Vapor intrusion

Table 6
Soil Vapor Monitoring Point Purged Air Parameter Readings
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

ARCADIS Design & Consultancy for natural and built assets

Location ID	June 2017			September 2017			November 2017			February 2018		
	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)	CO_2 (%)	O_2 (%)	CH_4 (%)
SVMP-1-3.5	1.3	19.7	0.0	1.2	19.3	0.0	1.7	21.1	0.0	1.8	18.5	NA
SVMP-1-7	0.9	19.4	0.0	1.7	19.2	0.0	2.4	20.0	0.0	1.9	18.9	NA
SVMP-2-4.5	4.8	17.4	0.0	0.9	20.1	0.0	9.3	7.7	0.0	0.1	21.6	NA
SVMP-2-8.5	6.7	16.3	0.0	1.7	19.3	0.0	10.5	5.4	0.0	0.0	21.6	NA
SVMP-3-3.5	0.3	20.6	0.0	0.6	20.4	0.0	0.7	21.4	0.0	0.0	21.4	NA
SVMP-3-7	0.4	21.2	0.0	0.8	19.9	0.0	0.9	21.1	0.0	0.0	21.2	NA
SVMP-4-3.5	0.6	20.1	0.0	1.0	20.0	0.0	0.8	19.1	0.0	1.6	16.2	NA
SVMP-5-4.5	0.2	22.0	0.0	0.2	20.7	0.0	0.5	26.9	0.0	1.2	19.6	NA
SVMP-6-4.5	0.5	20.8	0.0	0.9	20.1	0.0	0.7	21.0	0.0	0.4	20.8	NA
SVMP-7-3.5	1.2	20.5	0.0	0.0	20.8	0.0	1.3	19.7	0.0	1.0	20.4	NA
SVMP-8-3.5	2.5	19.8	0.0	1.4	19.6	0.0	8.9	21.6	0.0	0.3	20.8	NA
SVMP-9-4	0.3	21.2	0.0	0.0	20.8	0.0	0.7	21.6	0.0	0.0	21.0	NA
SVMP-10-3	0.2	20.1	0.0	0.4	19.9	0.0	0.5	19.5	0.0	0.1	20.9	NA
SVMP-11-3.5	0.3	21.1	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-12-3.5	0.2	21.2	0.0	1.2	19.9	0.0	1.0	19.9	0.0	0.0	20.9	NA
SVMP-13-2	0.6	20.0	0.0	1.2	18.6	0.0	2.6	11.8	0.0	NS	NS	NS
SVMP-14-2	0.9	18.5	0.0	1.5	19.5	0.0	1.4	19.1	0.0	NS	NS	NS
SVMP-15-2	0.8	21.4	0.0	0.7	20.3	0.0	0.1	20.1	0.0	NS	NS	NS
SVMP-16-2	0.9	20.8	0.0	1.2	19.8	0.0	0.3	20.5	0.0	NS	NS	NS
SVMP-17-2	1.3	19.5	0.0	4.9	16.8	0.0	NS	NS	NS	NS	NS	NS
SVMP-18-3	2.6	18.6	0.0	5.2	16.8	0.0	4.3	17.6	0.0	2.7	16.6	NA
SVMP-19-3	6.4	14.8	0.0	6.4	16.3	0.0	7.0	15.0	0.0	NA	NA	NA
SVMP-20-3	6.3	15.7	0.0	6.0	16.1	0.0	NS	NS	NS	NS	NS	NS
SVMP-21-2	2.5	19.8	0.0	1.8	19.3	0.0	0.8	19.9	0.0	NS	NS	NS
SVMP-22-3	0.9	20.3	0.0	1.8	19.8	0.0	1.3	20.2	0.0	0.0	21.0	NA
SVMP-23-3	1.4	20.2	0.0	0.1	15.8	0.0	1.1	20.6	0.0	NA	NA	NA
SVMP-24-4	2.8	19.4	0.0	2.5	18.9	0.0	2.6	19.5	0.0	2.0	19.2	NA
SVMP-25-3	3.2	18.0	0.0	4.0	15.5	0.0	4.0	18.0	0.0	0.2	20.9	NA
SVMP-25-6	2.4	18.4	0.0	5.4	14.0	0.0	4.6	17.4	0.0	0.0	21.0	NA
SVMP-26-4	3.8	12.0	0.0	11.4	8.6	0.0	12.0	5.6	0.0	0.6	20.7	NA
SVMP-27-4.5	3.8	20.3	0.0	1.1	19.2	0.0	1.5	20.4	0.0	0.1	21.3	NA
SVMP-28-3	1.8	21.0	0.0	3.4	16.7	0.0	2.3	16.2	0.0	0.1	21.1	NA
SVMP-29-3.5	0.6	20.5	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-29-7.5	0.9	20.8	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-30-4	0.4	20.9	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-31-5.5	1.2	19.7	0.0	NS	NS	NS	NS		NS	NS	NS	NS
SVMP-32-3	1.6	19.5	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-32-6	1.3	19.7	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-33-4	5.7	16.9	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-34-4	0.9	20.3	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-35-4	1.1	21.4	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-36-4	1.4	19.5	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVMP-37-2.5	7.2	15.8	0.0	NS	NS	NS	NS	NS	NS	NS	NS	NS

See Notes on Last Page.

Table 6
Soil Vapor Monitoring Point Purged Air Parameter Readings
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:

Air parameter readings collected directly after each round of sample collection using a GEM 2000.
SVMP-11 abandoned after the initial sampling event per the adjacent property owners request.
SVMP-29 through SVMP-37 are located on residential properties and therefore only sampled during the initial sampling event.
SVMP-17 and SVMP-20 were not sampled during the November 2017 sampling event due to saturated screens.
SVMP-13 through SVMP-17, SVMP-20, and SVMP-21 were not sampled during the February 2018 sampling event due to saturated screens.

Abbreviations:

%	Percent
CH_4	Methane
CO_2	Carbon dioxide
NA	Not analyzed
NS	Not sampled
O_2	Oxygen
SVMP	Soil Vapor Monitoring Point

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Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-01								SVMP-02							
Sample Depth (ft. bgs):		3.5				7				4.5				8.5			
Sample Date:		6/8/2017	9/20/2017	11/17/2017	2/19/2018	6/8/2017	9/20/2017	11/17/2017	2/19/2018	6/9/2017	9/20/2017	11/17/2017	2/19/2018	6/9/2017	9/20/2017	11/17/2017	2/19/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 5.0	< 4.2	< 4.6	NA	< 4.8	< 4.8	< 4.5	NA	< 5.2	< 4.5	< 8.3	NA	< 5.2	< 4.6	< 8.3
1,4-Dioxane	170	NA	< 18	< 15	< 16	NA	< 17	< 17	< 16	NA	< 19	< 16	< 30	NA	< 19	< 17	< 30
cis-1,2-Dichloroethene	280	NA	< 5.0	< 4.2	< 4.6	NA	< 4.8	< 4.8	< 4.5	NA	< 5.2	< 4.5	< 8.3	NA	< 5.2	< 4.6	< 8.3
Tetrachloroethene	1,400	NA	< 8.5	< 7.1	< 7.8	NA	< 8.2	< 8.2	< 7.6	NA	< 9.0	< 7.8	< 14	NA	< 9.0	< 7.9	< 14
trans-1,2-Dichloroethene	9,000	NA	< 5.0	< 4.2	< 4.6	NA	< 4.8	< 4.8	< 4.5	NA	< 5.2	< 4.5	< 8.3	NA	< 5.2	< 4.6	< 8.3
Trichloroethene	67	< 6.2	< 6.8	< 5.6	< 6.2	< 6.2	< 6.5	< 6.5	< 6.0	< 6.0	< 7.1	< 6.2	< 11	< 6.1	< 7.1	< 6.3	< 11
Vinyl chloride	54	< 3.0	< 3.2	< 2.7	< 2.9	< 3.0	< 3.1	< 3.1	< 2.9	< 2.8	< 3.4	< 2.9	< 5.3	< 2.9	< 3.4	< 3.0	< 5.3

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-03								SVMP-04				SVMP-05			
Sample Depth (ft. bgs):		3.5				7				3.5				4.5			
Sample Date:		6/12/2017	9/21/2017	11/17/2017	2/19/2018	6/12/2017	9/21/2017	11/17/2017	2/19/2018	6/12/2017	9/20/2017	11/20/2017	2/21/2018	6/12/2017	9/20/2017	11/20/2017	2/21/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 4.9	< 4.0	< 4.3	NA	< 4.7	< 4.3	< 4.6	NA	< 4.9	< 4.9	< 4.7	NA	< 4.8	< 4.6	< 4.2
1,4-Dioxane	170	NA	< 18	< 15	< 16	NA	< 17	< 16	< 17	NA	< 18	< 18	< 17	NA	< 17	< 16	< 15
cis-1,2-Dichloroethene	280	NA	< 4.9	< 4.0	< 4.3	NA	< 4.7	< 4.3	< 4.6	NA	< 4.9	< 4.9	< 4.7	NA	< 4.8	< 4.6	< 4.2
Tetrachloroethene	1,400	NA	< 8.3	< 6.9	< 7.3	NA	< 8.1	< 7.4	< 7.9	NA	**8.3 J**	< 8.4	< 8.1	NA	< 8.2	< 7.8	< 7.2
trans-1,2-Dichloroethene	9,000	NA	< 4.9	< 4.0	< 4.3	NA	< 4.7	< 4.3	< 4.6	NA	< 4.9	< 4.9	< 4.7	NA	< 4.8	< 4.6	< 4.2
Trichloroethene	67	< 6.3	< 6.6	< 5.5	< 5.8	< 6.8	< 6.4	< 5.8	< 6.3	< 6.0	< 6.6	< 6.7	< 6.4	< 6.7	< 6.5	< 6.2	< 5.7
Vinyl chloride	54	< 3.0	< 3.1	< 2.6	< 2.8	< 3.2	< 3.0	< 2.8	< 3.0	< 2.9	< 3.2	< 3.2	< 3.0	< 3.2	< 3.1	< 2.9	< 2.7

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-06				SVMP-07				SVMP-08				SVMP-09			
Sample Depth (ft. bgs):		4.5				3.5				3.5				4			
Sample Date:		6/13/2017	9/20/2017	11/20/2017	2/21/2018	6/13/2017	9/20/2017	11/20/2017	2/19/2018	6/15/2017	9/20/2017	11/20/2017	2/20/2018	6/14/2017	9/20/2017	11/20/2017	2/20/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 4.6	< 4.5	< 4.6	NA	< 4.8	< 4.7	< 4.5	NA	< 4.7	< 4.6	< 4.6	NA	< 4.9	< 4.5	< 4.8
1,4-Dioxane	170	NA	< 17	< 16	< 17	NA	< 17	< 17	< 16	NA	< 17	< 17	< 17	NA	< 18	< 16	< 17
cis-1,2-Dichloroethene	280	NA	**8.0**	< 4.5	< 4.6	NA	< 4.8	< 4.7	< 4.5	NA	< 4.7	< 4.6	< 4.6	NA	< 4.9	< 4.5	< 4.8
Tetrachloroethene	1,400	NA	**24**	< 7.7	< 7.8	NA	< 8.2	< 8.1	< 7.7	NA	< 8.1	< 7.9	< 7.9	NA	< 8.4	< 7.7	< 8.2
trans-1,2-Dichloroethene	9,000	NA	< 4.6	< 4.5	< 4.6	NA	< 4.8	< 4.7	< 4.5	NA	< 4.7	< 4.6	< 4.6	NA	< 4.9	< 4.5	< 4.8
Trichloroethene	67	< 6.0	< 6.3	< 6.1	< 6.2	< 6.3	< 6.5	< 6.4	< 6.1	< 6.5	< 6.4	< 6.2	< 6.3	**6.9**	< 6.6	< 6.1	< 6.5
Vinyl chloride	54	< 2.9	< 3.0	< 2.9	< 3.0	< 3.0	< 3.1	< 3.0	< 2.9	< 3.1	< 3.0	< 3.0	< 3.0	< 3.0	< 3.2	< 2.9	< 3.1

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-10				SVMP-11	SVMP-12				SVMP-13				SVMP-14			
Sample Depth (ft. bgs):		3				3.5	3.5				2				2			
Sample Date:		6/13/2017	9/20/2017	11/21/2017	2/20/2018	6/13/2017	6/13/2017	9/19/2017	11/21/2017	2/20/2018	6/16/2017	9/19/2017	11/21/2017	2/19/2018	6/16/2017	9/19/2017	11/21/2017	2/19/2018
VOCs (Method TO-15) µg/m^3																		
1,1-Dichloroethene	7,000	NA	< 4.8	< 4.4	< 4.7	NA	NA	< 4.8	< 4.7	< 4.7	NA	< 4.6	< 4.6	NA	NA	< 4.5	< 4.1	NA
1,4-Dioxane	170	NA	< 17	< 16	< 17	NA	NA	< 17	< 17	< 17	NA	< 17	< 16	NA	NA	< 16	< 15	NA
cis-1,2-Dichloroethene	280	NA	< 4.8	< 4.4	< 4.7	NA	NA	< 4.8	< 4.7	< 4.7	NA	< 4.6	< 4.6	NA	NA	< 4.5	< 4.1	NA
Tetrachloroethene	1,400	NA	< 8.2	< 7.5	< 8.1	NA	NA	< 8.2	< 8.0	< 8.1	NA	< 7.9	< 7.8	NA	NA	< 7.8	< 7.0	NA
trans-1,2-Dichloroethene	9,000	NA	< 4.8	< 4.4	< 4.7	NA	NA	< 4.8	< 4.7	< 4.7	NA	< 4.6	< 4.6	NA	NA	< 4.5	< 4.1	NA
Trichloroethene	67	< 6.7	< 6.5	< 5.9	< 6.4	< 6.3	< 6.4	< 6.5	< 6.3	< 6.4	< 6.6	< 6.3	< 6.2	NA	< 6.4	< 6.2	< 5.6	NA
Vinyl chloride	54	< 3.2	< 3.1	< 2.8	< 3.0	< 3.0	< 3.0	< 3.1	< 3.0	< 3.0	< 3.2	< 3.0	< 2.9	NA	< 3.0	< 2.9	< 2.6	NA

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-15				SVMP-16				SVMP-17				SVMP-18			
Sample Depth (ft. bgs):		2				2				2				3			
Sample Date:		6/16/2017	9/19/2017	11/20/2017	2/19/2018	6/16/2017	9/19/2017	11/20/2017	2/19/2018	6/16/2017	9/19/2017	11/20/2017	2/19/2018	6/16/2017	9/18/2017	11/17/2017	2/20/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 4.7	< 4.4	NA	NA	< 4.5	< 4.3	NA	NA	< 4.8	NA	NA	NA	< 4.6	< 4.3	< 4.5
1,4-Dioxane	170	NA	< 17	< 16	NA	NA	< 16	< 16	NA	NA	< 17	NA	NA	NA	< 17	< 16	< 16
cis-1,2-Dichloroethene	280	NA	< 4.7	< 4.4	NA	NA	< 4.5	< 4.3	NA	NA	< 4.8	NA	NA	NA	< 4.6	< 4.3	< 4.5
Tetrachloroethene	1,400	NA	< 8.1	< 7.6	NA	NA	< 7.8	< 7.4	NA	NA	< 8.2	NA	NA	NA	< 7.9	< 7.3	< 7.8
trans-1,2-Dichloroethene	9,000	NA	< 4.7	< 4.4	NA	NA	< 4.5	< 4.3	NA	NA	< 4.8	NA	NA	NA	< 4.6	< 4.3	< 4.5
Trichloroethene	67	< 6.3	< 6.4	< 6.0	NA	< 6.4	< 6.2	< 5.9	NA	**18**	**22**	NA	NA	< 6.6	< 6.3	< 5.8	< 6.2
Vinyl chloride	54	< 3.0	< 3.0	< 2.9	NA	< 3.0	< 2.9	< 2.8	NA	< 3.0	< 3.1	NA	NA	< 3.2	< 3.0	< 2.8	< 2.9

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-19				SVMP-20				SVMP-21				SVMP-22			
Sample Depth (ft. bgs):		3				3				2				3			
Sample Date:		6/16/2017	9/18/2017	11/17/2017	2/20/2018	6/19/2017	9/19/2017	11/20/2017	2/19/2018	6/19/2017	9/19/2017	11/20/2017	2/19/2018	6/19/2017	9/18/2017	11/17/2017	2/20/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 5.1	< 4.3	< 4.1	NA	< 4.8	NA	NA	NA	< 4.6	< 4.6	NA	NA	< 4.8	< 4.9	< 4.7
1,4-Dioxane	170	NA	< 18	< 16	< 15	NA	< 17	NA	NA	NA	< 17	< 17	NA	NA	< 17	< 18	< 17
cis-1,2-Dichloroethene	280	NA	< 5.1	< 4.3	< 4.1	NA	< 4.8	NA	NA	NA	< 4.6	< 4.6	NA	NA	< 4.8	< 4.9	< 4.7
Tetrachloroethene	1,400	NA	< 8.8	< 7.4	< 7.1	NA	< 8.2	NA	NA	NA	< 7.9	< 7.9	NA	NA	< 8.2	< 8.4	< 8.1
trans-1,2-Dichloroethene	9,000	NA	< 5.1	< 4.3	< 4.1	NA	< 4.8	NA	NA	NA	< 4.6	< 4.6	NA	NA	< 4.8	< 4.9	< 4.7
Trichloroethene	67	< 6.4	< 6.9	< 5.9	< 5.6	< 5.8	< 6.5	NA	NA	< 6.2	< 6.3	< 6.2	NA	< 6.4	< 6.5	< 6.7	< 6.4
Vinyl chloride	54	< 3.0	< 3.3	< 2.8	< 2.7	< 2.7	< 3.1	NA	NA	< 3.0	< 3.0	< 3.0	NA	< 3.1	< 3.1	< 3.2	< 3.0

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-23				SVMP-24				SVMP-25							
Sample Depth (ft. bgs):		3				4				3				6			
Sample Date:		6/19/2017	9/18/2017	11/17/2017	2/20/2018	6/19/2017	9/18/2017	11/17/2017	2/21/2018	6/19/2017	9/21/2017	11/21/2017	2/21/2018	6/19/2017	9/21/2017	11/21/2017	2/21/2018
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 4.6	< 4.3	< 4.2	NA	< 4.6	< 4.4	< 4.7	NA	< 4.7	< 4.5	< 4.4	NA	< 4.4	< 4.7	< 4.4
1,4-Dioxane	170	NA	< 17	< 16	< 15	NA	< 17	< 16	< 17	NA	< 17	< 16	< 16	NA	< 16	< 17	< 16
cis-1,2-Dichloroethene	280	NA	< 4.6	< 4.3	< 4.2	NA	< 4.6	< 4.4	< 4.7	NA	< 4.7	< 4.5	< 4.4	NA	< 4.4	< 4.7	< 4.4
Tetrachloroethene	1,400	NA	< 7.9	< 7.4	< 7.2	NA	< 7.9	< 7.5	< 8.1	NA	< 8.1	< 7.7	< 7.6	NA	**12**	< 8.1	< 7.6
trans-1,2-Dichloroethene	9,000	NA	< 4.6	< 4.3	< 4.2	NA	< 4.6	< 4.4	< 4.7	NA	< 4.7	< 4.5	< 4.4	NA	< 4.4	< 4.7	< 4.4
Trichloroethene	67	< 6.4	< 6.3	< 5.8	< 5.7	< 6.2	< 6.3	< 5.9	< 6.4	< 6.2	< 6.4	< 6.1	< 6.0	< 6.4	< 6.0	< 6.4	< 6.0
Vinyl chloride	54	< 3.1	< 3.0	< 2.8	< 2.7	< 3.0	< 3.0	< 2.8	< 3.0	< 3.0	< 3.0	< 2.9	< 2.9	< 3.0	< 2.9	< 3.0	< 2.9

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Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-26				SVMP-27				SVMP-28				SVMP-29		SVMP-30	SVMP-31
Sample Depth (ft. bgs):		4				4.5				3				3.5	7.5	4	5.5
Sample Date:		6/19/2017	9/21/2017	11/21/2017	2/21/2018	6/19/2017	9/21/2017	11/21/2017	2/21/2018	6/19/2017	9/21/2017	11/21/2017	2/21/2018	6/14/2017	6/14/2017	6/14/2017	6/14/2017
VOCs (Method TO-15) µg/m^3																	
1,1-Dichloroethene	7,000	NA	< 4.9	< 4.4	< 4.4	NA	< 4.4	< 4.4	< 4.4	NA	< 4.8	< 4.6	< 4.3	NA	NA	NA	NA
1,4-Dioxane	170	NA	< 18	< 16	< 16	NA	< 16	< 16	< 16	NA	< 17	< 17	< 16	NA	NA	NA	NA
cis-1,2-Dichloroethene	280	NA	< 4.9	< 4.4	< 4.4	NA	**11**	< 4.4	< 4.4	NA	< 4.8	< 4.6	< 4.3	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	< 8.4	< 7.6	< 7.5	NA	< 7.6	< 7.5	< 7.6	NA	**25**	< 7.9	< 7.3	NA	NA	NA	NA
trans-1,2-Dichloroethene	9,000	NA	< 4.9	< 4.4	< 4.4	NA	< 4.4	< 4.4	< 4.4	NA	< 4.8	< 4.6	< 4.3	NA	NA	NA	NA
Trichloroethene	67	< 6.2	< 6.6	< 6.0	< 5.9	< 6.2	**7.2**	< 5.9	< 6.0	< 6.1	< 6.5	< 6.3	< 5.8	< 6.3	< 6.0	**31**	< 6.1
Vinyl chloride	54	< 3.0	< 3.2	< 2.9	< 2.8	< 3.0	< 2.9	< 2.8	< 2.9	< 2.9	< 3.1	< 3.0	< 2.8	< 3.0	< 2.8	< 2.9	< 2.9

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Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location:	Residential RIASL	SVMP-32		SVMP-33	SVMP-34	SVMP-35	SVMP-36	SVMP-37
Sample Depth (ft. bgs):		3	6	4	4	4	4	2.5
Sample Date:		6/15/2017	6/15/2017	6/15/2017	6/15/2017	6/15/2017	6/16/2017	6/16/2017
VOCs (Method TO-15) µg/m^3								
1,1-Dichloroethene	7,000	NA	NA	NA	NA	NA	NA	NA
1,4-Dioxane	170	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	280	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	9,000	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	67	< 6.4	< 6.5	< 6.5	< 6.3	< 6.9	< 6.2	< 6.2
Vinyl chloride	54	< 3.0	< 3.1	< 3.1	< 3.0	< 3.3	< 2.9	< 3.0

See Notes on Last Page.

Table 7
Off-Site Soil Gas Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Notes:

The residential RIASLs apply to a residential structure with a basement.

SVMP-11 abandoned after the initial sampling event per the adjacent property owners request.

SVMP-29 through SVMP-37 are located on residential properties and therefore only sampled during the initial sampling event.

SVMP-17 and SVMP-20 were not sampled during the November 2017 sampling event due to saturated screens.

SVMP-13 through SVMP-17, SVMP-20, and SVMP-21 were not sampled during the February 2018 sampling event due to saturated screens.

Bold Concentration was detected above reporting limit.

Abbreviations:

<	denotes not detected above reporting limit
µg/m^3	Micrograms per cubic meter
ft. bgs	Feet below ground surface
J	Reported value is estimated
NA	Not analyzed
RIASL	Recommended Interim Action Screening Levels
SVMP	Soil vapor monitoring point
VOC	Volatile organic compounds

This document is a DRAFT document that has not received approval from the Michigan Department of Environmental Quality (MDEQ). 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 the MDEQ.

Table 8
Hydraulic Control System Monthly Discharge Volumes
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Date	Approximate Volume of Treated Water Discharged ¥ (Gallons)	Date	Approximate Volume of Treated Water Discharged ¥ (Gallons)	Date	Approximate Volume of Treated Water Discharged ¥ (Gallons)
1/1/2018[O]	0	2/1/2018[Ω]	42,835	3/1/2018	46,926
1/2/2018S[Ω]	4,689	2/2/2018	41,901	3/2/2018[Ω]	47,720
1/3/2018[S]	33,467	2/3/2018	40,846	3/3/2018	48,748
1/4/2018	33,467	2/4/2018	39,059	3/4/2018	48,843
1/5/2018[SΩ]	36,454	2/5/2018[Ω]	36,408	3/5/2018[Ω]	48,363
1/6/2018	44,013	2/6/2018	31,530	3/6/2018	46,377
1/7/2018	43,779	2/7/2018	32,837	3/7/2018	48,557
1/8/2018[Ω]	41,534	2/8/2018	38,455	3/8/2018	55,110
1/9/2018	41,729	2/9/2018[Ω]	39,546	3/9/2018[ΩM]	21,274
1/10/2018	39,933	2/10/2018	39,464	3/10/2018[M]	26,790
1/11/2018	37,407	2/11/2018	38,554	3/11/2018	48,841
1/12/2018[*Ω]	35,505	2/12/2018	38,166	3/12/2018[Ω]	45,594
1/13/2018	39,063	2/13/2018[*Ω]	44,027	3/13/2018	47,290
1/14/2018	38,746	2/14/2018[C]	44,812	3/14/2018	45,797
1/15/2018[Ω]	37,544	2/15/2018[P]	47,998	3/15/2018[Ω*]	42,250
1/16/2018	37,472	2/16/2018[ΩP]	57,627	3/16/2018	41,339
1/17/2018	36,678	2/17/2018	52,454	3/17/2018	39,845
1/18/2018	34,591	2/18/2018	50,009	3/18/2018	39,354
1/19/2018[DΩ]	23,698	2/19/2018[Ω]	51,422	3/19/2018[Ω]	37,131
1/20/2018	26,984	2/20/2018	52,544	3/20/2018	35,400
1/21/2018	16,985	2/21/2018	57,350	3/21/2018	37,434
1/22/2018[Ω]	28,392	2/22/2018[Ω]	53,401	3/22/2018	37,439
1/23/2018	40,939	2/23/2018	46,174	3/23/2018[Ω]	36,290
1/24/2018	40,247	2/24/2018	38,733	3/24/2018	37,147
1/25/2018	38,881	2/25/2018	37,444	3/25/2018	36,567
1/26/2018[Ω]	34,411	2/26/2018[Ω]	42,055	3/26/2018[Ω]	28,811
1/27/2018	32,203	2/27/2018[ΩM]	34,414	3/27/2018	38,458
1/28/2018	22,390	2/28/2018	47,121	3/28/2018	39,814
1/29/2018[ΩO]	25,844	--	--	3/29/2018[Ω]	28,824
1/30/2018[Ω]	23,692	--	--	3/30/2018	26,331
1/31/2018	44,188	--	--	3/31/2018	38,840
Total volume discharged during January 2018	**1,014,925**	**Total volume discharged during February 2018**	**1,217,186**	**Total volume discharged during March 2018**	**1,247,504**

Notes:
Treated groundwater discharged volume readings are recorded daily.

Footnotes:

* Monthly treated groundwater discharge compliance sample collected as required by the Wastewater Discharge Permit Addendum #1 (Permit No.: 006-27510-IU).

¥ Volume of treated groundwater discharged from the Groundwater Remediation System is based on a totalizer flow meter installed on the effluent discharge pipe inside the system building.

Ω Groundwater remediation treatment system inspection visit.

S System shut down (Less than 1 day).

O System offline due to extreme cold temperatures. System was restarted on January 2, 2018 and is operating as designed.

D System deactivated for replumbing exhaust to Catalytic Oxidizer (less than 1 day).

C System deactivated to collect carbon sample from each carbon vessel (less than 1 day).

M System deactivated to perform maintenance of the air stripper (less than 1 day).

P Pumps operating intermittlenly while field staff perform pump maintenance testing. (less than 1 day).

Table 9
Hydraulic Control System Air Stripper Effluent Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: / Date:	Air Stripper Effluent 1/26/2018	Air Stripper Effluent 2/28/2018	Air Stripper Effluent 3/23/2018
Method TO-15 (Full Scan)			
1,1,1-Trichloroethane	< 5.8	< 5.9	< 9.2
1,1,2,2-Tetrachloroethane	< 7.3	< 7.4	< 12
1,1,2-Trichloroethane	< 5.8	< 5.9	< 9.2
1,1-Dichloroethane	< 4.3	5.2	14
1,1-Dichloroethene	< 4.2	< 4.3	< 6.7
1,2,4-Trichlorobenzene	< 32	< 32	< 50
1,2,4-Trimethylbenzene	< 5.2	< 5.3	< 8.3
1,2-Dibromoethane (EDB)	< 8.2	< 8.3	< 13
1,2-Dichlorobenzene	< 6.4	< 6.5	< 10
1,2-Dichloroethane	< 4.3	< 4.4	< 6.9
1,2-Dichloropropane	< 4.9	< 5.0	< 7.8
1,3,5-Trimethylbenzene	< 5.2	< 5.3	< 8.3
1,3-Butadiene	< 2.4	< 2.4	< 3.7
1,3-Dichlorobenzene	< 6.4	< 6.5	< 10
1,4-Dichlorobenzene	< 6.4	< 6.5	< 10
1,4-Dioxane	< 15	< 16	< 24
2,2,4-Trimethylpentane	< 5.0	< 5.0	< 7.9
2-Butanone (Methyl Ethyl Ketone)	< 12	25	< 20
2-Hexanone	< 17	< 18	< 28
2-Propanol	< 10	64	< 17
3-Chloropropene	< 13	< 14	< 21
4-Ethyltoluene	< 5.2	< 5.3	< 8.3
4-Methyl-2-pentanone	< 4.4	< 4.4	< 6.9
Acetone	33	61	< 40
alpha-Chlorotoluene	< 5.5	< 5.6	< 8.8
Benzene	< 3.4	< 3.4	< 5.4
Bromodichloromethane	< 7.1	< 7.2	< 11
Bromoform	< 11	< 11	< 18
Bromomethane	< 41	< 42	< 66
Carbon Disulfide	< 13	< 13	< 21
Carbon Tetrachloride	< 6.7	< 6.8	< 11
Chlorobenzene	< 4.9	< 5.0	< 7.8
Chloroethane	< 11	< 11	< 18
Chloroform	< 5.2	< 5.3	< 8.3
Chloromethane	< 22	< 22	< 35
cis-1,2-Dichloroethene	< 4.2	170	330
cis-1,3-Dichloropropene	< 4.8	< 4.9	< 7.7
Cumene	< 5.2	< 5.3	< 8.3
Cyclohexane	< 3.7	27	< 5.8
Dibromochloromethane	< 9.1	< 9.2	< 14
Ethanol	< 8.0	16	< 13
Ethyl Benzene	< 4.6	< 4.7	< 7.4
Freon 11	< 6.0	< 6.1	< 9.5
Freon 113	< 8.2	< 8.3	< 13
Freon 114	< 7.4	< 7.6	< 12
Freon 12	< 5.3	< 5.3	< 8.4
Heptane	< 4.4	< 4.4	< 6.9
Hexachlorobutadiene	< 45	< 46	< 72
Hexane	< 3.8	< 3.8	< 6.0
m,p-Xylene	< 4.6	< 4.7	< 7.4
Methyl tert-butyl ether	< 15	< 16	< 24
Methylene Chloride	< 37	< 38	< 59
o-Xylene	< 4.6	< 4.7	< 7.4
Propylbenzene	< 5.2	< 5.3	< 8.3
Styrene	< 4.5	< 4.6	< 7.2
Tetrachloroethene	< 7.2	< 7.3	< 11
Tetrahydrofuran	19	68	10
Toluene	6.7	4.4	< 6.4
trans-1,2-Dichloroethene	< 4.2	4.7	12
trans-1,3-Dichloropropene	< 4.8	< 4.9	< 7.7
Trichloroethene	< 5.7	30	100
Vinyl Chloride	< 2.7	940	1,300

Notes:

United States Environmental Protection Agency Method, Toxic Organics - 15 (TO-15)

Compounds exempt under Rule 290

All units are measured in micrograms per cubic meter ($\mu g/m^3$).

< denotes not detected above reporting limit.

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FIGURES

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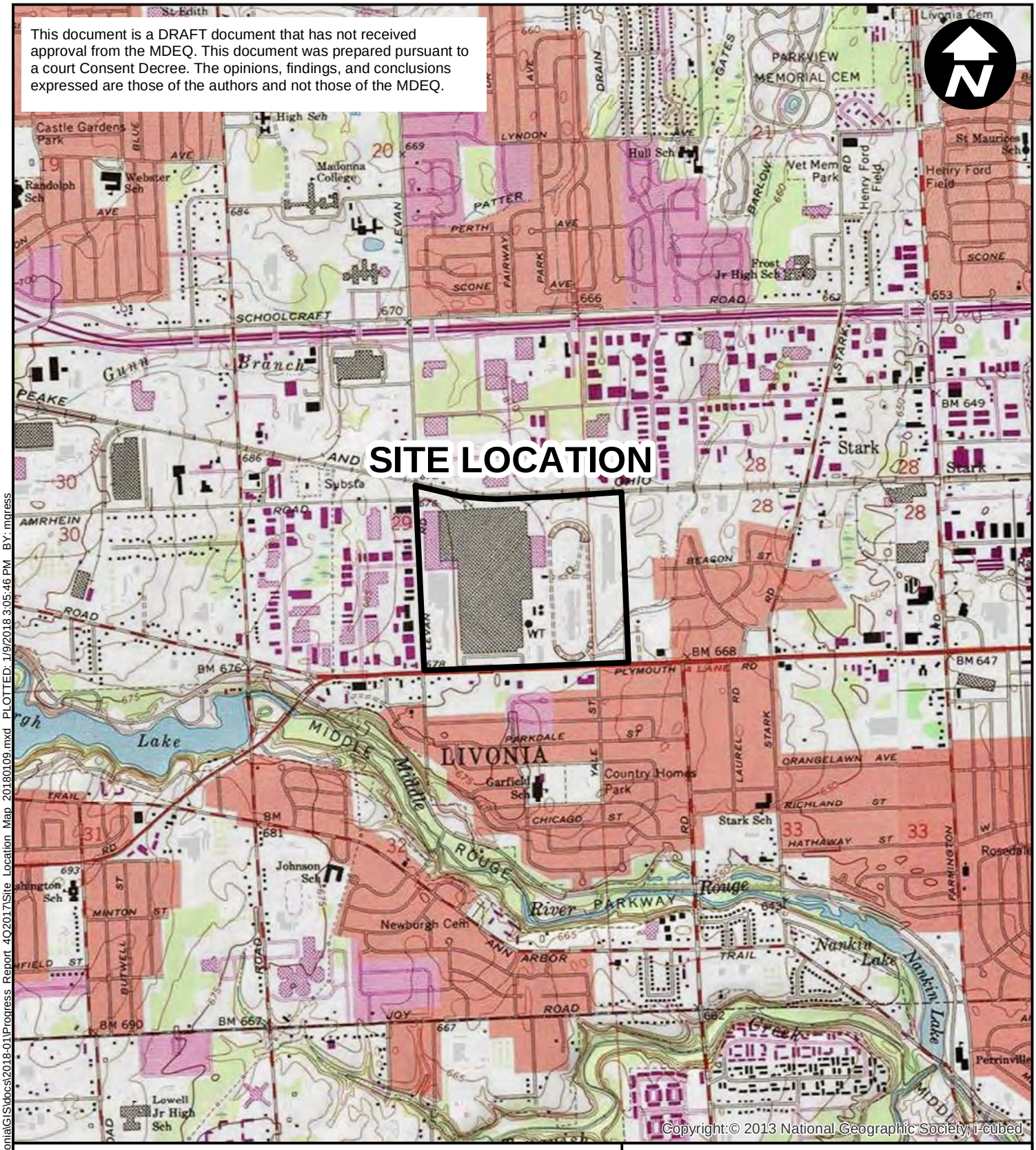

0 2,000 4,000

SCALE IN FEET

SOURCE:

USGS 7.5 MINUTE TOPOGRAPHIC MAP
NORTHVILLE AND WAYNE QUADRANGLES

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: MI001322.0001 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects\ ENV\Novi\Brighton MI\Ford\Livonia\GIS\docs\2018-01\Progress Report 4Q2017\Site Location Map 20180109.mxd PLOTTED: 1/9/2018 3:05:46 PM BY: mgress

ON-SITE AREA

OFF-SITE AREA

LIVONIA TRANSMISSION PLANT

TEST TRACK

ATNPC BUILDING

ROSATI AVE

CONCORD ST

CAPITOL ST

BEACON ST

BOSTON POST ST

BREWSTER ST

STARK RD

WADSWORTH ST

STANDISH ST

PRISCILLA LN

BELDEN CT

LEVAN RD

PLYMOUTH RD

ELMIRA ST

WAYNE RD

LAUREL ST

LEGEND

- ABANDONED SOIL VAPOR MONITORING POINT
- SOIL VAPOR MONITORING POINT
- MONITORING WELL
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- FORD PROPERTY BOUNDARY
- COMMERCIAL/RESIDENTIAL PROPERTY BOUNDARY
- AREA OF CONCERN

0 400 800

SCALE IN FEET

NOTES:

ATNPC - AUTOMATIC TRANSMISSION NEW PRODUCT CENTER

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

SITE LAYOUT

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: Novi DIV: ENV DB: MG PIC: R_ELLIS PM: K_HINSKEY PROJECT NUMBER: MI001322.0001 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NowiBrighton_MI\FordLivoniaGIS\docs\2018-01\Progress_Report_4Q2017\Site Layout On-site and Off-site_20180109.mxd PLOTTED: 1/9/2018 3:11:23 PM BY: mgress

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: MI001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NowiBrighton_MI\Ford\LivoniaGIS\docs\2018-04\Progress_Report_1Q2018\SiteWide_GWE_Contour_Feb2018.mxd PLOTTED: 4/6/2018 11:07:14 AM BY: mgress

LEGEND

- MONITORING WELL
- LNAPL MONITORING WELL
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- (661.85) GROUNDWATER ELEVATION
- 652 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED; CONTOUR INTERVAL = 1.0 FT)
- APPARENT GROUNDWATER FLOW DIRECTION
- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY

NOTES:
1. ALL ELEVATIONS COLLECTED ON FEBRUARY 5-6, 2018 AND MEASURED FROM TOP OF WELL CASING.
2. ALL ELEVATIONS ARE REFERENCED TO A MEAN SEA LEVEL DATUM AND ARE IN UNITS OF FEET ABOVE SEA LEVEL.
3. WHERE NESTED WELLS ARE PRESENT, THE DEEP WELL IS USED FOR CONTOURING PURPOSES.
4. *WELL NOT USED TO CREATE CONTOURS
5. LNAPL = LIGHT NON-AQUEOUS PHASE LIQUID
6. NM = NOT MEASURED, CNL = COULD NOT LOCATE, CNO = COULD NOT OPEN
7. GROUNDWATER ELEVATION AT HYDRAULIC CONTROL SYSTEM HORIZONTAL WELLS ARE DETERMINED BY ESTIMATING AN APPARENT AMBIENT GROUNDWATER ELEVATION AND SUBTRACTING THE PUMPING WATER LEVEL.
8. HYDRAULIC CONTROL SYSTEM PERFORMANCE MONITORING WELLS RE-SURVEYED IN OCTOBER 2017. MONITORING WELLS RE-SURVEYED IN NOVEMBER 2017. MW-5 WAS UNABLE TO BE RE-SURVEYED DURING THE NOVEMBER 2017 EVENT DUE TO ACCESS.
9. MONITORING WELLS WITH LNAPL PRESENT IN THEM HAVE HAD THEIR GROUNDWATER ELEVATIONS CORRECTED TO ACCOUNT FOR THE LNAPL.
10. MW-1 SUBMERGED UNDER WATER DURING THE 1Q 2018 SAMPLING EVENT.

0 400 800
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

SITE-WIDE GROUNDWATER ELEVATION CONTOUR MAP UNDER PUMPING CONDITIONS FEBRUARY 2018

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

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MW-15-59D (94-99 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-26 (4.5-14.5 FT)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)

MW-27

LMW-15-07

MW-28 (2-12 FT)
8/3/2017: 1.1 µg/L
11/8/2017: 0.91 J µg/L
2/7/2018: 0.50 J µg/L

MW-56 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-55 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-54 (16-21 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-57 (17-22 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: ND (< 1.0 µg/L)

MW-53 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-58 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

VAULT V-ESD-1

MW-52 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

TW-16-03 (9-19 FT)
8/3/2017: 37 µg/L
11/8/2017: 36 µg/L
2/14/2018: 40 µg/L

PW-16-02 (6-21 FT)
8/3/2017: 63 µg/L
11/8/2017: 2.3 µg/L
2/14/2018: 12 µg/L

MW-62 (16.3-21.3 FT)
4/21/2017: 1.6 µg/L
7/31/2017: ND (< 1.0 µg/L)
11/13/2017: 0.30 J µg/L
2/6/2018: 0.30 J µg/L

LMW-15-06

LMW-15-08

LMW-15-10

MW-29 (5-15 FT)
4/26/2017: ND (< 1.0 µg/L)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

TW-16-04 (9-19 FT)
4/25/2017: 20 µg/L
8/3/2017: 18 µg/L
11/8/2017: 23 µg/L
2/14/2018: 25 µg/L

MW-50 (16-21 FT)
4/21/2017: 13 µg/L
7/31/2017: 15 µg/L
11/13/2017: 23 µg/L
2/12/2018: 22 µg/L

ESD-1

MW-63 (7-12 FT)
4/21/2017: ND (< 1,000 µg/L)
5/25/2017: ND (< 1,000 µg/L)
7/31/2017: ND (< 100 µg/L)
11/13/2017: ND (< 10 µg/L)
2/7/2018: 1.7 µg/L

MW-43 (17-22 FT)
4/27/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-35 (19.5-24.5 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

VAULT V-ESD-2

MW-64 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: 0.37 J µg/L
11/7/2017: 0.31 J µg/L
2/9/2018: 0.30 J µg/L

MW-42 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LMW-15-09

MW-65 (16-21 FT)
4/25/2017: 3.3 µg/L
8/2/2017: 4.1 µg/L
11/8/2017: 3.9 µg/L
2/6/2018: 4.1 µg/L

MW-48 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-15-61D (88-93 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-51 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: 0.31 J µg/L

MW-66 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

ESD-2

MW-67 (9-14 FT)
4/21/2017: 47 µg/L
7/31/2017: 36 µg/L
11/14/2017: 15 µg/L
2/12/2018: 9.6 µg/L

MW-34 (16.5-21.5 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: 0.37 J µg/L
11/9/2017: 0.35 J µg/L
2/13/2018: ND (< 1.0 µg/L)

LMW-15-02

VAULT V-ESD-3

MW-44 (16-21 FT)
4/25/2017: ND (< 6.3 µg/L)
8/2/2017: ND (< 10 µg/L)
11/7/2017: ND (< 20 µg/L)
2/6/2018: ND (< 6.7 µg/L)

MW-68 (15-20 FT)
4/24/2017: 20 µg/L
8/1/2017: 18 µg/L
11/10/2017: 13 µg/L
2/12/2018: 13 µg/L

MW-3 (14-19 FT)
4/27/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-19 (15-20 FT)
11/14/2017: 1.1 µg/L
2/14/2018: 0.94 J µg/L

MW-47 (16-21 FT)
4/24/2017: 69 µg/L
7/31/2017: 69 µg/L
11/10/2017: 79 µg/L

LMW-15-05

LMW-15-03

MW-22 (16.5-21.5 FT)
4/25/2017: 130 µg/L
8/2/2017: 210 µg/L
11/7/2017: 25 J µg/L
2/6/2018: 200 µg/L

MW-46 (16-21 FT)
4/24/2017: 21 µg/L
7/31/2017: 15 µg/L
11/13/2017: 22 µg/L
2/12/2018: 14 µg/L

ESD-3

MW-69 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-30 (19-24 FT)
4/25/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-4 (15.5-20.5 FT)
4/27/2017: 32,000 µg/L
8/3/2017: 27,000 µg/L
11/9/2017: 21,000 µg/L
2/13/2018: 26,000 µg/L

MW-5 (15.5-20.5 FT)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

VAULT V-ESD-4

MW-70 (15-20 FT)
4/24/2017: 190 µg/L
8/1/2017: 200 µg/L
11/13/2017: 200 µg/L
2/12/2018: 230 µg/L

MW-31 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

LMW-15-04

MW-10 (16.5-21.5 FT)
4/27/2017: ND (< 50 µg/L)
8/4/2017: ND (< 67 µg/L)
11/9/2017: ND (< 100 µg/L)
2/13/2018: ND (< 200 µg/L)

MW-21 (13.5-18.5 FT)
2/13/2018: 20,000 µg/L

TW-16-02 (12-17 FT)
4/25/2017: 5,200 µg/L
8/2/2017: 3,100 µg/L
11/7/2017: 6,000 µg/L
2/14/2018: 3,500 µg/L

PW-16-01 (9.7-19.7 FT)
8/2/2017: 2.2 µg/L
11/7/2017: 550 µg/L
2/7/2018: 82 µg/L

MW-2 (15.5-20.5 FT)
4/27/2017: 630 µg/L
8/3/2017: 1,200 µg/L
11/9/2017: 1,000 µg/L
2/13/2018: 1,400 µg/L

MW-49 (12.5-17.5 FT)
4/21/2017: 43,000 µg/L
7/28/2017: 29,000 µg/L
2/13/2018: 20,000 µg/L

MW-23 (15-20 FT)
8/3/2017: 21,000 µg/L
11/7/2017: 78,000 µg/L
2/6/2018: 33,000 µg/L

MW-71 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/13/2017: 0.39 J µg/L
2/12/2018: 0.37 J µg/L

MW-40 (20-25 FT)
7/28/2017: 2.7 µg/L
11/15/2017: 3.2 µg/L

MW-25 (16-21 FT)
4/21/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LMW-15-01

MW-1 (14-19 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)

MW-7 (18-23 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-9 (19.5-24.5 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-18 (13-18 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-20 (13.5-18.5 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

TW-16-01 (12-17 FT)
8/2/2017: 17 µg/L
11/7/2017: 32 µg/L
2/7/2018: 34 µg/L

MW-45 (15-20 FT)
4/24/2017: 10,000 µg/L
8/1/2017: 8,100 µg/L
11/13/2017: 2,100 µg/L
2/12/2018: 1,800 µg/L

MW-32 (18-23 FT)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: 0.31 J µg/L
2/12/2018: 0.37 J µg/L

MW-38 (15-20 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

VAULT V-ESD-5

MW-15-60D (93-98 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-36 (20-25 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

MW-24 (19-24 FT)
4/26/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-14 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-37 (18-23 FT)
8/1/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-33 (14-19 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-39 (20-25 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

WESTERN DIVERSION CHAMBER

EASTERN DIVERSION CHAMBER

PLYMOUTH RD

LEVAN RD

STANDISH ST

LEGEND

- ON-SITE MONITORING WELL CIS-1,2-DICHLOROETHENE ≤ 70 µg/L
- ON-SITE MONITORING WELL CIS-1,2-DICHLOROETHENE > 70 µg/L
- **BLUE/BOLD TEXT** — EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA FROM PAST AND PRESENT SAMPLING EVENTS
- WELL NOT SAMPLED
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- FORD PROPERTY BOUNDARY

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

> - GREATER THAN

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR CIS-1,2-DICHLOROETHENE IS 70 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR CIS-1,2-DICHLOROETHENE IS 620 µg/L.

FT = FEET BELOW GROUND SURFACE

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR CIS-1,2-DICHLOROETHENE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE APRIL, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA ASSOCIATED WITH THE MOST RECENT SAMPLING EVENT POSSIBLE

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS CIS-1,2-DICHLOROETHENE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: MI001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\Ford\LivoniaGIS\docs\2018-04\Progress_Report_1Q2018\Onsite_MW_cisDCE_GW_20180406.mxd PLOTTED: 4/6/2018 11:12:24 AM BY: mgress

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MW-15-59D (94-99 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-26 (4.5-14.5 FT)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)

MW-27

LMW-15-07

MW-28 (2-12 FT)
8/3/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-56 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-55 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-54 (16-21 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-53 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

TW-16-03 (9-19 FT)
8/3/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 3.3 µg/L)
2/14/2018: ND (< 10 µg/L)

MW-58 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-57 (17-22 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: ND (< 1.0 µg/L)

VAULT V-ESD-1

MW-52 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

TW-16-04 (9-19 FT)
4/25/2017: ND (< 4.0 µg/L)
8/3/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 6.7 µg/L)
2/14/2018: ND (< 6.7 µg/L)

PW-16-02 (6-21 FT)
8/3/2017: ND (< 5.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-62 (16.3-21.3 FT)
4/21/2017: ND (< 1.0 µg/L)
7/31/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-43 (17-22 FT)
4/27/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LMW-15-06

LMW-15-08

LMW-15-10

MW-29 (5-15 FT)
4/26/2017: ND (< 1.0 µg/L)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-50 (16-21 FT)
4/21/2017: ND (< 5.0 µg/L)
7/31/2017: ND (< 4.0 µg/L)
11/13/2017: ND (< 5.0 µg/L)
2/12/2018: ND (< 5.0 µg/L)

ESD-1

MW-63 (7-12 FT)
4/21/2017: ND (< 1,000 µg/L)
5/25/2017: ND (< 1,000 µg/L)
7/31/2017: ND (< 100 µg/L)
11/13/2017: ND (< 10 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-64 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: ND (< 1.0 µg/L)

LMW-15-09

MW-51 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-65 (16-21 FT)
4/25/2017: ND (< 2.0 µg/L)
8/2/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 2.0 µg/L)
2/6/2018: ND (< 2.0 µg/L)

VAULT V-ESD-2

MW-35 (19.5-24.5 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-66 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-48 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-42 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

ESD-2

MW-67 (9-14 FT)
4/21/2017: ND (< 10 µg/L)
7/31/2017: 2.4 J µg/L
11/14/2017: 1.7 J µg/L
2/12/2018: 1.1 J µg/L

MW-34 (16.5-21.5 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-15-61D (88-93 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

LMW-15-02

MW-44 (16-21 FT)
4/25/2017: ND (< 6.3 µg/L)
8/2/2017: ND (< 10 µg/L)
11/7/2017: ND (< 20 µg/L)
2/6/2018: ND (< 6.7 µg/L)

VAULT V-ESD-3

MW-68 (15-20 FT)
4/24/2017: 1.9 µg/L
8/1/2017: 1.9 µg/L
11/10/2017: 1.5 µg/L
2/12/2018: 1.8 µg/L

MW-41 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-19 (15-20 FT)
11/14/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-47 (16-21 FT)
4/24/2017: 7.1 µg/L
7/31/2017: 8.6 µg/L
11/10/2017: 9.3 J µg/L

MW-3 (14-19 FT)
4/27/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LMW-15-05

LMW-15-03

MW-69 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-30 (19-24 FT)
4/25/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-46 (16-21 FT)
4/24/2017: 1.6 J µg/L
7/31/2017: 2.6 µg/L
11/13/2017: 2.7 µg/L
2/12/2018: 1.7 µg/L

ESD-3

VAULT V-ESD-4

MW-5 (15.5-20.5 FT)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-10 (16.5-21.5 FT)
4/27/2017: ND (< 50 µg/L)
8/4/2017: ND (< 67 µg/L)
11/9/2017: ND (< 100 µg/L)
2/13/2018: ND (< 200 µg/L)

MW-22 (16.5-21.5 FT)
4/25/2017: ND (< 63 µg/L)
8/2/2017: ND (< 100 µg/L)
11/7/2017: ND (< 50 µg/L)
2/6/2018: ND (< 140 µg/L)

MW-21 (13.5-18.5 FT)
2/13/2018: ND (< 1,000 µg/L)

MW-70 (15-20 FT)
4/24/2017: 3.8 J µg/L
8/1/2017: 4.2 J µg/L
11/13/2017: 5.1 J µg/L
2/12/2018: 4.4 J µg/L

BELDEN CT

LEVAN RD

MW-4 (15.5-20.5 FT)
4/27/2017: 1,200 µg/L
8/3/2017: 1,100 µg/L
11/9/2017: 850 J µg/L
2/13/2018: 1,100 J µg/L

LMW-15-04

MW-49 (12.5-17.5 FT)
4/21/2017: ND (< 2,000 µg/L)
7/28/2017: ND (< 1,000 µg/L)
2/13/2018: ND (< 1,700 µg/L)

PW-16-01 (9.7-19.7 FT)
8/2/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 200 µg/L)
2/7/2018: 5.4 J µg/L

MW-71 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-31 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-25 (16-21 FT)
4/21/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-2 (15.5-20.5 FT)
4/27/2017: 200 µg/L
8/3/2017: 270 µg/L
11/9/2017: 260 µg/L
2/13/2018: 390 µg/L

MW-23 (15-20 FT)
8/3/2017: 1,200 µg/L
11/7/2017: 4,100 µg/L
2/6/2018: 1,800 µg/L

TW-16-02 (12-17 FT)
4/25/2017: ND (< 630 µg/L)
8/2/2017: ND (< 500 µg/L)
11/7/2017: ND (< 400 µg/L)
2/14/2018: ND (< 1,000 µg/L)

ESD-4

MW-45 (15-20 FT)
4/24/2017: ND (< 500 µg/L)
8/1/2017: ND (< 500 µg/L)
11/13/2017: ND (< 67 µg/L)
2/12/2018: ND (< 100 µg/L)

MW-40 (20-25 FT)
7/28/2017: 0.41 J µg/L
11/15/2017: 0.48 J µg/L

LMW-15-01

MW-1 (14-19 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)

MW-7 (18-23 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-9 (19.5-24.5 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-18 (13-18 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-20 (13.5-18.5 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-38 (15-20 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

TW-16-01 (12-17 FT)
8/2/2017: ND (< 10 µg/L)
11/7/2017: ND (< 13 µg/L)
2/7/2018: ND (< 33 µg/L)

VAULT V-ESD-5

MW-32 (18-23 FT)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-15-60D (93-98 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

WESTERN DIVERSION CHAMBER

MW-36 (20-25 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

PLYMOUTH RD

MW-24 (19-24 FT)
4/26/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-14 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-37 (18-23 FT)
8/1/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-33 (14-19 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

EASTERN DIVERSION CHAMBER

MW-39 (20-25 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

STANDISH ST

LEGEND

- ON-SITE MONITORING WELL TRANS-1,2-DICHLOROETHENE ≤ 100 µg/L
- ON-SITE MONITORING WELL TRANS-1,2-DICHLOROETHENE > 100 µg/L
- BLUE/BOLD TEXT — EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA FROM PAST AND PRESENT SAMPLING EVENTS
- WELL NOT SAMPLED
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- FORD PROPERTY BOUNDARY

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

> - GREATER THAN

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR TRANS-1,2-DICHLOROETHENE IS 100 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR TRANS-1,2-DICHLOROETHENE IS 1,500 µg/L.

FT = FEET BELOW GROUND SURFACE

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR TRANS-1,2-DICHLOROETHENE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE APRIL, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA ASSOCIATED WITH THE MOST RECENT SAMPLING EVENT POSSIBLE

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LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS
TRANS-1,2-DICHLOROETHENE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: MI001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GIS\docs\2018-04\Progress_Report_1Q2018\Onsite_MW_trans-DCE_GW_20180406.mxd PLOTTED: 4/6/2018 11:14:27 AM BY: mgress

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4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-26 (4.5-14.5 FT)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)

MW-27

MW-28 (2-12 FT)
8/3/2017: 0.68 J µg/L
11/8/2017: 0.59 J µg/L
2/7/2018: 0.45 J µg/L

MW-56 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-55 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-54 (16-21 FT)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-53 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-58 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-57 (17-22 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: ND (< 1.0 µg/L)

LMW-15-07

LMW-15-06

LMW-15-08

LMW-15-10

TW-16-04 (9-19 FT)
4/25/2017: ND (< 4.0 µg/L)
8/3/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 6.7 µg/L)
2/14/2018: ND (< 6.7 µg/L)

TW-16-03 (9-19 FT)
8/3/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 3.3 µg/L)
2/14/2018: ND (< 10 µg/L)

VAULT V-ESD-1

MW-62 (16.3-21.3 FT)
4/21/2017: ND (< 1.0 µg/L)
7/31/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-52 (15-20 FT)
7/27/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-29 (5-15 FT)
4/26/2017: ND (< 1.0 µg/L)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

PW-16-02 (6-21 FT)
8/3/2017: ND (< 5.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

ESD-1

MW-63 (7-12 FT)
4/21/2017: ND (< 1,000 µg/L)
5/25/2017: ND (< 1,000 µg/L)
7/31/2017: ND (< 100 µg/L)
11/13/2017: ND (< 10 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-43 (17-22 FT)
4/27/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LMW-15-09

VAULT V-ESD-2

MW-64 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: ND (< 1.0 µg/L)

MW-35 (19.5-24.5 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-50 (16-21 FT)
4/21/2017: ND (< 5.0 µg/L)
7/31/2017: ND (< 4.0 µg/L)
11/13/2017: ND (< 5.0 µg/L)
2/12/2018: ND (< 5.0 µg/L)

MW-65 (16-21 FT)
4/25/2017: ND (< 2.0 µg/L)
8/2/2017: ND (< 4.0 µg/L)
11/8/2017: ND (< 2.0 µg/L)
2/6/2018: ND (< 2.0 µg/L)

MW-42 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-48 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-51 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-66 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

ESD-2

MW-15-61D (88-93 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

LMW-15-02

MW-44 (16-21 FT)
4/25/2017: ND (< 6.3 µg/L)
8/2/2017: ND (< 10 µg/L)
11/7/2017: ND (< 20 µg/L)
2/6/2018: ND (< 6.7 µg/L)

VAULT V-ESD-3

MW-67 (9-14 FT)
4/21/2017: 94 µg/L
7/31/2017: 91 µg/L
11/14/2017: 110 µg/L
2/12/2018: 83 µg/L

MW-68 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-34 (16.5-21.5 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-3 (14-19 FT)
4/27/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-47 (16-21 FT)
4/24/2017: ND (< 5.0 µg/L)
7/31/2017: ND (< 4.0 µg/L)
11/10/2017: ND (< 10 µg/L)

LMW-15-05

MW-19 (15-20 FT)
11/14/2017: 1.1 µg/L
2/14/2018: 1.0 µg/L

LMW-15-03

MW-22 (16.5-21.5 FT)
4/25/2017: ND (< 63 µg/L)
8/2/2017: ND (< 100 µg/L)
11/7/2017: ND (< 50 µg/L)
2/6/2018: ND (< 140 µg/L)

MW-46 (16-21 FT)
4/24/2017: ND (< 5.0 µg/L)
7/31/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 2.5 µg/L)
2/12/2018: ND (< 1.0 µg/L)

ESD-3

MW-69 (15-20 FT)
4/25/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-41 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-5 (15.5-20.5 FT)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-10 (16.5-21.5 FT)
4/27/2017: ND (< 50 µg/L)
8/4/2017: ND (< 67 µg/L)
11/9/2017: ND (< 100 µg/L)
2/13/2018: ND (< 200 µg/L)

MW-21 (13.5-18.5 FT)
2/13/2018: 460 J µg/L

VAULT V-ESD-4

MW-70 (15-20 FT)
4/24/2017: ND (< 6.7 µg/L)
8/1/2017: ND (< 10 µg/L)
11/13/2017: ND (< 10 µg/L)
2/12/2018: ND (< 13 µg/L)

MW-30 (19-24 FT)
4/25/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LEVAN RD

MW-4 (15.5-20.5 FT)
4/27/2017: 21,000 µg/L
8/3/2017: 18,000 µg/L
11/9/2017: 19,000 µg/L
2/13/2018: 23,000 µg/L

LMW-15-04

MW-49 (12.5-17.5 FT)
4/21/2017: ND (< 2,000 µg/L)
7/28/2017: ND (< 1,000 µg/L)
2/13/2018: ND (< 1,700 µg/L)

PW-16-01 (9.7-19.7 FT)
8/2/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 200 µg/L)
2/7/2018: ND (< 14 µg/L)

MW-25 (16-21 FT)
4/21/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-2 (15.5-20.5 FT)
4/27/2017: ND (< 25 µg/L)
8/3/2017: ND (< 50 µg/L)
11/9/2017: ND (< 67 µg/L)
2/13/2018: ND (< 67 µg/L)

MW-23 (15-20 FT)
8/3/2017: 5,300 µg/L
11/7/2017: 25,000 µg/L
2/6/2018: 11,000 µg/L

TW-16-02 (12-17 FT)
4/25/2017: ND (< 630 µg/L)
8/2/2017: ND (< 500 µg/L)
11/7/2017: ND (< 400 µg/L)
2/14/2018: ND (< 1,000 µg/L)

MW-71 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/13/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-31 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

LMW-15-01

MW-1 (14-19 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)

MW-7 (18-23 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-9 (19.5-24.5 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-18 (13-18 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-20 (13.5-18.5 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-38 (15-20 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

TW-16-01 (12-17 FT)
8/2/2017: ND (< 10 µg/L)
11/7/2017: ND (< 13 µg/L)
2/7/2018: ND (< 33 µg/L)

MW-45 (15-20 FT)
4/24/2017: ND (< 500 µg/L)
8/1/2017: ND (< 500 µg/L)
11/13/2017: ND (< 67 µg/L)
2/12/2018: ND (< 100 µg/L)

MW-40 (20-25 FT)
7/28/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)

VAULT V-ESD-5

MW-32 (18-23 FT)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-15-60D (93-98 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

WESTERN DIVERSION CHAMBER

MW-36 (20-25 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

PLYMOUTH RD

MW-24 (19-24 FT)
4/26/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-14 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-37 (18-23 FT)
8/1/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-33 (14-19 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

EASTERN DIVERSION CHAMBER

MW-39 (20-25 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

LEGEND

- ON-SITE MONITORING WELL TRICHLOROETHENE ≤ 5 µg/L
- ON-SITE MONITORING WELL TRICHLOROETHENE > 5 µg/L
- BLUE/BOLD TEXT — EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA FROM PAST AND PRESENT SAMPLING EVENTS
- WELL NOT SAMPLED
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- FORD PROPERTY BOUNDARY

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

> - GREATER THAN

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR TRICHLOROETHENE IS 5.0 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR TRICHLOROETHENE IS 200 µg/L.

FT = FEET BELOW GROUND SURFACE

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR TRICHLOROETHENE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE APRIL, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA ASSOCIATED WITH THE MOST RECENT SAMPLING EVENT POSSIBLE

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS TRICHLOROETHENE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: MI001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\Ford\Livonia\GIS\docs\2018-04\Progress_Report_1Q2018\Onsite_MW_TCE_GW_20180406.mxd PLOTTED: 4/6/2018 11:18:20 AM BY: mgress

This document is a DRAFT document that has not received approval from the MDEQ. 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 the MDEQ.

MW-15-59D (94-99 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-26 (4.5-14.5 FT)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)

MW-27

LMW-15-07

MW-28 (2-12 FT)
8/3/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-56 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-55 (15-20 FT)
7/27/2017: 0.84 J µg/L
11/8/2017: 0.65 J µg/L
2/7/2018: ND (< 1.0 µg/L)

MW-54 (16-21 FT)
7/27/2017: 0.88 J µg/L
11/8/2017: 1.5 µg/L
2/7/2018: 1.2 µg/L

MW-53 (16-21 FT)
4/24/2017: ND (< 1.0 µg/L)
7/27/2017: 0.63 J µg/L
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-58 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-57 (17-22 FT)
7/27/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/9/2018: 0.59 J µg/L

VAULT V-ESD-1

MW-52 (15-20 FT)
7/27/2017: 7.0 µg/L
11/10/2017: 9.1 µg/L
2/13/2018: 4.0 µg/L

TW-16-04 (9-19 FT)
4/25/2017: 150 µg/L
8/3/2017: 120 µg/L
11/8/2017: 100 µg/L
2/14/2018: 77 µg/L

TW-16-03 (9-19 FT)
8/3/2017: 100 µg/L
11/8/2017: 77 µg/L
2/14/2018: 95 µg/L

MW-62 (16.3-21.3 FT)
4/21/2017: 1.3 µg/L
7/31/2017: ND (< 1.0 µg/L)
11/13/2017: 1.0 µg/L
2/6/2018: 1.3 µg/L

MW-43 (17-22 FT)
4/27/2017: 8.4 µg/L
7/27/2017: 3.0 µg/L
11/9/2017: 2.2 µg/L
2/13/2018: 8.0 µg/L

LMW-15-06

LMW-15-08

LMW-15-10

MW-29 (5-15 FT)
4/26/2017: ND (< 1.0 µg/L)
8/4/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

PW-16-02 (6-21 FT)
8/3/2017: 160 µg/L
11/8/2017: 2.0 µg/L
2/14/2018: 18 µg/L

MW-50 (16-21 FT)
4/21/2017: 48 µg/L
7/31/2017: 140 µg/L
11/13/2017: 150 µg/L
2/12/2018: 76 µg/L

ESD-1

MW-63 (7-12 FT)
4/21/2017: ND (< 1,000 µg/L)
5/25/2017: ND (< 1,000 µg/L)
7/31/2017: ND (< 100 µg/L)
11/13/2017: ND (< 10 µg/L)
2/7/2018: ND (< 1.0 µg/L)

MW-64 (15-20 FT)
4/24/2017: 2.4 µg/L
7/27/2017: 4.8 µg/L
11/7/2017: 7.0 µg/L
2/9/2018: 6.7 µg/L

LMW-15-09

MW-51 (15-20 FT)
4/25/2017: 0.57 J µg/L
8/3/2017: 0.97 J µg/L
11/9/2017: 0.47 J µg/L
2/8/2018: ND (< 1.0 µg/L)

VAULT V-ESD-2

MW-65 (16-21 FT)
4/25/2017: 61 µg/L
8/2/2017: 49 µg/L
11/8/2017: 48 µg/L
2/6/2018: 36 µg/L

MW-35 (19.5-24.5 FT)
7/27/2017: 3.5 µg/L
11/7/2017: 2.4 µg/L
2/14/2018: 4.5 µg/L

MW-66 (15-20 FT)
4/25/2017: 5.6 µg/L
8/2/2017: 5.4 µg/L
11/13/2017: 3.0 µg/L
2/12/2018: 2.7 µg/L

MW-48 (17-22 FT)
4/21/2017: 0.85 J µg/L
8/1/2017: 11 µg/L
11/14/2017: 5.2 µg/L
2/12/2018: 3.8 µg/L

ESD-2

MW-42 (16-21 FT)
4/24/2017: 0.81 J µg/L
7/27/2017: 0.99 J µg/L
11/9/2017: 1.0 µg/L
2/13/2018: 0.81 J µg/L

MW-67 (9-14 FT)
4/21/2017: 14 µg/L
7/31/2017: ND (< 4.0 µg/L)
11/14/2017: ND (< 5.0 µg/L)
2/12/2018: ND (< 3.3 µg/L)

MW-44 (16-21 FT)
4/25/2017: 230 µg/L
8/2/2017: 380 µg/L
11/7/2017: 520 µg/L
2/6/2018: 210 µg/L

LMW-15-02

VAULT V-ESD-3

MW-34 (16.5-21.5 FT)
4/24/2017: 0.52 J µg/L
7/27/2017: 1.5 µg/L
11/9/2017: 2.0 µg/L
2/13/2018: 0.97 J µg/L

MW-15-61D (88-93 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-3 (14-19 FT)
4/27/2017: ND (< 1.0 µg/L)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-19 (15-20 FT)
11/14/2017: 1.8 µg/L
2/14/2018: 1.5 µg/L

MW-47 (16-21 FT)
4/24/2017: 120 µg/L
7/31/2017: 110 µg/L
11/10/2017: 220 µg/L

MW-41 (16-21 FT)
4/24/2017: 3.2 µg/L
7/27/2017: 1.9 µg/L
11/9/2017: 2.4 µg/L
2/13/2018: 2.1 µg/L

LMW-15-05

LMW-15-03

MW-68 (15-20 FT)
4/24/2017: 12 µg/L
8/1/2017: 2.1 µg/L
11/10/2017: 18 µg/L
2/12/2018: 2.5 µg/L

MW-46 (16-21 FT)
4/24/2017: 150 µg/L
7/31/2017: 13 µg/L
11/13/2017: 57 µg/L
2/12/2018: 38 µg/L

ESD-3

MW-69 (15-20 FT)
4/25/2017: 2.8 µg/L
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-10 (16.5-21.5 FT)
4/27/2017: 1,200 µg/L
8/4/2017: 2,100 µg/L
11/9/2017: 2,000 µg/L
2/13/2018: 1,900 µg/L

MW-21 (13.5-18.5 FT)
2/13/2018: 5,400 µg/L

MW-22 (16.5-21.5 FT)
4/25/2017: 2,300 µg/L
8/2/2017: 2,100 µg/L
11/7/2017: 1,600 µg/L
2/6/2018: 1,500 µg/L

VAULT V-ESD-4

MW-70 (15-20 FT)
4/24/2017: 120 µg/L
8/1/2017: 100 µg/L
11/13/2017: 140 µg/L
2/12/2018: 160 µg/L

MW-30 (19-24 FT)
4/25/2017: ND (< 1.0 µg/L)
7/27/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-5 (15.5-20.5 FT)
8/3/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

LEVAN RD

MW-4 (15.5-20.5 FT)
4/27/2017: 570 J µg/L
8/3/2017: 640 J µg/L
11/9/2017: 470 J µg/L
2/13/2018: ND (< 1,700 µg/L)

LMW-15-04

MW-49 (12.5-17.5 FT)
4/21/2017: 10,000 µg/L
7/28/2017: 9,800 µg/L
2/13/2018: 8,400 µg/L

PW-16-01 (9.7-19.7 FT)
8/2/2017: 24 µg/L
11/7/2017: 5,300 µg/L
2/7/2018: 160 µg/L

MW-71 (15-20 FT)
4/24/2017: ND (< 1.0 µg/L)
8/1/2017: 0.68 J µg/L
11/13/2017: 0.83 J µg/L
2/12/2018: 0.59 J µg/L

MW-31 (17-22 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: 0.68 J µg/L
11/10/2017: 0.84 J µg/L
2/14/2018: ND (< 1.0 µg/L)

MW-25 (16-21 FT)
4/21/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/14/2017: ND (< 1.0 µg/L)
2/13/2018: ND (< 1.0 µg/L)

MW-2 (15.5-20.5 FT)
4/27/2017: 200 µg/L
8/3/2017: 160 µg/L
11/9/2017: 140 µg/L
2/13/2018: 210 µg/L

MW-23 (15-20 FT)
8/3/2017: 1,100 µg/L
11/7/2017: 2,400 µg/L
2/6/2018: 820 J µg/L

TW-16-02 (12-17 FT)
4/25/2017: 15,000 µg/L
8/2/2017: 12,000 µg/L
11/7/2017: 13,000 µg/L
2/14/2018: 9,100 µg/L

ESD-4

MW-40 (20-25 FT)
7/28/2017: 0.77 J µg/L
11/15/2017: 1.8 µg/L

LMW-15-01

MW-1 (14-19 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)

MW-7 (18-23 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-9 (19.5-24.5 FT)
7/28/2017: 5.5 µg/L
11/10/2017: 7.1 µg/L
2/12/2018: 4.6 µg/L

MW-18 (13-18 FT)
4/21/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-20 (13.5-18.5 FT)
7/31/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-38 (15-20 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

TW-16-01 (12-17 FT)
8/2/2017: 210 µg/L
11/7/2017: 320 µg/L
2/7/2018: 380 µg/L

MW-45 (15-20 FT)
4/24/2017: 7,600 µg/L
8/1/2017: 5,400 µg/L
11/13/2017: 1,500 µg/L
2/12/2018: 1,200 µg/L

MW-32 (18-23 FT)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: 0.67 J µg/L
2/12/2018: ND (< 1.0 µg/L)

VAULT V-ESD-5

MW-15-60D (93-98 FT)
4/26/2017: ND (< 1.0 µg/L)
8/1/2017: ND (< 1.0 µg/L)
11/15/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

WESTERN DIVERSION CHAMBER

MW-36 (20-25 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

PLYMOUTH RD

MW-24 (19-24 FT)
4/26/2017: ND (< 1.0 µg/L)
8/2/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

MW-14 (15-20 FT)
7/28/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-37 (18-23 FT)
8/1/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/12/2018: ND (< 1.0 µg/L)

MW-33 (14-19 FT)
7/28/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/14/2018: ND (< 1.0 µg/L)

EASTERN DIVERSION CHAMBER

MW-39 (20-25 FT)
4/26/2017: ND (< 1.0 µg/L)
7/28/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/15/2018: ND (< 1.0 µg/L)

LEGEND

- ON-SITE MONITORING WELL VINYL CHLORIDE ≤ 2.0 µg/L
- ON-SITE MONITORING WELL VINYL CHLORIDE > 2.0 µg/L
- BLUE/BOLD TEXT — EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA FROM PAST AND PRESENT SAMPLING EVENTS
- WELL NOT SAMPLED
- VAULT (2 FT x 2 FT)
- VAULT (4 FT x 6 FT)
- WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED)
- WELL BLANK CASING (4-INCH SDR-11 HDPE)
- WELL BLANK CASING (6-INCH SDR-11 HDPE)
- FORD PROPERTY BOUNDARY

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

> - GREATER THAN

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR VINYL CHLORIDE IS 2.0 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR VINYL CHLORIDE IS 13 µg/L.

FT = FEET BELOW GROUND SURFACE

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR VINYL CHLORIDE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE APRIL, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA ASSOCIATED WITH THE MOST RECENT SAMPLING EVENT POSSIBLE

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS VINYL CHLORIDE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE 7

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: MI001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GIS\docs\2018-04\Progress_Report_1Q2018\Onsite_MW_VC_GW_20180406.mxd PLOTTED: 4/18/2018 4:29:49 PM BY: mgress

MW-72 (15-20 FT)
5/22/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-85 (8-13 FT)
5/25/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

ROSATI AVE

MW-83 (8-13 FT)
5/26/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-73S (7-12 FT)
5/22/2017: 0.40 J µg/L
7/26/2017: 0.48 J µg/L
11/7/2017: 0.48 J µg/L
2/6/2018: 0.33 J µg/L

MW-79D (10-15 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-79S (5-10 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-80S (7-12 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

CAPITOL ST

MW-82D (18-23 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-73D (13.5-18.5 FT)
5/22/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-84 (8-13 FT)
5/25/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-78 (7-12 FT)
5/25/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

STARK RD

MW-82S (9-14 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-74 (14-19 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/7/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

BEACON ST

MW-81 (8-13 FT)
5/26/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

BREWSTER ST

BELDEN CT

MW-86 (12-17 FT)
5/25/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-75D (12-17 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-75S (5-10 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-77 (9-14 FT)
5/25/2017: 0.87 J µg/L
7/26/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

WADSWORTH ST

BOSTON POST ST

MW-87 (14-19 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

STANDISH ST

PRISCILLA LN

MW-76 (15-20 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

PLYMOUTH RD

WAYNE RD

LAUREL ST

LEGEND

- PROPERTY BOUNDARY
- FORD PROPERTY BOUNDARY
- OFF-SITE MONITORING WELL TRICHLOROETHENE ≤ 1.0 µg/L

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

THE PUBLISHED 2016 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION TARGET DETECTION LIMIT FOR TRICHLOROETHENE IS 1.0 µg/L .

THE RESIDENTIAL DRINKING WATER CRITERIA FOR TRICHLOROETHENE IS 5.0 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR TRICHLOROETHENE IS 200 µg/L.

FT = FEET BELOW GROUND SURFACE

J = ESTIMATED CONCENTRATION ABOVE THE METHOD DETECTION LIMIT AND BELOW THE REPORTING LIMIT.

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR TRICHLOROETHENE.

MW = MONITORING WELL

RESULTS COLLECTED DURING THE MAY, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE MONITORING WELLS TRICHLOROETHENE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
8

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K_HINSKEY TM: A_DEGRANDIS TR: P_CURRY PROJECT NUMBER: MI001373.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GIS\Projects_ENV\Novi\Brighton_MI\Ford\Livonia\GIS\docs\2018-04\Progress_Report_1Q2018\TCE_Offsite_Wells_20180406.mxd PLOTTED: 4/6/2018 11:24:51 AM BY: mgress

MW-72 (15-20 FT)
5/22/2017: 3.9 µg/L
7/26/2017: 2.9 µg/L
11/7/2017: 1.6 µg/L
2/6/2018: 1.3 µg/L

MW-85 (8-13 FT)
5/25/2017: 8.6 µg/L
7/25/2017: 7.3 µg/L
11/7/2017: 7.3 µg/L
2/8/2018: 5.5 µg/L

MW-83 (8-13 FT)
5/26/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-73S (7-12 FT)
5/22/2017: 1.6 µg/L
7/26/2017: 1.3 µg/L
11/7/2017: 1.9 µg/L
2/6/2018: 1.1 µg/L

MW-73D (13.5-18.5 FT)
5/22/2017: 1.1 µg/L
7/26/2017: 0.85 J µg/L
11/7/2017: 1.3 µg/L
2/6/2018: 0.79 J µg/L

MW-79D (10-15 FT)
5/24/2017: 3.2 µg/L
7/25/2017: 4.1 µg/L
11/9/2017: 3.6 µg/L
2/8/2018: 1.9 µg/L

MW-79S (5-10 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-80S (7-12 FT)
5/24/2017: 4.6 µg/L
7/25/2017: 7.1 µg/L
11/8/2017: 7.6 µg/L
2/8/2018: 2.9 µg/L

MW-82D (18-23 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-82S (9-14 FT)
5/24/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-78 (7-12 FT)
5/25/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-84 (8-13 FT)
5/25/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-74 (14-19 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: 2.7 µg/L
11/7/2017: 2.4 µg/L
2/6/2018: 2.0 µg/L

MW-81 (8-13 FT)
5/26/2017: ND (< 1.0 µg/L)
7/25/2017: ND (< 1.0 µg/L)
11/9/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-86 (12-17 FT)
5/25/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-75D (12-17 FT)
5/23/2017: 6.4 µg/L
7/26/2017: 3.7 µg/L
11/8/2017: 4.9 J µg/L
2/6/2018: 1.9 µg/L

MW-75S (5-10 FT)
5/23/2017: 0.45 J µg/L
7/26/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

MW-77 (9-14 FT)
5/25/2017: 0.51 J µg/L
7/26/2017: 0.45 J µg/L
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-87 (14-19 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/10/2017: ND (< 1.0 µg/L)
2/8/2018: ND (< 1.0 µg/L)

MW-76 (15-20 FT)
5/23/2017: ND (< 1.0 µg/L)
7/26/2017: ND (< 1.0 µg/L)
11/8/2017: ND (< 1.0 µg/L)
2/6/2018: ND (< 1.0 µg/L)

ROSATI AVE
CAPITOL ST
STARK RD
BEACON ST
BREWSTER ST
WADSWORTH ST
BOSTON POST ST
STANDISH ST
PRISCILLA LN
BELDEN CT
WAYNE RD
LAUREL ST
PLYMOUTH RD

LEGEND

- PROPERTY BOUNDARY
- FORD PROPERTY BOUNDARY
- OFF-SITE MONITORING WELL VINYL CHLORIDE ≤ 1.0 µg/L
- OFF-SITE MONITORING WELL VINYL CHLORIDE > 1.0 µg/L
- **BLUE/BOLD TEXT** EXCEEDANCE OF THE TDL FROM PAST AND PRESENT SAMPLING EVENTS

NOTES:
µg/L - MICROGRAMS PER LITER (PARTS PER BILLION)

≤ - LESS THAN OR EQUAL TO

> - GREATER THAN

TDL - TARGET DETECTION LIMIT

THE PUBLISHED 2016 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIATION AND REDEVELOPMENT DIVISION TARGET DETECTION LIMIT FOR VINYL CHLORIDE IS 1.0 µg/L.

THE RESIDENTIAL DRINKING WATER CRITERIA FOR VINYL CHLORIDE IS 2.0 µg/L.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR VINYL CHLORIDE IS 13 µg/L.

FT = FEET BELOW GROUND SURFACE

J = ESTIMATED CONCENTRATION ABOVE THE METHOD DETECTION LIMIT AND BELOW THE REPORTING LIMIT.

"ND", "<" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 µg/L FOR VINYL CHLORIDE.

MW = MONITORING WELL

RESULTS COLLECTED DURING THE MAY, JULY, AND NOVEMBER 2017 AND FEBRUARY 2018 SAMPLING EVENTS

BLUE BOX INDICATES EXCEEDANCE OF THE TARGET DETECTION LIMIT FOR VINYL CHLORIDE ASSOCIATED WITH THE MOST RECENT SAMPLING EVENT POSSIBLE

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE MONITORING WELLS VINYL CHLORIDE IN GROUNDWATER

ARCADIS Design & Consultancy for natural and built assets

FIGURE
9

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: MI001373.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GIS\Projects_ENV\NoviBrighton_MI\Ford\Livonia\GIS\docs\2018-04\Progress_Report_1Q2018\VC_Offsite_Wells_20180406.mxd PLOTTED: 4/6/2018 11:32:08 AM BY: mgress

SVMP-25 (3.0 FT)
9/21/2017: ND (< 4.7 µg/m^3)
11/21/2017: ND (< 4.5 µg/m^3)
2/21/2018: ND (< 4.4 µg/m^3)

SVMP-25 (6.0 FT)
9/21/2017: ND (< 4.4 µg/m^3)
11/21/2017: ND (< 4.7 µg/m^3)
2/21/2018: ND (< 4.4 µg/m^3)

SVMP-22 (3.0 FT)
9/18/2017: ND (< 4.8 µg/m^3)
11/17/2017: ND (< 4.9 µg/m^3)
2/20/2018: ND (< 4.7 µg/m^3)

SVMP-23 (3.0 FT)
9/18/2017: ND (< 4.6 µg/m^3)
11/17/2017: ND (< 4.3 µg/m^3)
2/20/2018: ND (< 4.2 µg/m^3)

SVMP-24 (4.0 FT)
9/18/2017: ND (< 4.6 µg/m^3)
11/17/2017: ND (< 4.4 µg/m^3)
2/21/2018: ND (< 4.7 µg/m^3)

ROSATI AVE

CONCORD ST

SVMP-19 (3.0 FT)
9/18/2017: ND (< 5.1 µg/m^3)
11/17/2017: ND (< 4.3 µg/m^3)
2/20/2018: ND (< 4.1 µg/m^3)

SVMP-36 (4.0 FT)

SVMP-18 (3.0 FT)
9/18/2017: ND (< 4.6 µg/m^3)
11/17/2017: ND (< 4.3 µg/m^3)
2/20/2018: ND (< 4.5 µg/m^3)

SVMP-26 (4.0 FT)
9/21/2017: ND (< 4.9 µg/m^3)
11/21/2017: ND (< 4.4 µg/m^3)
2/21/2018: ND (< 4.4 µg/m^3)

SVMP-11 (3.5 FT)

SVMP-20 (3.0 FT)
9/19/2017: ND (< 4.8 µg/m^3)

CAPITOL ST

SVMP-12 (3.5 FT)
9/19/2017: ND (< 4.8 µg/m^3)
11/21/2017: ND (< 4.7 µg/m^3)
2/20/2018: ND (< 4.7 µg/m^3)

SVMP-21 (2.0 FT)
9/19/2017: ND (< 4.6 µg/m^3)
11/20/2017: ND (< 4.6 µg/m^3)

SVMP-34 (4.0 FT)

SVMP-33 (4.0 FT)

STARK RD

SVMP-37 (2.5 FT)

SVMP-27 (4.5 FT)
9/21/2017: 11 µg/m^3
11/21/2017: ND (< 4.4 µg/m^3)
2/21/2018: ND (< 4.4 µg/m^3)

SVMP-32 (3.0 FT)

SVMP-32 (6.0 FT)

SVMP-10 (3.0 FT)
9/20/2017: ND (< 4.8 µg/m^3)
11/21/2017: ND (< 4.4 µg/m^3)
2/20/2018: ND (< 4.7 µg/m^3)

SVMP-14 (2.0 FT)
9/19/2017: ND (< 4.5 µg/m^3)
11/21/2017: ND (< 4.1 µg/m^3)

BEACON ST

SVMP-17 (2.0 FT)
9/19/2017: ND (< 4.8 µg/m^3)

SVMP-08 (3.5 FT)
9/20/2017: ND (< 4.7 µg/m^3)
11/20/2017: ND (< 4.6 µg/m^3)
2/20/2018: ND (< 4.6 µg/m^3)

SVMP-09 (4.0 FT)
9/20/2017: ND (< 4.9 µg/m^3)
11/20/2017: ND (< 4.5 µg/m^3)
2/20/2018: ND (< 4.8 µg/m^3)

SVMP-13 (2.0 FT)
9/19/2017: ND (< 4.6 µg/m^3)
11/21/2017: ND (< 4.6 µg/m^3)

SVMP-16 (2.0 FT)
9/19/2017: ND (< 4.5 µg/m^3)
11/20/2017: ND (< 4.3 µg/m^3)

SVMP-15 (2.0 FT)
9/19/2017: ND (< 4.7 µg/m^3)
11/20/2017: ND (< 4.4 µg/m^3)

SVMP-06 (4.5 FT)
9/20/2017: 8.0 µg/m^3
11/20/2017: ND (< 4.5 µg/m^3)
2/21/2018: ND (< 4.6 µg/m^3)

SVMP-05 (4.5 FT)
9/20/2017: ND (< 4.8 µg/m^3)
11/20/2017: ND (< 4.6 µg/m^3)
2/21/2018: ND (< 4.2 µg/m^3)

SVMP-04 (3.5 FT)
9/20/2017: ND (< 4.9 µg/m^3)
11/20/2017: ND (< 4.9 µg/m^3)
2/21/2018: ND (< 4.7 µg/m^3)

BELDEN CT

SVMP-07 (3.5 FT)
9/20/2017: ND (< 4.8 µg/m^3)
11/20/2017: ND (< 4.7 µg/m^3)
2/19/2018: ND (< 4.5 µg/m^3)

WADSWORTH ST

SVMP-28 (3.0 FT)
9/21/2017: ND (< 4.8 µg/m^3)
11/21/2017: ND (< 4.6 µg/m^3)
2/21/2018: ND (< 4.3 µg/m^3)

SVMP-35 (4.0 FT)

SVMP-31 (5.5 FT)

SVMP-30 (4.0 FT)

SVMP-29 (3.5 FT)

SVMP-29 (7.5 FT)

SVMP-01 (3.5 FT)
9/20/2017: ND (< 5.0 µg/m^3)
11/17/2017: ND (< 4.2 µg/m^3)
2/19/2018: ND (< 4.6 µg/m^3)

BOSTON POST ST

STANDISH ST

SVMP-01 (7.0 FT)
9/20/2017: ND (< 4.8 µg/m^3)
11/17/2017: ND (< 4.8 µg/m^3)
2/19/2018: ND (< 4.5 µg/m^3)

SVMP-03 (3.5 FT)
9/21/2017: ND (< 4.9 µg/m^3)
11/17/2017: ND (< 4.0 µg/m^3)
2/19/2018: ND (< 4.3 µg/m^3)

PRISCILLA LN

SVMP-02 (4.5 FT)
9/20/2017: ND (< 5.2 µg/m^3)
11/17/2017: ND (< 4.5 µg/m^3)
2/19/2018: ND (< 8.3 µg/m^3)

SVMP-03 (7.0 FT)
9/21/2017: ND (< 4.7 µg/m^3)
11/17/2017: ND (< 4.3 µg/m^3)
2/19/2018: ND (< 4.6 µg/m^3)

SVMP-02 (8.5 FT)
9/20/2017: ND (< 5.2 µg/m^3)
11/17/2017: ND (< 4.6 µg/m^3)
2/19/2018: ND (< 8.3 µg/m^3)

PLYMOUTH RD

WAYNE RD

LAUREL ST

LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP CIS-1,2-DICHLOROETHENE < 280 µg/m^3
- OFF-SITE SVMP NOT SAMPLED FOR CIS-1,2-DICHLOROETHENE

NOTES:

µg/m^3 - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED RESIDENTIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR CIS-1,2-DICHLOROETHENE IS 280 µg/m^3

THE MDEQ PROVIDED COMMERCIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR CIS-1,2-DICHLOROETHENE IS 410 µg/m^3

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

FT = FEET BELOW GROUND SURFACE

"ND", "<" = NON-DETECT INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 4.0 TO 8.3 µg/m^3, FOR CIS-1,2-DICHLOROETHENE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING THE SEPTEMBER 2017, NOVEMBER 2017, AND FEBRUARY 2018 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017, NOVEMBER 2017, OR FEBRUARY 2018 SAMPLING EVENTS.

SVMP-17 AND SVMP-20 WERE NOT SAMPLED DURING THE NOVEMBER 2017 EVENT DUE TO SATURATED SCREENS.

SVMP-13 THROUGH SVMP-17, SVMP-20, AND SVMP-21 WERE NOT SAMPLED DURING THE FEBRUARY 2018 EVENT DUE TO SATURATED SCREENS.

SVMP-11, WHICH RESIDED IN THE CITY OF LIVONIA RIGHT-OF-WAY, WAS REMOVED PER THE ADJACENT PROPERTY OWNERS REQUEST.

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE VAPOR INTRUSION ASSESSMENT CIS-1,2-DICHLOROETHENE IN SOIL GAS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
10

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: MI001386.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GIS\docs\2018-04\Progress_Report_1Q2018\CIS_Offsite_SVMP_20180406.mxd PLOTTED: 4/18/2018 4:34:45 PM BY: mgress

SVMP-25 (3.0 FT)
9/21/2017: ND (< 8.1 µg/m^3)
11/21/2017: ND (< 7.7 µg/m^3)
2/21/2018: ND (< 7.6 µg/m^3)

SVMP-25 (6.0 FT)
9/21/2017: 12 µg/m^3
11/21/2017: ND (< 8.1 µg/m^3)
2/21/2018: ND (< 7.6 µg/m^3)

SVMP-26 (4.0 FT)
9/21/2017: ND (< 8.4 µg/m^3)
11/21/2017: ND (< 7.6 µg/m^3)
2/21/2018: ND (< 7.5 µg/m^3)

SVMP-27 (4.5 FT)
9/21/2017: ND (< 7.6 µg/m^3)
11/21/2017: ND (< 7.5 µg/m^3)
2/21/2018: ND (< 7.6 µg/m^3)

SVMP-28 (3.0 FT)
9/21/2017: 25 µg/m^3
11/21/2017: ND (< 7.9 µg/m^3)
2/21/2018: ND (< 7.3 µg/m^3)

SVMP-32 (3.0 FT)

SVMP-32 (6.0 FT)

SVMP-33 (4.0 FT)

SVMP-34 (4.0 FT)

SVMP-11 (3.5 FT)

SVMP-12 (3.5 FT)
9/19/2017: ND (< 8.2 µg/m^3)
11/21/2017: ND (< 8.0 µg/m^3)
2/20/2018: ND (< 8.1 µg/m^3)

SVMP-10 (3.0 FT)
9/20/2017: ND (< 8.2 µg/m^3)
11/21/2017: ND (< 7.5 µg/m^3)
2/20/2018: ND (< 8.1 µg/m^3)

SVMP-13 (2.0 FT)
9/19/2017: ND (< 7.9 µg/m^3)
11/21/2017: ND (< 7.8 µg/m^3)

SVMP-22 (3.0 FT)
9/18/2017: ND (< 8.2 µg/m^3)
11/17/2017: ND (< 8.4 µg/m^3)
2/20/2018: ND (< 8.1 µg/m^3)

SVMP-23 (3.0 FT)
9/18/2017: ND (< 7.9 µg/m^3)
11/17/2017: ND (< 7.4 µg/m^3)
2/20/2018: ND (< 7.2 µg/m^3)

SVMP-24 (4.0 FT)
9/18/2017: ND (< 7.9 µg/m^3)
11/17/2017: ND (< 7.5 µg/m^3)
2/21/2018: ND (< 8.1 µg/m^3)

SVMP-19 (3.0 FT)
9/18/2017: ND (< 8.8 µg/m^3)
11/17/2017: ND (< 7.4 µg/m^3)
2/20/2018: ND (< 7.1 µg/m^3)

SVMP-20 (3.0 FT)
9/19/2017: ND (< 8.2 µg/m^3)

SVMP-36 (4.0 FT)

SVMP-18 (3.0 FT)
9/18/2017: ND (< 7.9 µg/m^3)
11/17/2017: ND (< 7.3 µg/m^3)
2/20/2018: ND (< 7.8 µg/m^3)

SVMP-21 (2.0 FT)
9/19/2017: ND (< 7.9 µg/m^3)
11/20/2017: ND (< 7.9 µg/m^3)

SVMP-37 (2.5 FT)

SVMP-17 (2.0 FT)
9/19/2017: ND (< 8.2 µg/m^3)

SVMP-16 (2.0 FT)
9/19/2017: ND (< 7.8 µg/m^3)
11/20/2017: ND (< 7.4 µg/m^3)

SVMP-15 (2.0 FT)
9/19/2017: ND (< 8.1 µg/m^3)
11/20/2017: ND (< 7.6 µg/m^3)

SVMP-14 (2.0 FT)
9/19/2017: ND (< 7.8 µg/m^3)
11/21/2017: ND (< 7.0 µg/m^3)

SVMP-08 (3.5 FT)
9/20/2017: ND (< 8.1 µg/m^3)
11/20/2017: ND (< 7.9 µg/m^3)
2/20/2018: ND (< 7.9 µg/m^3)

SVMP-09 (4.0 FT)
9/20/2017: ND (< 8.4 µg/m^3)
11/20/2017: ND (< 7.7 µg/m^3)
2/20/2018: ND (< 8.2 µg/m^3)

SVMP-07 (3.5 FT)
9/20/2017: ND (< 8.2 µg/m^3)
11/20/2017: ND (< 8.1 µg/m^3)
2/19/2018: ND (< 7.7 µg/m^3)

SVMP-05 (4.5 FT)
9/20/2017: ND (< 8.2 µg/m^3)
11/20/2017: ND (< 7.8 µg/m^3)
2/21/2018: ND (< 7.2 µg/m^3)

SVMP-35 (4.0 FT)

SVMP-31 (5.5 FT)

SVMP-06 (4.5 FT)
9/20/2017: 24 µg/m^3
11/20/2017: ND (< 7.7 µg/m^3)
2/21/2018: ND (< 7.8 µg/m^3)

SVMP-04 (3.5 FT)
9/20/2017: 8.3 J µg/m^3
11/20/2017: ND (< 8.4 µg/m^3)
2/21/2018: ND (< 8.1 µg/m^3)

SVMP-30 (4.0 FT)

SVMP-29 (3.5 FT)

SVMP-29 (7.5 FT)

SVMP-01 (3.5 FT)
9/20/2017: ND (< 8.5 µg/m^3)
11/17/2017: ND (< 7.1 µg/m^3)
2/19/2018: ND (< 7.8 µg/m^3)

SVMP-01 (7.0 FT)
9/20/2017: ND (< 8.2 µg/m^3)
11/17/2017: ND (< 8.2 µg/m^3)
2/19/2018: ND (< 7.6 µg/m^3)

SVMP-02 (4.5 FT)
9/20/2017: ND (< 9.0 µg/m^3)
11/17/2017: ND (< 7.8 µg/m^3)
2/19/2018: ND (< 14 µg/m^3)

SVMP-02 (8.5 FT)
9/20/2017: ND (< 9.0 µg/m^3)
11/17/2017: ND (< 7.9 µg/m^3)
2/19/2018: ND (< 14 µg/m^3)

SVMP-03 (3.5 FT)
9/21/2017: ND (< 8.3 µg/m^3)
11/17/2017: ND (< 6.9 µg/m^3)
2/19/2018: ND (< 7.3 µg/m^3)

SVMP-03 (7.0 FT)
9/21/2017: ND (< 8.1 µg/m^3)
11/17/2017: ND (< 7.4 µg/m^3)
2/19/2018: ND (< 7.9 µg/m^3)

ROSATI AVE
CONCORD ST
CAPITOL S
STARK RD
BEACON ST
BREWSTER ST
WADSWORTH ST
BELDEN CT
STANDISH ST
BOSTON POST ST
PRISCILLA LN
PLYMOUTH RD
WAYNE RD
LAUREL ST

LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP TETRACHLOROETHENE < 1,400 µg/m^3
- OFF-SITE SVMP NOT SAMPLED FOR TETRACHLOROETHENE

NOTES:

µg/m^3 - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL (RESIDENTIAL AND COMMERCIAL) FOR TETRACLOROETHENE IS 1,400 µg/m^3

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

FT = FEET BELOW GROUND SURFACE

J = REPORTED VALUE IS ESTIMATED

"ND", "<" = NON-DETECT INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 6.9 TO 14 µg/m^3 , FOR TETRACHLOROETHENE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING THE SEPTEMBER 2017, NOVEMBER 2017, AND FEBRUARY 2018 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017, NOVEMBER 2017, OR FEBRUARY 2018 SAMPLING EVENTS.

SVMP-17 AND SVMP-20 WERE NOT SAMPLED DURING THE NOVEMBER 2017 EVENT DUE TO SATURATED SCREENS.

SVMP-13 THROUGH SVMP-17, SVMP-20, AND SVMP-21 WERE NOT SAMPLED DURING THE FEBRUARY 2018 EVENT DUE TO SATURATED SCREENS.

SVMP-11, WHICH RESIDED IN THE CITY OF LIVONIA RIGHT-OF-WAY, WAS REMOVED PER THE ADJACENT PROPERTY OWNERS REQUEST.

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE VAPOR INTRUSION ASSESSMENT TETRACHLOROETHENE IN SOIL GAS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 11

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K_HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: MI001386.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GIS\docs\2018-04\Progress_Report_1Q2018\PCE_Offsite_SVMP_20180406.mxd PLOTTED: 4/18/2018 4:35:49 PM BY: mgress

SVMP-25 (3.0 FT)
6/19/2017: ND (< 6.2 µg/m^3)
9/21/2017: ND (< 6.4 µg/m^3)
11/21/2017: ND (< 6.1 µg/m^3)
2/21/2018: ND (< 6.0 µg/m^3)

SVMP-25 (6.0 FT)
6/19/2017: ND (< 6.4 µg/m^3)
9/21/2017: ND (< 6.0 µg/m^3)
11/21/2017: ND (< 6.4 µg/m^3)
2/21/2018: ND (< 6.0 µg/m^3)

SVMP-26 (4.0 FT)
6/19/2017: ND (< 6.2 µg/m^3)
9/21/2017: ND (< 6.6 µg/m^3)
11/21/2017: ND (< 6.0 µg/m^3)
2/21/2018: ND (< 5.9 µg/m^3)

SVMP-27 (4.5 FT)
6/19/2017: ND (< 6.2 µg/m^3)
9/21/2017: 7.2 µg/m^3
11/21/2017: ND (< 5.9 µg/m^3)
2/21/2018: ND (< 6.0 µg/m^3)

SVMP-28 (3.0 FT)
6/19/2017: ND (< 6.1 µg/m^3)
9/21/2017: ND (< 6.5 µg/m^3)
11/21/2017: ND (< 6.3 µg/m^3)
2/21/2018: ND (< 5.8 µg/m^3)

SVMP-32 (3.0 FT)
6/15/2017: ND (< 6.4 µg/m^3)

SVMP-32 (6.0 FT)
6/15/2017: ND (< 6.5 µg/m^3)

SVMP-08 (3.5 FT)
6/15/2017: ND (< 6.5 µg/m^3)
9/20/2017: ND (< 6.4 µg/m^3)
11/20/2017: ND (< 6.2 µg/m^3)
2/20/2018: ND (< 6.3 µg/m^3)

SVMP-07 (3.5 FT)
6/13/2017: ND (< 6.3 µg/m^3)
9/20/2017: ND (< 6.5 µg/m^3)
11/20/2017: ND (< 6.4 µg/m^3)
2/19/2018: ND (< 6.1 µg/m^3)

SVMP-35 (4.0 FT)
6/15/2017: ND (< 6.9 µg/m^3)

SVMP-31 (5.5 FT)
6/14/2017: ND (< 6.1 µg/m^3)

SVMP-29 (3.5 FT)
6/14/2017: ND (< 6.3 µg/m^3)

SVMP-29 (7.5 FT)
6/14/2017: ND (< 6.0 µg/m^3)

SVMP-01 (3.5 FT)
6/8/2017: ND (< 6.2 µg/m^3)
9/20/2017: ND (< 6.8 µg/m^3)
11/17/2017: ND (< 5.6 µg/m^3)
2/19/2018: ND (< 6.2 µg/m^3)

SVMP-01 (7.0 FT)
6/8/2017: ND (< 6.2 µg/m^3)
9/20/2017: ND (< 6.5 µg/m^3)
11/17/2017: ND (< 6.5 µg/m^3)
2/19/2018: ND (< 6.0 µg/m^3)

SVMP-11 (3.5 FT)
6/13/2017: ND (< 6.3 µg/m^3)

SVMP-34 (4.0 FT)
6/15/2017: ND (< 6.3 µg/m^3)

SVMP-33 (4.0 FT)
6/15/2017: ND (< 6.5 µg/m^3)

SVMP-09 (4.0 FT)
6/14/2017: 6.9 µg/m^3
9/20/2017: ND (< 6.6 µg/m^3)
11/20/2017: ND (< 6.1 µg/m^3)
2/20/2018: ND (< 6.5 µg/m^3)

SVMP-05 (4.5 FT)
6/12/2017: ND (< 6.7 µg/m^3)
9/20/2017: ND (< 6.5 µg/m^3)
11/20/2017: ND (< 6.2 µg/m^3)
2/21/2018: ND (< 5.7 µg/m^3)

SVMP-06 (4.5 FT)
6/13/2017: ND (< 6.0 µg/m^3)
9/20/2017: ND (< 6.3 µg/m^3)
11/20/2017: ND (< 6.1 µg/m^3)
2/21/2018: ND (< 6.2 µg/m^3)

SVMP-12 (3.5 FT)
6/13/2017: ND (< 6.4 µg/m^3)
9/19/2017: ND (< 6.5 µg/m^3)
11/21/2017: ND (< 6.3 µg/m^3)
2/20/2018: ND (< 6.4 µg/m^3)

SVMP-13 (2.0 FT)
6/16/2017: ND (< 6.6 µg/m^3)
9/19/2017: ND (< 6.3 µg/m^3)
11/21/2017: ND (< 6.2 µg/m^3)

SVMP-10 (3.0 FT)
6/13/2017: ND (< 6.7 µg/m^3)
9/20/2017: ND (< 6.5 µg/m^3)
11/21/2017: ND (< 5.9 µg/m^3)
2/20/2018: ND (< 6.4 µg/m^3)

SVMP-02 (4.5 FT)
6/9/2017: ND (< 6.0 µg/m^3)
9/20/2017: ND (< 7.1 µg/m^3)
11/17/2017: ND (< 6.2 µg/m^3)
2/19/2018: ND (< 11 µg/m^3)

SVMP-02 (8.5 FT)
6/9/2017: ND (< 6.1 µg/m^3)
9/20/2017: ND (< 7.1 µg/m^3)
11/17/2017: ND (< 6.3 µg/m^3)
2/19/2018: ND (< 11 µg/m^3)

SVMP-22 (3.0 FT)
6/19/2017: ND (< 6.4 µg/m^3)
9/18/2017: ND (< 6.5 µg/m^3)
11/17/2017: ND (< 6.7 µg/m^3)
2/20/2018: ND (< 6.4 µg/m^3)

SVMP-23 (3.0 FT)
6/19/2017: ND (< 6.4 µg/m^3)
9/18/2017: ND (< 6.3 µg/m^3)
11/17/2017: ND (< 5.8 µg/m^3)
2/20/2018: ND (< 5.7 µg/m^3)

SVMP-24 (4.0 FT)
6/19/2017: ND (< 6.2 µg/m^3)
9/18/2017: ND (< 6.3 µg/m^3)
11/17/2017: ND (< 5.9 µg/m^3)
2/21/2018: ND (< 6.4 µg/m^3)

SVMP-19 (3.0 FT)
6/16/2017: ND (< 6.4 µg/m^3)
9/18/2017: ND (< 6.9 µg/m^3)
11/17/2017: ND (< 5.9 µg/m^3)
2/20/2018: ND (< 5.6 µg/m^3)

SVMP-36 (4.0 FT)
6/16/2017: ND (< 6.2 µg/m^3)

SVMP-18 (3.0 FT)
6/16/2017: ND (< 6.6 µg/m^3)
9/18/2017: ND (< 6.3 µg/m^3)
11/17/2017: ND (< 5.8 µg/m^3)
2/20/2018: ND (< 6.2 µg/m^3)

SVMP-20 (3.0 FT)
6/19/2017: ND (< 5.8 µg/m^3)
9/19/2017: ND (< 6.5 µg/m^3)

SVMP-21 (2.0 FT)
6/19/2017: ND (< 6.2 µg/m^3)
9/19/2017: ND (< 6.3 µg/m^3)
11/20/2017: ND (< 6.2 µg/m^3)

SVMP-37 (2.5 FT)
6/16/2017: ND (< 6.2 µg/m^3)

SVMP-17 (2.0 FT)
6/16/2017: 18 µg/m^3
9/19/2017: 22 µg/m^3

SVMP-16 (2.0 FT)
6/16/2017: ND (< 6.4 µg/m^3)
9/19/2017: ND (< 6.2 µg/m^3)
11/20/2017: ND (< 5.9 µg/m^3)

SVMP-15 (2.0 FT)
6/16/2017: ND (< 6.3 µg/m^3)
9/19/2017: ND (< 6.4 µg/m^3)
11/20/2017: ND (< 6.0 µg/m^3)

SVMP-14 (2.0 FT)
6/16/2017: ND (< 6.4 µg/m^3)
9/19/2017: ND (< 6.2 µg/m^3)
11/21/2017: ND (< 5.6 µg/m^3)

SVMP-04 (3.5 FT)
6/12/2017: ND (< 6.0 µg/m^3)
9/20/2017: ND (< 6.6 µg/m^3)
11/20/2017: ND (< 6.7 µg/m^3)
2/21/2018: ND (< 6.4 µg/m^3)

SVMP-30 (4.0 FT)
6/14/2017: 31 µg/m^3

SVMP-03 (3.5 FT)
6/12/2017: ND (< 6.3 µg/m^3)
9/21/2017: ND (< 6.6 µg/m^3)
11/17/2017: ND (< 5.5 µg/m^3)
2/19/2018: ND (< 5.8 µg/m^3)

SVMP-03 (7.0 FT)
6/12/2017: ND (< 6.8 µg/m^3)
9/21/2017: ND (< 6.4 µg/m^3)
11/17/2017: ND (< 5.8 µg/m^3)
2/19/2018: ND (< 6.3 µg/m^3)

ROSATI AVE
CONCORD ST
CAPITOL ST
STARK RD
BEACON ST
BELDEN CT
WADSWORTH ST
BOSTON POST ST
PRISCILLA LN
WAYNE RD
PLYMOUTH RD
LAUREL ST

LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP TRICHLOROETHENE < 67 µg/m^3

NOTES:

µg/m^3 - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL (RESIDENTIAL AND COMMERCIAL) FOR TRICHLOROETHENE IS 67 µg/m^3

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

FT = FEET BELOW GROUND SURFACE

"ND", "<" = NON-DETECT INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 5.5 TO 11 µg/m^3, FOR TRICHLOROETHENE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING THE JUNE 2017, SEPTEMBER 2017, NOVEMBER 2017, AND FEBRUARY 2018 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017, NOVEMBER 2017, OR FEBRUARY 2018 SAMPLING EVENTS.

SVMP-17 AND SVMP-20 WERE NOT SAMPLED DURING THE NOVEMBER 2017 EVENT DUE TO SATURATED SCREENS.

SVMP-13 THROUGH SVMP-17, SVMP-20, AND SVMP-21 WERE NOT SAMPLED DURING THE FEBRUARY 2018 EVENT DUE TO SATURATED SCREENS.

SVMP-11, WHICH RESIDED IN THE CITY OF LIVONIA RIGHT-OF-WAY, WAS REMOVED PER THE ADJACENT PROPERTY OWNERS REQUEST.

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE VAPOR INTRUSION ASSESSMENT TRICHLOROETHENE IN SOIL GAS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
12

CITY: NOVI DIV: ENV DB: MG PIC: R_ELLIS PM: K_HINSKEY TM: A_DEGRANDIS TR: P_CURRY PROJECT NUMBER: MI001386.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GIS\docs\2018-04\Progress_Report_1Q2018\TCE_Offsite_SVMP_20180406.mxd PLOTTED: 4/18/2018 4:36:55 PM BY: mgress

This document is a DRAFT document that has not received approval from the MDEQ. 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 the MDEQ.

SVMP-25 (3.0 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/21/2017: ND (< 3.0 µg/m^3)
11/21/2017: ND (< 2.9 µg/m^3)
2/21/2018: ND (< 2.9 µg/m^3)

SVMP-25 (6.0 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/21/2017: ND (< 2.9 µg/m^3)
11/21/2017: ND (< 3.0 µg/m^3)
2/21/2018: ND (< 2.9 µg/m^3)

SVMP-26 (4.0 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/21/2017: ND (< 3.2 µg/m^3)
11/21/2017: ND (< 2.9 µg/m^3)
2/21/2018: ND (< 2.8 µg/m^3)

SVMP-32 (3.0 FT)
6/15/2017: ND (< 3.0 µg/m^3)

SVMP-32 (6.0 FT)
6/15/2017: ND (< 3.1 µg/m^3)

SVMP-27 (4.5 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/21/2017: ND (< 2.9 µg/m^3)
11/21/2017: ND (< 2.8 µg/m^3)
2/21/2018: ND (< 2.9 µg/m^3)

SVMP-28 (3.0 FT)
6/19/2017: ND (< 2.9 µg/m^3)
9/21/2017: ND (< 3.1 µg/m^3)
11/21/2017: ND (< 3.0 µg/m^3)
2/21/2018: ND (< 2.8 µg/m^3)

SVMP-08 (3.5 FT)
6/15/2017: ND (< 3.1 µg/m^3)
9/20/2017: ND (< 3.0 µg/m^3)
11/20/2017: ND (< 3.0 µg/m^3)
2/20/2018: ND (< 3.0 µg/m^3)

SVMP-07 (3.5 FT)
6/13/2017: ND (< 3.0 µg/m^3)
9/20/2017: ND (< 3.1 µg/m^3)
11/20/2017: ND (< 3.0 µg/m^3)
2/19/2018: ND (< 2.9 µg/m^3)

SVMP-35 (4.0 FT)
6/15/2017: ND (< 3.3 µg/m^3)

SVMP-29 (3.5 FT)
6/14/2017: ND (< 3.0 µg/m^3)

SVMP-29 (7.5 FT)
6/14/2017: ND (< 2.8 µg/m^3)

SVMP-01 (3.5 FT)
6/8/2017: ND (< 3.0 µg/m^3)
9/20/2017: ND (< 3.2 µg/m^3)
11/17/2017: ND (< 2.7 µg/m^3)
2/19/2018: ND (< 2.9 µg/m^3)

SVMP-01 (7.0 FT)
6/8/2017: ND (< 3.0 µg/m^3)
9/20/2017: ND (< 3.1 µg/m^3)
11/17/2017: ND (< 3.1 µg/m^3)
2/19/2018: ND (< 2.9 µg/m^3)

SVMP-09 (4.0 FT)
6/14/2017: ND (< 3.0 µg/m^3)
9/20/2017: ND (< 3.2 µg/m^3)
11/20/2017: ND (< 2.9 µg/m^3)
2/20/2018: ND (< 3.1 µg/m^3)

SVMP-05 (4.5 FT)
6/12/2017: ND (< 3.2 µg/m^3)
9/20/2017: ND (< 3.1 µg/m^3)
11/20/2017: ND (< 2.9 µg/m^3)
2/21/2018: ND (< 2.7 µg/m^3)

SVMP-06 (4.5 FT)
6/13/2017: ND (< 2.9 µg/m^3)
9/20/2017: ND (< 3.0 µg/m^3)
11/20/2017: ND (< 2.9 µg/m^3)
2/21/2018: ND (< 3.0 µg/m^3)

SVMP-31 (5.5 FT)
6/14/2017: ND (< 2.9 µg/m^3)

SVMP-11 (3.5 FT)
6/13/2017: ND (< 3.0 µg/m^3)

SVMP-34 (4.0 FT)
6/15/2017: ND (< 3.0 µg/m^3)

SVMP-33 (4.0 FT)
6/15/2017: ND (< 3.1 µg/m^3)

SVMP-12 (3.5 FT)
6/13/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 3.1 µg/m^3)
11/21/2017: ND (< 3.0 µg/m^3)
2/20/2018: ND (< 3.0 µg/m^3)

SVMP-13 (2.0 FT)
6/16/2017: ND (< 3.2 µg/m^3)
9/19/2017: ND (< 3.0 µg/m^3)
11/21/2017: ND (< 2.9 µg/m^3)

SVMP-10 (3.0 FT)
6/13/2017: ND (< 3.2 µg/m^3)
9/20/2017: ND (< 3.1 µg/m^3)
11/21/2017: ND (< 2.8 µg/m^3)
2/20/2018: ND (< 3.0 µg/m^3)

SVMP-22 (3.0 FT)
6/19/2017: ND (< 3.1 µg/m^3)
9/18/2017: ND (< 3.1 µg/m^3)
11/17/2017: ND (< 3.2 µg/m^3)
2/20/2018: ND (< 3.0 µg/m^3)

SVMP-23 (3.0 FT)
6/19/2017: ND (< 3.1 µg/m^3)
9/18/2017: ND (< 3.0 µg/m^3)
11/17/2017: ND (< 2.8 µg/m^3)
2/20/2018: ND (< 2.7 µg/m^3)

SVMP-24 (4.0 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/18/2017: ND (< 3.0 µg/m^3)
11/17/2017: ND (< 2.8 µg/m^3)
2/21/2018: ND (< 3.0 µg/m^3)

SVMP-19 (3.0 FT)
6/16/2017: ND (< 3.0 µg/m^3)
9/18/2017: ND (< 3.3 µg/m^3)
11/17/2017: ND (< 2.8 µg/m^3)
2/20/2018: ND (< 2.7 µg/m^3)

SVMP-36 (4.0 FT)
6/16/2017: ND (< 2.9 µg/m^3)

SVMP-18 (3.0 FT)
6/16/2017: ND (< 3.2 µg/m^3)
9/18/2017: ND (< 3.0 µg/m^3)
11/17/2017: ND (< 2.8 µg/m^3)
2/20/2018: ND (< 2.9 µg/m^3)

SVMP-21 (2.0 FT)
6/19/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 3.0 µg/m^3)
11/20/2017: ND (< 3.0 µg/m^3)

SVMP-20 (3.0 FT)
6/19/2017: ND (< 2.7 µg/m^3)
9/19/2017: ND (< 3.1 µg/m^3)

SVMP-37 (2.5 FT)
6/16/2017: ND (< 3.0 µg/m^3)

SVMP-17 (2.0 FT)
6/16/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 3.1 µg/m^3)

SVMP-16 (2.0 FT)
6/16/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 2.9 µg/m^3)
11/20/2017: ND (< 2.8 µg/m^3)

SVMP-15 (2.0 FT)
6/16/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 3.0 µg/m^3)
11/20/2017: ND (< 2.9 µg/m^3)

SVMP-04 (3.5 FT)
6/12/2017: ND (< 2.9 µg/m^3)
9/20/2017: ND (< 3.2 µg/m^3)
11/20/2017: ND (< 3.2 µg/m^3)
2/21/2018: ND (< 3.0 µg/m^3)

SVMP-14 (2.0 FT)
6/16/2017: ND (< 3.0 µg/m^3)
9/19/2017: ND (< 2.9 µg/m^3)
11/21/2017: ND (< 2.6 µg/m^3)

SVMP-30 (4.0 FT)
6/14/2017: ND (< 2.9 µg/m^3)

SVMP-03 (3.5 FT)
6/12/2017: ND (< 3.0 µg/m^3)
9/21/2017: ND (< 3.1 µg/m^3)
11/17/2017: ND (< 2.6 µg/m^3)
2/19/2018: ND (< 2.8 µg/m^3)

SVMP-03 (7.0 FT)
6/12/2017: ND (< 3.2 µg/m^3)
9/21/2017: ND (< 3.0 µg/m^3)
11/17/2017: ND (< 2.8 µg/m^3)
2/19/2018: ND (< 3.0 µg/m^3)

SVMP-02 (4.5 FT)
6/9/2017: ND (< 2.8 µg/m^3)
9/20/2017: ND (< 3.4 µg/m^3)
11/17/2017: ND (< 2.9 µg/m^3)
2/19/2018: ND (< 5.3 µg/m^3)

SVMP-02 (8.5 FT)
6/9/2017: ND (< 2.9 µg/m^3)
9/20/2017: ND (< 3.4 µg/m^3)
11/17/2017: ND (< 3.0 µg/m^3)
2/19/2018: ND (< 5.3 µg/m^3)

ROSATI AVE
CONCORD ST
CAPITOL ST
BEACON ST
STARK RD
WADSWORTH ST
BOSTON POST ST
PRISCILLA LN
PLYMOUTH RD
BELDEN CT
WAYNE RD
LAUREL ST

LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP VINYL CHLORIDE < 54 µg/m^3

NOTES:

µg/m^3 - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED RESIDENTIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR VINYL CHLORIDE IS 54 µg/m^3

THE MDEQ PROVIDED COMMERCIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR VINYL CHLORIDE IS 450 µg/m^3

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

FT = FEET BELOW GROUND SURFACE

"ND", "<" = NON-DETECT INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 2.6 TO 5.3 µg/m^3, FOR VINYL CHLORIDE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING THE JUNE 2017, SEPTEMBER 2017, NOVEMBER 2017, AND FEBRUARY 2018 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017, NOVEMBER 2017, OR FEBRUARY 2018 SAMPLING EVENTS.

SVMP-17 AND SVMP-20 WERE NOT SAMPLED DURING THE NOVEMBER 2017 EVENT DUE TO SATURATED SCREENS.

SVMP-13 THROUGH SVMP-17, SVMP-20, AND SVMP-21 WERE NOT SAMPLED DURING THE FEBRUARY 2018 EVENT DUE TO SATURATED SCREENS.

SVMP-11, WHICH RESIDED IN THE CITY OF LIVONIA RIGHT-OF-WAY, WAS REMOVED PER THE ADJACENT PROPERTY OWNERS REQUEST.

0 300 600
SCALE IN FEET

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE VAPOR INTRUSION ASSESSMENT
VINYL CHLORIDE IN SOIL GAS

ARCADIS Design & Consultancy for natural and built assets

FIGURE
13

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: MI001386.0001.00003 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GISProjects_ENV\NoviBrighton_MI\FordLivonia\GISdocs\2018-04\Progress_Report_1Q2018\VC_Offsite_SVMP_20180406.mxd PLOTTED: 4/18/2018 4:37:57 PM BY: mgress

APPENDIX A

On-Site Groundwater Field Sampling Logs

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-62 | Replicate No.: - | Code No.: -

Weather: COLD, 18°F | Sampling Time: Begin 1256 End 1300

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.15
Depth to Water (ft bmp)	9.46
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.69
Casing Diameter/Type	2" PVC
Gallons in Well	1.8704
Gallons Pumped/Bailed Prior to Sampling	~2.5
Sample Pump Intake Setting (ft bmp)	19.15
Purge Time	begin 1205 end 1255
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.98
SpC (mS/cm)	4.502
CND (mS/cm)	2.926
Dissolved Oxygen (%)	4.0
Dissolved Oxygen (mg/L)	0.44
pH (s.u.)	7.07
ORP (mV)	-43.8
Turbidity (NTU)	12.9
Color	NONE
Odor	NONE
Appearance	CLEAR WITH SUSPENDED ORANGE-COLORED PARTICLES
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DICAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) ~~MI001373.0001.00002 (off)~~ PAGE 2 OF 2

WELL : MW-62 PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1215	12.52	4.554	2.961	6.4	0.68	6.57	38.2	200	45.3	9.54
1220	12.48	4.544	2.953	5.7	0.60	6.73	-2.2	"	29.9	"
1225	12.42	4.536	2.948	5.5	0.58	6.85	-21.9	"	20.9	"
1230	12.54	4.526	2.942	4.5	0.48	6.92	-28.6	"	17.4	9.53
1235	12.65	4.506	2.930	3.9	0.40	6.97	-33.7	"	15.4	9.54
1240	12.63	4.502	2.926	3.7	0.39	7.00	-36.9	"	12.8	"
1245	12.55	4.490	2.918	4.3	0.44	7.02	-38.8	"	12.1	"
1250	12.53	4.472	2.907	4.7	0.50	7.06	-38.9	"	11.2	"
1255	11.98	4.502	2.926	4.0	0.44	7.07	-43.8	↓	12.9	"
1256	COLLECT SAMPLE (EVEN THOUGH TURBIDITY +10, PARAMETERS LOOK STABLE).									
Total Depth of Well:		21.15								
Depth To Water Before Purging:			9.46							
Depth To Water After Purging:			9.54							

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001386.0001.20000	Page	1 of 2
Location	Livonia, MI			Date	2/6/18
Site/Well No.	MW-22	Replicate No.	—	Code No.	—
Weather	SUNNY, 18°F	Sampling Time:	Begin 1500	End	1510

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.48
Depth to Water (ft bmp)	7.61
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.87
Casing Diameter/Type	2" PVC
Gallons in Well	2.0592
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	18.48
Purge Time	begin 1420 end 1500
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.77
SpC (mS/cm)	7.682
CND (mS/cm)	4.993
Dissolved Oxygen (%)	7.2
Dissolved Oxygen (mg/L)	0.77
pH (s.u.)	7.55
ORP (mV)	-54.3
Turbidity (NTU)	1.63
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-22 PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1430	10.23	9.154	5.942	9.1	0.99	7.61	-85.1	220	12.9	7.78
1440	10.44	8.335	5.412	9.2	1.00	7.59	-76.8	"	3.48	"
1445	10.67	7.908	5.137	6.5	0.70	7.57	-66.1	"	2.81	"
1450	10.73	7.773	5.051	5.7	0.61	7.56	-63.5	"	2.05	7.80
1455	10.88	7.688	4.997	5.5	0.59	7.56	-56.1	"	1.85	"
1500	10.77	7.682	4.993	7.2	0.77	7.55	-54.3	↓	1.63	"
1502	COLLECT SAMPLE									

Total Depth of Well:	20.48
Depth To Water Before Purging:	7.61
Depth To Water After Purging:	7.80

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-44 | Replicate No.: – | Code No.: –

Weather: OVERCAST, 18°F | Sampling Time: Begin 1607 End 1615

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.90
Depth to Water (ft bmp)	8.53
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.37
Casing Diameter/Type	2" PVC
Gallons in Well	1.9792
Gallons Pumped/Bailed Prior to Sampling	DK NR ~2
Sample Pump Intake Setting (ft bmp)	18.90
Purge Time	begin 1535 end 1605
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.78
SpC (mS/cm)	4.608
CND (mS/cm)	2.995
Dissolved Oxygen (%)	8.4
Dissolved Oxygen (mg/L)	0.94
pH (s.u.)	7.78
ORP (mV)	-80.2
Turbidity (NTU)	4.96
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2

~~MI001373.0001.00002 (off)~~

WELL : MW-44 PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
15:40	9.72	4.920	3.198	10.3	1.16	7.91	-81.4	200	8.59	8.65
15:45	9.71	4.680	3.041	10.7	1.20	7.82	-88.1	"	6.45	8.66
15:50	9.72	4.630	3.009	10.4	1.16	7.80	-83.6	"	4.65	"
15:55	9.80	4.627	3.007	9.1	1.02	7.79	-81.0	"	4.50	"
16:00	9.61	4.631	3.010	9.3	1.05	7.78	-80.5	"	4.96	"
16:05	9.78	4.608	2.995	8.4	0.94	7.78	-80.2	↓	4.96	8.66
1607	COLLECT SAMPLE									

Total Depth of Well:	20.90
Depth To Water Before Purging:	8.53
Depth To Water After Purging:	8.66

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-65 | Replicate No.: - | Code No.: -

Weather: SUNNY, 18°F | Sampling Time: Begin 1702 End 1707

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.16
Depth to Water (ft bmp)	10.05
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.11
Casing Diameter/Type	2" PVC
Gallons in Well	1.7776
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	19.16
Purge Time	begin 1630 end 1700
Pumping Rate (ml/min)	250
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.98
SpC (mS/cm)	2.862
CND (mS/cm)	1.861
Dissolved Oxygen (%)	3.6
Dissolved Oxygen (mg/L)	0.40
pH (s.u.)	7.39
ORP (mV)	-85.5
Turbidity (NTU)	1.38
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-65 PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1635	9.20	3.818	2.474	6.9	0.78	7.63	-62.4	250	8.89	10.12
1640	9.38	2.833	1.840	6.9	0.78	7.48	-71.7	"	5.52	"
1645	9.77	2.761	1.794	5.6	0.63	7.43	-77.7	"	3.51	"
1650	9.83	2.780	1.807	4.5	0.51	7.42	-81.5	"	2.42	"
1655	9.93	2.850	1.853	3.6	0.40	7.40	-84.9	"	1.37	"
1700	9.98	2.862	1.861	3.6	0.40	7.39	-85.5	↓	1.38	"
1702	COLLECT SAMPLE									
		21.16								

Total Depth of Well: ~~10.05~~ DK

Depth To Water Before Purging: 10.05

Depth To Water After Purging: 10.12

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: TW-16-01 | Replicate No.: – | Code No.: –

Weather: COLD, 21°F | Sampling Time: Begin 1455 End 1500

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	16.87
Depth to Water (ft bmp)	7.94
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	8.93
Casing Diameter/Type	2" PVC
Gallons in Well	1.4288
Gallons Pumped/Bailed Prior to Sampling	~4
Sample Pump Intake Setting (ft bmp)	14.57
Purge Time	begin 1345 end 1450
Pumping Rate (ml/min)	230
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.27
SpC (mS/cm)	3.378
CND (mS/cm)	2.364
Dissolved Oxygen (%)	7.1
Dissolved Oxygen (mg/L)	0.81
pH (s.u.)	7.35
ORP (mV)	-70.3
Turbidity (NTU)	7.60
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : TW-16-01 PROJ #:

DATE : 2/7/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1350	8.73	3.253	2.115	5.4	0.62	7.49	153.9	230	71.6	8.00
~~1355~~	~~5.87~~	~~0.024~~								
1355	8.41	3.292	2.140	9.2	1.07	7.31	104.0		34.4	"
1400	8.35	3.306	2.150	7.1	0.83	7.29	60.0		31.6	"
1405	8.54	3.300	2.267	6.6	0.76	7.29	17.0		28.3	"
1410	8.45	3.314	2.266	5.8	0.67	7.29	-1.1		30.6	"
1415	8.33	3.316	2.261	5.2	0.60	7.40	-22.0		27.4	"
1420	8.75	3.310	2.284	5.6	0.64	7.31	-31.9		24.1	"
1425	8.59	3.351	2.300	6.6	0.77	7.44	-44.0		19.4	"
1430	8.92	3.339	2.315	6.3	0.72	7.50	-50.4		16.3	"
1435	9.02	3.359	2.333	6.4	0.73	7.52	-54.9		14.1	"
1440	8.71	3.381	2.329	5.3	0.61	7.50	-65.6		10.2	"
1445	8.96	3.376	2.343	7.0	0.81	7.41	-67.8		9.02	"
1450	9.27	3.378	2.364	7.1	0.81	7.35	-70.3	↓	7.60	"
1455	COLLECT SAMPLE									

Total Depth of Well:	16.87
Depth To Water Before Purging:	7.94
Depth To Water After Purging:	8.00

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: ~~PW-16-01~~ DK PW-1601 | Replicate No.: – | Code No.: –

Weather: COLD, 20°F | Sampling Time: Begin 1555 End 1600

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.62
Depth to Water (ft bmp)	8.72
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.90
Casing Diameter/Type	2" PVC
Gallons in Well	18.963
Gallons Pumped/Bailed Prior to Sampling	~~2.0~~ DK ~2.0
Sample Pump Intake Setting (ft bmp)	17.62*
Purge Time	begin 1520 end 1550
Pumping Rate (ml/min)	250
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.50
SpC (mS/cm)	3.000
CND (mS/cm)	2.112
Dissolved Oxygen (%)	4.4
Dissolved Oxygen (mg/L)	0.50
pH (s.u.)	7.42
ORP (mV)	-24.8
Turbidity (NTU)	4.56
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	* HAS A SUMP @ BOTTOM. SO, PULLED UP BY 4 FT.

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65 DK
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47 DK

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : PW-16-01

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

DATE : 2/7/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1525	8.49	3.114	2.134	9.6	1.11	7.41	-31.3	250	10.8	8.72
1530	8.47	3.118	2.133	6.8	0.79	7.41	-33.8	↓	8.06	"
1535	8.61	3.066	2.105	6.5	0.75	7.38	-32.8	↓	8.75	"
1540	8.73	3.018	2.081	5.7	0.66	7.41	-30.4	↓	10.3	"
1545	9.23	2.975	2.080	9.8	1.10	7.40	-24.4	↓	6.56	"
1550	9.50	3.000	2.112	4.4	0.50	7.42	-24.8	↓	4.56	"
1555	COLLECT SAMPLE									

Total Depth of Well: 21.62

Depth To Water Before Purging: 8.72

Depth To Water After Purging: 8.72

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-63 | Replicate No.: — | Code No.: —

Weather: COLD, 20°F | Sampling Time: Begin 1705 End 1710

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	11.80
Depth to Water (ft bmp)	8.75
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	3.05
Casing Diameter/Type	2" PVC
Gallons in Well	0.488
Gallons Pumped/Bailed Prior to Sampling	~2.0
Sample Pump Intake Setting (ft bmp)	9.80
Purge Time	begin 1630 end 1705
Pumping Rate (ml/min)	225
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	7.53
SpC (mS/cm)	2.791
CND (mS/cm)	1.860
Dissolved Oxygen (%)	5.7
Dissolved Oxygen (mg/L)	0.66
pH (s.u.)	7.48
ORP (mV)	-58.9
Turbidity (NTU)	2.01
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: NCAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-63

PROJ #:

DATE : 2/7/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1635	7.06	2.828	1.860	8.8	1.05	7.53	0.1	225	19.3	8.82
1640	7.38	2.835	1.881	5.7	0.69	7.51	-15.0	|	7.36	"
1645	7.59	2.828	1.887	5.8	0.70	7.50	-33.5	|	3.89	"
1650	7.42	2.813	1.868	6.3	0.75	7.49	-50.5	|	2.59	"
1655	7.47	2.801	1.864	6.2	0.73	7.49	-54.3	|	2.01	"
1700	7.53	2.791	1.860	5.7	0.66	7.48	-58.9	↓	2.01	"
1705	COLLECT	SAMPLE								
Total Depth of Well:		11.80								
Depth To Water Before Purging:		8.75								
Depth To Water After Purging:		8.82								

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-51 | Replicate No.: | Code No.:

Weather: OVERCAST, 18F | Sampling Time: Begin 1655 End 1700

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.95
Depth to Water (ft bmp)	7.89
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.06
Casing Diameter/Type	2" PVC
Gallons in Well	1.7696
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	16.95
Purge Time	begin 1620 end 1655
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	5.95
SpC (mS/cm)	0.853
CND (mS/cm)	0.542
Dissolved Oxygen (%)	9.6
Dissolved Oxygen (mg/L)	1.19
pH (s.u.)	7.71
ORP (mV)	42.3
Turbidity (NTU)	3.21
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-51 PROJ #:

DATE : 2/8/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1625	5.70	1.071	0.677	29.9	3.70	8.05	71.4	220	13.4	7.89
1630	6.21	0.974	0.623	14.6	1.80	7.75	63.7		5.60	"
1635	5.65	0.914	0.576	11.5	1.44	7.74	56.4		3.58	"
1640	5.87	0.874	0.555	10.2	1.27	7.71	49.8		3.32	"
1645	5.84	0.863	0.547	10.2	1.27	7.66	47.1		3.32	"
1650	5.95	0.853	0.542	9.6	1.19	7.71	42.3	↓	3.21	"
1655	COLLECT SAMPLE									

Total Depth of Well:	18.95									
Depth To Water Before Purging:	7.89									
Depth To Water After Purging:	7.89									

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/9/18

Site/Well No.: MW-57 | Replicate No.: – | Code No.: –

Weather: SNOWY, WINDY, 19°F | Sampling Time: Begin 1140 End 1145

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.80
Depth to Water (ft bmp)	7.86
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	13.94
Casing Diameter/Type	2" PVC
Gallons in Well	2.2304
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	19.80
Purge Time	begin 1105 end 1135
Pumping Rate (ml/min)	230
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.63
SpC (mS/cm)	3.702
CND (mS/cm)	2.757
Dissolved Oxygen (%)	5.2
Dissolved Oxygen (mg/L)	0.55
pH (s.u.)	7.69
ORP (mV)	-91.5
Turbidity (NTU)	6.41
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-57 PROJ #:

DATE : 2/9/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1110	11.88	3.500	2.625	41.7	4.27	7.60	111.9	230	4.06	7.86
1115	12.01	3.562	2.679	15.6	1.63	7.62	60.4	"	8.70	"
1120	11.99	3.528	2.651	10.6	1.13	7.68	13.5	"	8.27	"
1125	11.42	3.622	2.670	10.6	1.16	7.70	-32.6	"	6.95	"
1130	11.26	3.628	2.677	7.6	0.82	7.68	-65.5	"	7.11	"
1135	11.41	3.673	2.720	6.3	0.68	7.69	-83.5	"	7.95	"
~~1140~~	~~COLLECT~~	~~SAMPLE~~								PK
1140	11.63	3.702	2.757	5.2	0.55	7.69	-91.5	↓	6.41	"
1141	COLLECT	SAMPLE								

Total Depth of Well:	21.80	
Depth To Water Before Purging:		7.86
Depth To Water After Purging:		7.86

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/9/18

Site/Well No.: MW-64 | Replicate No.: — | Code No.: —

Weather: SNOWING, WINDY, 19°F | Sampling Time: Begin 1255 End 1300

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.19
Depth to Water (ft bmp)	10.14
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.05
Casing Diameter/Type	2" PVC
Gallons in Well	1.608
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	18.19
Purge Time	begin 1215 end 1255
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.65
SpC (mS/cm)	3.209
CND (mS/cm)	2.452
Dissolved Oxygen (%)	2.6
Dissolved Oxygen (mg/L)	0.27
pH (s.u.)	7.97
ORP (mV)	-132.6
Turbidity (NTU)	4.14
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	COVERED CASING WITH PLUG DURING SAMPLING TO PREVENT SNOW FROM ENTERING WELL

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DICAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2

WELL : MW-64 PROJ #: MI001373.0001.00002 (off)

DATE : 2/9/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1220	7.18	3.384	2.238	21.5	2.55	8.08	-126.8	220	12.8	10.14
1230	11.23	3.243	2.396	5.0	0.54	8.11	-130.6	↓	10.7	"
1235	12.17	3.273	2.471	3.5	0.37	8.16	-134.7	↓	9.10	"
1240	12.31	3.265	2.474	3.3	0.34	8.12	-135.8	↓	6.69	"
1245	12.41	3.234	2.456	2.2	0.23	7.84	-132.8	↓	4.64	"
1250	12.65	3.209	2.452	2.6	0.27	7.97	-132.6	↓	4.14	"
1255	COLLECT SAMPLE									

Total Depth of Well: 20.19

Depth To Water Before Purging: 10.14

Depth To Water After Purging: 10.14

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-32 | Replicate No.: — | Code No.: —

Weather: COLD, SUNNY, 10°F | Sampling Time: Begin 1015 End 1020

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	22.78
Depth to Water (ft bmp)	10.20
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.58
Casing Diameter/Type	2" PVC
Gallons in Well	2.028
Gallons Pumped/Bailed Prior to Sampling	~2.5
Sample Pump Intake Setting (ft bmp)	20.78
Purge Time	begin 0925 end 1015
Pumping Rate (ml/min)	230
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.37
SpC (mS/cm)	4.530
CND (mS/cm)	3.095
Dissolved Oxygen (%)	19.9
Dissolved Oxygen (mg/L)	2.29
pH (s.u.)	6.95
ORP (mV)	299.1
Turbidity (NTU)	10.7
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

* UNUSUAL DO. YSI SITTING OUT IN COLD MAYHAVE CAUSED THIS

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-32 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0930	3.66	4.954	2.939	22.7*	1.54	7.53	296.1	230	55.1	10.68
0935	9.14	4.311	3.007	9.8	1.10	7.23	296.2		21.1	10.70
0940	9.59	4.481	3.163	11.0	1.23	7.14	295.8		21.0	"
0945	9.74	4.502	3.190	9.2	1.02	7.09	295.9		21.5	"
0955	8.35	4.614	3.126	10.1	1.26	6.92	287.4		10.8	"
1000	7.66	4.537	3.035	26.0	3.06	6.94	295.2		8.21	"
1005	8.37	4.580	3.095	19.9	2.29*	6.95	299.1	↓	10.7	"
1015	COLLECT	SAMPLE								

Total Depth of Well:	22.78
Depth To Water Before Purging:	10.20
Depth To Water After Purging:	10.70

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-37 | Replicate No.: – | Code No.: –

Weather: COLD, SUNNY, 16°F | Sampling Time: Begin 1217 End 1230

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	22.80
Depth to Water (ft bmp)	8.42
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.38
Casing Diameter/Type	2" PVC
Gallons in Well	2.3008
Gallons Pumped/Bailed Prior to Sampling	~2.5
Sample Pump Intake Setting (ft bmp)	20.80
Purge Time	begin 1120 end 1215
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.24
SpC (mS/cm)	2.377
CND (mS/cm)	1.707
Dissolved Oxygen (%)	2.9
Dissolved Oxygen (mg/L)	0.33
pH (s.u.)	7.07
ORP (mV)	251.4
Turbidity (NTU)	12.7
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	DUP-01

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

* TURBIDITY STILL >10 BUT ALL OTHER PARAMETERS WITHIN 10% OF EACH OTHER

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-37 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1125	11.33	0.012	0.009	67.8	7.42	7.22	248.3	220	113	8.61
1130	10.58	2.647	1.918	6.8	0.75	7.24	249.0	"	55.2	"
1135	10.79	2.576	1.877	3.7	0.40	7.13	249.9	"	33.8	"
1155	10.55	2.522	1.826	4.6	0.50	7.15	250.2	"	33.9	"
1200	10.08	2.494	1.784	5.5	0.61	7.12	250.1	"	35.7	"
1205	10.26	2.424	1.741	6.5	0.72	7.09	250.9	"	22.1	"
1210	10.32	2.408	1.732	4.4	0.49	7.03	251.1	"	21.5	"
1215	10.24	2.377	1.707	2.9	0.33	7.07	251.4	↓	12.7	"
1217	COLLECT SAMPLE*									

Total Depth of Well:	22.80
Depth To Water Before Purging:	8.42
Depth To Water After Purging:	8.61

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-68 | Replicate No.: – | Code No.: –

Weather: COLD, SUNNY, 16°F | Sampling Time: Begin 1417 End 1425

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.85
Depth to Water (ft bmp)	9.73
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.12
Casing Diameter/Type	2" PVC
Gallons in Well	1.6192
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	17.85
Purge Time	begin 1335 end 1415
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.88
SpC (mS/cm)	14.85
CND (mS/cm)	10.85
Dissolved Oxygen (%)	6.9
Dissolved Oxygen (mg/L)	0.66
pH (s.u.)	6.64
ORP (mV)	257.5
Turbidity (NTU)	14.1
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

* COLLECTING SAMPLE B/C TURBIDITY DOESN'T SEEM TO GO DOWN AND ALL OTHER GW PARAMETERS ARE WITHIN 10% OF EACH OTHER

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-68 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
13:40	8.61	14.65	10.06	29.7	3.26	6.89	249.8	200	27.6	9.78
13:45	10.62	14.84	10.76	7.1	0.75	6.82	250.7	↓	29.2	"
13:50	10.48	14.91	10.77	6.5	0.60	6.75	256.8		27.8	"
13:55	10.42	14.77	10.86	8.9	0.90	6.73	256.8		11.6	"
14:00	10.59	14.84	10.75	5.3	0.54	6.67	257.5		16.4	"
14:10	10.77	14.83	10.80	6.8	0.68	6.65	257.4		14.3	"
14:15	10.88	14.85	10.85	6.9	0.66	6.64	257.5	↓	14.1	"
14:17	COLLECT SAMPLE*									

Total Depth of Well:	19.85
Depth To Water Before Purging:	9.73
Depth To Water After Purging:	9.78

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-50 | Replicate No.: - | Code No.: -

Weather: COLD & SUNNY, 20s | Sampling Time: Begin 1605 End 1610

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.44
Depth to Water (ft bmp)	8.47
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.97
Casing Diameter/Type	2" PVC
Gallons in Well	1.5952
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	16.44
Purge Time	begin 1505 end 1605
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.97
SpC (mS/cm)	5.355
CND (mS/cm)	3.919
Dissolved Oxygen (%)	6.5
Dissolved Oxygen (mg/L)	0.71
pH (s.u.)	6.63
ORP (mV)	259.0
Turbidity (NTU)	20.8
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) ~~MI001373.0001.00002 (off)~~ PAGE 2 OF 2

WELL : MW-50 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1510	11.40	6.872	5.088	13.0	1.38	7.25	256.3	200	27.3	8.72
1515	11.66	6.502	4.840	5.6	0.60	6.96	259.2	|	30.2	"
1520	10.91	6.343	4.634	10.8	1.16	6.86	257.8	|	32.6	"
1525	10.87	6.430	4.696	18.2	1.94	6.78	257.9	|	37.6	"
1530	11.00	6.358	4.657	9.0	0.97	6.74	258.6	|	50.0	"
1535	11.04	6.144	4.505	10.5	1.14	6.76	258.5	|	34.8	"
1540	10.99	6.102	4.469	9.2	1.00	6.71	258.7	|	28.4	"
1545	11.33	5.870	4.336	7.9	0.85	6.66	259.4	|	24.1	"
1550	11.31	5.788	4.271	7.7	0.82	6.64	259.4	|	21.6	8.73
1555	11.11	5.645	4.144	7.9	0.86	6.65	259.3	|	18.7	"
1600	10.97	5.355	3.919	6.5	0.71	6.63	259.0	✓	20.8	"
1605	COLLECT	SAMPLE								

Total Depth of Well:	18.44		
Depth To Water Before Purging:		8.47	
Depth To Water After Purging:		8.73	

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-66 | Replicate No.: - | Code No.: -

Weather: COLD, 12°F | Sampling Time: Begin 1835 End 1840

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.06
Depth to Water (ft bmp)	8.03
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.03
Casing Diameter/Type	2" PVC
Gallons in Well	1.7648
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	17.06
Purge Time	begin 1740 end 1835
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	3.99
SpC (mS/cm)	3.139
CND (mS/cm)	1.879
Dissolved Oxygen (%)	12.4
Dissolved Oxygen (mg/L)	1.61
pH (s.u.)	7.28
ORP (mV)	244.6
Turbidity (NTU)	78.2
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

→ TRIED TO CHANGE FLOW TO CHECK IF TURBIDITY WILL REDUCE

* LOWER TEMP. SINCE IT GOT COLDER AND YSI/FLOW CELL SITTING OUTDOORS

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-66 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW	
17:45	7.62	3.035	2.027	9.1	1.08	7.81	246.8	220	168	8.23	
17:50	8.04	3.623	2.044	3.6	1.01	7.64	249.5	"	147	"	
17:56	7.35	3.038	2.013	4.3	0.51	7.53	249.8	"	134	"	
~~18:05~~	~~7.88~~	~~3.038~~	~~2.0~~								
18:05	7.08	3.038	1.998	6.7	0.80	7.38	249.0	"	102	"	*
18:10	6.07	3.021	1.928	14.3	1.70	7.32	242.8	"	99.0	"	
18:15	5.77	3.065	1.939	11.0	1.37	7.31	245.3	"	103.0	"	
18:25	3.99	3.139	1.879	12.4	1.61	7.28	244.6	↓	78.2	"	
18:35	COLLECT SAMPLE **										

Total Depth of Well: 19.06

Depth To Water Before Purging: 8.03

Depth To Water After Purging: 8.23

** TURBIDITY REMAINS HIGH BUT WITHIN 10% OF ONE ANOTHER. ALL OTHE READINGS WITHIN 10%

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-25 | Replicate No.: — | Code No.: —

Weather: CLOUDS, OVERCAST 20S | Sampling Time: Begin 1305 End 1310

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.52
Depth to Water (ft bmp)	6.42
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.1
Casing Diameter/Type	2" PVC
Gallons in Well	2.256
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	18.52
Purge Time	begin 1230 end 1305
Pumping Rate (ml/min)	250
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.92
SpC (mS/cm)	5.254
CND (mS/cm)	3.941
Dissolved Oxygen (%)	14.2
Dissolved Oxygen (mg/L)	1.50
pH (s.u.)	7.17
ORP (mV)	-45.3
Turbidity (NTU)	3.77
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

WELL : MW-25

DATE : 2/13/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1235	11.88	5.220	3913	22.2	2.35	7.29	185.1	250	19.6	6.88
1240	12.08	5.244	3.950	17.6	1.86	7.17	179.3	"	12.1	"
1245	12.03	5.259	3955	15.7	1.66	7.15	1202	"	8.14	"
1250	11.78	5.264	3934	15.1	1.61	7.15	23.2	"	3.93	6.85
1255	11.80	5.258	3.932	14.5	1.54	7.14	-14.9	"	3.77	"
1300	11.92	5.254	3.941	14.2	1.50	7.17	-45.3	↓	3.71	"
1305	COLLECT SAMPLE									

Total Depth of Well: 20.52

Depth To Water Before Purging: 6.42

Depth To Water After Purging: 6.85

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-41 | Replicate No.: — | Code No.: —

Weather: OVERCAST, 40s | Sampling Time: Begin 1410 End 1415

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.85
Depth to Water (ft bmp)	9.74
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.11
Casing Diameter/Type	2" PVC
Gallons in Well	1.7776
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	18.85
Purge Time	begin 1335 end 1410
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.49
SpC (mS/cm)	17.62
CND (mS/cm)	12.40
Dissolved Oxygen (%)	4.0
Dissolved Oxygen (mg/L)	0.43
pH (s.u.)	7.08
ORP (mV)	-80.0
Turbidity (NTU)	7.53
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: NKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-41 PROJ #:

DATE : 2/13/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1340	9.78	17.33	12.29	13.9	1.48	7.17	-87.7	220	13.8	10.03
1345	9.73	17.43	12.35	10.8	1.13	7.14	-91.0	↓	13.9	"
1350	9.91	17.54	12.48	6.6	0.70	7.09	-93.0		6.61	"
1355	9.77	17.60	12.48	4.8	0.52	7.09	-90.8		8.17	"
1400	9.54	17.61	12.41	5.4	0.57	7.09	-84.2		8.12	"
1405	9.49	17.62	12.40	4.0	0.43	7.08	-80.0	↓	7.53	9.88
1410	COLLECT	SAMPLE								

Total Depth of Well:	20.85
Depth To Water Before Purging:	9.74
Depth To Water After Purging:	~~10.03~~ AK 9.88

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-34 | Replicate No.: - | Code No.: -

Weather: OVERCAST, 20s | Sampling Time: Begin 1510 End 1515

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.35
Depth to Water (ft bmp)	~~9.74~~ DTW 9.74
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.61
Casing Diameter/Type	2" PVC
Gallons in Well	1.8576
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	19.35
Purge Time	begin 1435 end 1505
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.83
SpC (mS/cm)	5.089
CND (mS/cm)	3.713
Dissolved Oxygen (%)	11.9
Dissolved Oxygen (mg/L)	1.30
pH (s.u.)	7.29
ORP (mV)	-63.3
Turbidity (NTU)	1.86
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: NKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

PROJ #: MI001386.0001.20000 (on) ~~MI001373.0001.00002 (off)~~

WELL : MW-34

DATE : 2/13/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1445	9.07	4.795	3.338	31.0	3.51	7.63	-19.8	220	4.91	10.66
1450	9.47	4.840	3.406	29.4	2.63	7.48	-20.8	↓	4.71	"
1455	9.84	4.870	3.461	21.0	2.34	7.41	-25.2		4.35	"
1500	10.76	5.054	3.680	16.9	1.82	7.34	-47.3		2.24	11.01
1505	10.82	5.053	3.684	14.6	1.59	7.32	-51.7		2.15	"
1510	10.77	5.062	3.686	13.8	1.50	7.31	-57.9		2.01	"
1515	10.83	5.089	3.713	11.9	1.30	7.29	-63.3	↓	1.86	"
1520	COLLECT SAMPLE									

Total Depth of Well: 21.35

Depth To Water Before Purging: 10.74

Depth To Water After Purging: 11.01

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-52 | Replicate No.: -- | Code No.: --

Weather: OVERCAST, 20s | Sampling Time: Begin 1655 End 1700

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.57
Depth to Water (ft bmp)	8.43
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.14
Casing Diameter/Type	2" PVC
Gallons in Well	1.7824
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	17.57
Purge Time	begin 1600 end 1655
Pumping Rate (ml/min)	230
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.83
SpC (mS/cm)	4.129
CND (mS/cm)	2.854
Dissolved Oxygen (%)	4.5
Dissolved Oxygen (mg/L)	0.51
pH (s.u.)	7.39
ORP (mV)	-74.0
Turbidity (NTU)	13.0
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: NKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

* TURBIDITY NOT <10 BUT ALL OTHER PARAMETERS ARE STABLE

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-52 PROJ #:

DATE : 2/13/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1605	10.39	4.139	2.984	4.3	0.47	7.34	-21.6	230	482	8.62
1610	10.19	4.132	2.963	12.3	1.35	7.35	-43.2		22.6	"
1615	10.10	4.136	2.959	6.6	0.74	7.34	-52.5		25.8	"
1620	10.04	4.140	2.956	6.5	0.72	7.36	-56.2		28.4	"
1625	7.47	4.154	2.760	8.1	0.96	7.37	-66.5		29.3	8.60
1635	7.66	4.098	2.742	6.0	0.71	7.36	-70.1		14.3	"
1640	8.14	4.097	2.779	6.1	0.71	7.36	-70.0		12.3	"
1645	8.70	4.112	2.833	5.2	0.59	7.37	-69.5		10.7	"
1650	8.83	4.129	2.854	4.5	0.51	7.39	-74.0	↓	13.0	"
1655	COLLECT SAMPLE*									

Total Depth of Well:	19.57
Depth To Water Before Purging:	8.43
Depth To Water After Purging:	8.62

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: MW-19 | Replicate No.: — | Code No.: —

Weather: SUNNY, 20s | Sampling Time: Begin 1010 End 1015

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.84
Depth to Water (ft bmp)	6.23
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	13.61
Casing Diameter/Type	2" PVC
Gallons in Well	2.1776
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	17.34
Purge Time	begin 0905 end 1010
Pumping Rate (ml/min)	225
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.29
SpC (mS/cm)	8.222
CND (mS/cm)	5.756
Dissolved Oxygen (%)	3.7
Dissolved Oxygen (mg/L)	0.42
pH (s.u.)	6.90
ORP (mV)	-99.3
Turbidity (NTU)	4.20
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

WELL : MW-19

DATE : 2/14/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0910	10.52	8.842	6.396	12.0	1.30	6.85	-102.3	225	12.9	6.42
0920	9.17	8.480	5.912	15.5	1.72	7.26	-89.2	↓	10.2	"
0940	9.34	8.348	5.847	4.0	0.44	6.97	-105.5	↓	7.22	"
0950	9.40	8.259	5.793	3.5	0.39	6.91	-101.4	↓	5.58	"
1000	9.29	8.222	5.756	3.7	0.42	6.90	-99.3	↓	4.20	"
1010	COLLECT SAMPLE									

Total Depth of Well:	19.84
Depth To Water Before Purging:	6.23
Depth To Water After Purging:	6.42

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: MW-29 | Replicate No.: – | Code No.: –

Weather: SUNNY, 21°F | Sampling Time: Begin 1130 End 1135

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	14.84
Depth to Water (ft bmp)	5.52
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.32
Casing Diameter/Type	2" PVC
Gallons in Well	1.4912
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	12.84
Purge Time	begin 1055 end 1125
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.21
SpC (mS/cm)	7.829
CND (mS/cm)	5.467
Dissolved Oxygen (%)	2.3
Dissolved Oxygen (mg/L)	0.25
pH (s.u.)	7.37
ORP (mV)	-66.6
Turbidity (NTU)	1.26
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: SKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-29 PROJ #:

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1100	9.21	8.197	5.724	5.4	0.61	7.40	-29.8	220	2.21	5.63
1105	9.19	8.082	5.640	3.1	0.35	7.37	-39.3	↓	2.79	"
1110	9.21	8.055	5.628	2.8	0.32	7.36	-43.7		1.80	"
1115	9.18	8.066	5.586	2.3	0.26	7.36	-52.3		1.27	"
1120	9.21	7.860	5.490	2.2	0.25	7.37	-61.9		1.44	"
1125	9.21	7.829	5.467	2.3	0.25	7.37	-66.6	↓	1.26	"
1130	COLLECT SAMPLE									
Total Depth of Well:		14.84								
Depth To Water Before Purging:			5.52							
Depth To Water After Purging:			5.63							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: MW-33 | Replicate No.: — | Code No.: —

Weather: SUNNY, 20S | Sampling Time: Begin _____ End _____

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.74
Depth to Water (ft bmp)	8.63
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.11
Casing Diameter/Type	2" PVC
Gallons in Well	1.6176
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	16.74
Purge Time	begin 1450 end 1555
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.64
SpC (mS/cm)	3.723
CND (mS/cm)	2.693
Dissolved Oxygen (%)	4.4
Dissolved Oxygen (mg/L)	0.48
pH (s.u.)	7.03
ORP (mV)	-67.2
Turbidity (NTU)	8.58
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: NUAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-33 PROJ #:

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1455	9.84	3.376	2.399	12.3	1.38	7.43	44.6	200	111	8.90
1500	10.16	3.536	2.533	11.6	1.29	7.20	19.0	|	121	"
1505	10.12	3.522	2.522	16.3	1.81	7.12	-19.8	|	102	"
1510	10.30	3.628	2.609	6.6	0.74	7.08	-46.7	|	81.6	"
1520	10.56	3.700	2.680	6.7	0.74	7.06	-62.8	|	70.5	"
1525	10.64	3.736	3.712	4.3	0.48	7.03	-68.0	|	29.1	"
1530	10.56	3.724	2.697	4.1	0.45	7.03	-67.4	|	21.8	"
1540	10.51	3.723	2.693	4.4	0.48	7.03	-67.2	|	16.2	"
1545	10.64	3.736	2.693	4.4	0.48	7.03	-67.2	|	10.3	"
1550	10.64	3.723	2.693	4.4	0.48	7.03	-67.2	↓	8.58	"
15:55	COLLECT SAMPLE									

Total Depth of Well:	18.74
Depth To Water Before Purging:	8.63
Depth To Water After Purging:	8.90

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-15-60D | Replicate No.: | Code No.:

Weather: 10°F Sunny | Sampling Time: Begin 1021 End 1030

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	99.42
Depth to Water (ft bmp)	19.61
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	79.81
Casing Diameter/Type	2" PVC
Gallons in Well	12.7
Gallons Pumped/Bailed Prior to Sampling	0.28 gal/min
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 945 end 1030
Pumping Rate (ml/min)	10 gal
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	13.12
SpC (mS/cm)	0.704
CND (mS/cm)	0.544
Dissolved Oxygen (%)	4.2
Dissolved Oxygen (mg/L)	0.42
pH (s.u.)	8.29
ORP (mV)	-109.4
Turbidity (NTU)	5.50
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

* pumping rate lowest possible before submpump would turn off.

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-15-60D PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0950	11.99	0.813	0.566	52.1	5.21	8.28	2.0	150	16.3	19.61
0955	12.62	0.750	0.567	9.1	0.96	8.26	-79.9	150	17.8	19.59
1000	12.76	0.728	0.558	7.4	0.77	8.26	-54.1	150	30.9	19.59
1005	12.65	0.711	0.544	4.7	0.49	8.26	-153.8	150	13.9	19.59
1010	13.15	0.711	0.550	4.6	0.48	8.26	-156.3	150	13.6	19.59
1015	13.19	0.702	0.544	4.0	0.41	8.23	-182.7	150	5.51	19.59
1020	13.20	0.702	0.544	4.0	0.42	8.25	-182.7	150	5.39	19.59
1025	13.12	0.704	0.544	4.2	0.44	8.29	-189.4	150	5.50	19.59
	Sampled @ 1027									
Total Depth of Well:		99.42								
Depth To Water Before Purging:			19.61							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-15-59D | Replicate No.: | Code No.:

Weather: Sunny 18°F | Sampling Time: Begin 1212 End 1215

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	100.01
Depth to Water (ft bmp)	21.44
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	78.57
Casing Diameter/Type	2" PVC
Gallons in Well	12.6
Gallons Pumped/Bailed Prior to Sampling	~9.0 gal
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1130 end 1215
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.56
SpC (mS/cm)	0.581
CND (mS/cm)	0.444
Dissolved Oxygen (%)	3.2
Dissolved Oxygen (mg/L)	0.31
pH (s.u.)	8.41
ORP (mV)	-165.6
Turbidity (NTU)	9.9
Color	clear
Odor	none
Appearance	-
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

* pumping rate lowest possible before submpump would turn off

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-15-59D PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1135	12.13	0.620	0.468	9.7	1.04	8.32	-45.1		5.51	21.44
1140	12.61	0.610	0.466	4.3	0.46	8.31	-147.1		9.69	21.44
1145	12.56	0.595	0.454	3.6	0.38	8.35	-181.7		29.3	21.44
1150	12.48	0.591	0.449	3.1	0.32	8.39	-188.4		34.4	21.44
1155	12.43	0.586	0.445	3.2	0.34	8.40	-171.3		20.3	21.44
1200	12.26	0.584	0.442	3.3	0.34	8.41	-170.2		15.2	21.44
1205	12.53	0.580	0.442	3.3	0.33	8.41	-168.3		11.0	21.44
1210	12.56	0.581	0.444	3.2	0.31	8.41	-165.6		9.9	21.44
Total Depth of Well:		100.01								
Depth To Water Before Purging:			21.44							
Depth To Water After Purging:			21.30							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-15-61D | Replicate No.: | Code No.:

Weather: Sunny, 18°F | Sampling Time: Begin 1432 End 1435

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	94.71
Depth to Water (ft bmp)	25.79
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	68.92
Casing Diameter/Type	2" PVC
Gallons in Well	11.02
Gallons Pumped/Bailed Prior to Sampling	5 gal
Sample Pump Intake Setting (ft bmp)	*
Purge Time	begin 1350 end 1435
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.71
SpC (mS/cm)	1.246
CND (mS/cm)	0.905
Dissolved Oxygen (%)	5.9
Dissolved Oxygen (mg/L)	0.66
pH (s.u.)	7.73
ORP (mV)	-130.5
Turbidity (NTU)	9.9
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

* lowest pumping rate before sub pump would shut off.

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-15-61D PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1355	8.49	1.382	0.946	13.1	1.52	7.85	-108.8		5.23	25.79
1400	9.05	1.344	0.935	9.4	1.08	7.85	-120.3		34.9	25.79
1405	9.31	1.345	0.942	9.6	1.09	7.85	-122.2		33.2	25.79
1410	8.85	1.380	0.976	13.9	1.75	7.85	-121.8		27.3	25.79
1415	11.62	1.255	0.934	6.0	0.65	7.78	-126.5		17.6	25.79
1420	11.11	1.231	0.899	6.4	0.69	7.75	-127.5		14.1	25.79
1425	11.11	1.234	0.891	6.4	0.70	7.73	-127.3		11.6	25.79
1430	10.71	1.246	0.905	5.9	0.66	7.73	-130.5		9.9	25.79
1435										
	Sampled: 1432									
Total Depth of Well:		94.71								
Depth To Water Before Purging:			25.79							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/6/18

Site/Well No.: MW-23 | Replicate No.: | Code No.:

Weather: Sunny, 18°F | Sampling Time: Begin 1602 End 1605

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.54
Depth to Water (ft bmp)	6.93
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.61
Casing Diameter/Type	2" PVC
Gallons in Well	2.01
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	17
Purge Time	begin 1520 end 1605
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.04
SpC (mS/cm)	8.288
CND (mS/cm)	6.214
Dissolved Oxygen (%)	6.0
Dissolved Oxygen (mg/L)	0.63
pH (s.u.)	7.37
ORP (mV)	-92.8
Turbidity (NTU)	3.21
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-23 PROJ #:

DATE : 2/6/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1530	11.74	10.25	7.654	14.5	1.49	7.22	-67.8	150	31.9	6.93
1535	11.91	8.872	6.650	9.5	0.99	7.27	-71.8	150	14.6	6.93
1540	11.93	8.365	6.277	8.7	0.91	7.34	-78.7	150	12.5	6.93
1545	12.01	8.164	6.136	7.6	0.80	7.37	-84.5	150	6.92	6.93
1550	12.02	8.131	6.116	6.6	0.69	7.38	-90.7	150	3.96	6.93
1555	12.00	8.150	6.128	6.5	0.68	7.38	-91.2	150	3.96	6.93
1600	12.04	8.255	6.24	6.0	0.63	7.37	-92.8	150	3.21	6.93
		Sampled @ 1602								
Total Depth of Well:		19.54								
Depth To Water Before Purging:			6.93							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-28 | Replicate No.: | Code No.:

Weather: 28°F Snow/cloudy | Sampling Time: Begin 1257 End 1300

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	11.65
Depth to Water (ft bmp)	4.62
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	7.03
Casing Diameter/Type	2" PVC
Gallons in Well	1.12
Gallons Pumped/Bailed Prior to Sampling	~ 3 gal
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1220 end 1300
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.61
SpC (mS/cm)	9.797
CND (mS/cm)	6.728
Dissolved Oxygen (%)	9.5
Dissolved Oxygen (mg/L)	1.07
pH (s.u.)	7.37
ORP (mV)	27.3
Turbidity (NTU)	1.98
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-28 PROJ #:

DATE : 2/7/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1225	8.83	11.15	7.701	62.7	6.82	7.70	41.1	150	65.8	4.62
1230	8.77	11.11	7.667	17.6	1.96	7.58	32.4	150	21.9	4.62
1235	8.78	10.81	7.456	13.1	1.46	7.45	30.7	150	5.23	4.62
1240	8.86	10.51	7.267	11.5	1.28	7.42	29.5	150	2.52	4.62
1245	8.77	10.08	6.945	10.2	1.15	7.38	28.2	150	1.89	4.62
1250	8.72	9.863	6.791	9.7	1.08	7.37	27.8	150	2.15	4.62
1255	8.61	9.797	6.728	9.5	1.07	7.37	28.3	150	1.98	4.62
		Sampled @ 1257								
Total Depth of Well:		11.16								
Depth To Water Before Purging:		4.62								
Depth To Water After Purging:										

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-55 | Replicate No.: | Code No.:

Weather: p. cloudy 28°F | Sampling Time: Begin 1352 End 1355

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	~~20.59~~ AR 19.64
Depth to Water (ft bmp)	8.78
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.86
Casing Diameter/Type	2" PVC
Gallons in Well	1.73
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1315 end 1355
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.61
SpC (mS/cm)	7.852
CND (mS/cm)	5.995
Dissolved Oxygen (%)	22.7
Dissolved Oxygen (mg/L)	2.28
pH (s.u.)	7.51
ORP (mV)	-90.1
Turbidity (NTU)	7.56
Color	Clear
Odor	None
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-55 PROJ #:

DATE : 2/7/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1320	12.20	6.027	4.557	34.1	3.59	7.63	19.5	150	76.8	8.78
1325	12.48	6.173	4.699	29.1	3.04	7.46	-19.3	150	53.6	8.78
1330	12.51	6.884	5.264	26.4	2.75	7.45	-57.2	150	30.6	8.78
1335	12.33	7.416	5.626	23.1	2.41	7.48	-68.9	150	17.8	8.78
1340	12.43	7.674	5.834	23.1	2.32	7.43	-87.9	150	9.74	8.81
1345	12.55	7.800	5.947	22.7	2.28	7.56	-89.6	150	8.04	8.83
1350	12.61	7.852	5.995	22.7	2.28	7.51	-90.1	150	7.56	8.85
		sampled @ 1352								

Total Depth of Well:	19.64
Depth To Water Before Purging:	8.78
Depth To Water After Purging:	

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-84 | Replicate No.: | Code No.:

Weather: Mostly cloudy 28°F | Sampling Time: Begin 1507 End 1510

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.56
Depth to Water (ft bmp)	8.07
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.49
Casing Diameter/Type	2" PVC
Gallons in Well	~ 1.99
Gallons Pumped/Bailed Prior to Sampling	~ 2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1430 end 1510
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.95
SpC (mS/cm)	8.962
CND (mS/cm)	10.558
Dissolved Oxygen (%)	6.0
Dissolved Oxygen (mg/L)	0.64
pH (s.u.)	7.41
ORP (mV)	-127.6
Turbidity (NTU)	5.87
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-54 PROJ #:

DATE : 2/7/10 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1435	10.62	8.784	6.371	4.2	1.21	7.47	-115.9	150	17.4	8.07
1440	10.98	8.849	6.481	7.1	0.76	7.43	-123.9	150	13.1	8.07
1445	11.11	8.817	6.478	6.4	0.68	7.42	-127.2	150	10.2	8.07
1450	10.95	8844	6.471	6.6	0.71	7.41	-127.3	150	8.01	8.07
1455	10.94	8.887	6.501	6.4	0.69	7.41	-127.2	150	6.49	8.07
1500	10.92	8.931	6.529	6.4	0.68	7.41	-127.4	150	5.89	8.07
1505	10.95	8.962	6.558	6.0	0.64	7.41	-127.6	150	5.87	8.07
		Sampled		@ 1507						

Total Depth of Well:	20.56
Depth To Water Before Purging:	8.07
Depth To Water After Purging:	8.07

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-58 | Replicate No.: | Code No.:

Weather: cloudy 28° F | Sampling Time: Begin 1602 End 1605

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.68
Depth to Water (ft bmp)	7.98
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.70
Casing Diameter/Type	2" PVC
Gallons in Well	2.03
Gallons Pumped/Bailed Prior to Sampling	~2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1520 end 1605
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.15
SpC (mS/cm)	5.691
CND (mS/cm)	4.294
Dissolved Oxygen (%)	7.0
Dissolved Oxygen (mg/L)	0.74
pH (s.u.)	7.49
ORP (mV)	-44.8
Turbidity (NTU)	2.81
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-53 PROJ #:

DATE : 2/7/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1530	11.58	7.792	5.795	18.5	1.87	7.45	-70.2	150	20.8	7.98
1535	11.89	7.164	5.367	8.7	0.92	7.48	-70.2	150	14.7	7.98
1540	11.79	6.684	4.970	6.9	0.73	7.48	-67.4	150	12.7	7.99
1545	11.94	5.974	4.482	6.6	0.70	7.50	-55.7	150	5.85	7.98
1550	12.15	5.745	4.333	6.7	0.71	7.49	-50.0	150	4.78	7.98
1555	12.15	5.710	4.309	6.8	0.72	7.49	-47.0	150	5.44	7.98
1600	12.15	5.691	4.294	7.0	0.74	7.49	-44.9	150	2.81	7.98
		Sampled @	1602							

Total Depth of Well:	20.68
Depth To Water Before Purging:	7.98
Depth To Water After Purging:	

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/7/18

Site/Well No.: MW-58 | Replicate No.: | Code No.:

Weather: | Sampling Time: Begin 1657 End 1700

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.40
Depth to Water (ft bmp)	5.63
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	~ 2.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1620 end 1700
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.61
SpC (mS/cm)	9.567
CND (mS/cm)	7.19
Dissolved Oxygen (%)	7.9
Dissolved Oxygen (mg/L)	0.83
pH (s.u.)	7.20
ORP (mV)	-85.6
Turbidity (NTU)	4.24
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-58 PROJ #:

DATE : 2/7/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1625	11.19	11.67	8.593	10.8	1.12	7.22	-72.3	150	23.9	5.63
1630	11.73	11.06	8.234	10.3	1.07	7.22	-80.2	150	28.7	5.63
1635	11.75	9.443	7.057	9.6	1.01	7.21	-76.8	150	9.25	5.63
1640	11.80	9.153	6.846	8.5	0.89	7.20	-79.7	150	2.84	5.63
1645	11.92	9.254	6.954	7.9	0.82	7.20	-83.1	150	2.23	5.63
1650	11.68	9.673	7.21	8.0	0.84	7.20	-88.4	150	5.10	5.63
1655	11.61	9.567	7.19	7.9	0.83	7.20	-85.6	150	4.26	5.63
	Sampled @ 1657									

Total Depth of Well:	19.40
Depth To Water Before Purging:	5.63
Depth To Water After Purging:	

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-46 | Replicate No.: | Code No.:

Weather: 21°F Sunny | Sampling Time: Begin 1152 End 1155

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.81
Depth to Water (ft bmp)	10.19
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.63
Casing Diameter/Type	2" PVC
Gallons in Well	1.54
Gallons Pumped/Bailed Prior to Sampling	~ 4.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1040 end 1156
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.98
SpC (mS/cm)	12.25
CND (mS/cm)	9.203
Dissolved Oxygen (%)	7.4
Dissolved Oxygen (mg/L)	0.76
pH (s.u.)	7.11
ORP (mV)	25.6
Turbidity (NTU)	4.22
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

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MI001373.0001.00002 (off)

WELL : MW-46 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1050	11.70	12.09	9.023	14.1	1.46	7.11	205.3	150	86.5	10.19
1055	12.25	12.08	9.136	12.9	1.32	7.07	211.8	150	28.8	10.19
1100	12.60	12.08	9.219	11.8	1.20	7.09	213.9	150	16.6	10.19
1105	12.60	12.11	9.242	9.9	1.00	7.09	216.8	150	8.74	10.19
1110	12.59	12.11	9.243	9.7	0.99	7.09	171.1	150	8.54	10.19
1115	12.62	12.15	9.274	8.7	0.88	7.09	121.4	150	7.46	10.19
1120	12.62	12.19	9.308	8.2	0.83	7.09	94.9	150	7.98	10.19
1125	12.48	12.24	9.307	7.8	0.80	7.09	62.3	150	6.64	10.19
1130	12.14	12.25	9.239	8.0	0.82	7.11	55.4	150	5.70	10.19
1135	12.06	12.24	9.210	7.9	0.81	7.11	47.7	150	5.09	10.19
1140	11.97	12.25	9.201	7.8	0.80	7.11	38.5	150	4.85	10.19
1145	11.94	12.25	9.194	7.7	0.79	7.11	25.9	150	4.50	10.19
1150	11.90	12.25	9.203	7.4	0.76	7.11	25.6	150	4.22	10.19
	Sampled @ 1152									

Total Depth of Well:	
Depth To Water Before Purging:	10.19
Depth To Water After Purging:	

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-71 | Replicate No.: | Code No.:

Weather: 21°F Sunny | Sampling Time: Begin 1312 End 1315

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.12
Depth to Water (ft bmp)	10.74
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.38
Casing Diameter/Type	2" PVC
Gallons in Well	1.5
Gallons Pumped/Bailed Prior to Sampling	~ 2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1235 end 1315
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	15.80
SpC (mS/cm)	21.24
CND (mS/cm)	17.35
Dissolved Oxygen (%)	5.3
Dissolved Oxygen (mg/L)	0.49
pH (s.u.)	6.91
ORP (mV)	-106.2
Turbidity (NTU)	2Cle
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Ruibel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-71 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1240	13.47	4.576	3.591	55.9	5.73	7.84	30.6	150	3.73	10.74
1245	15.16	19.20	15.60	11.7	1.09	6.93	-84.2	150	2.43	10.74
1250	15.28	20.26	16.50	12.1	1.12	6.91	-93.7	150	2.35	10.74
1255	15.31	20.99	17.10	7.1	0.66	6.91	-100.4	150	2.59	10.74
1300	15.35	21.24	17.33	5.6	0.52	6.91	-104.3	150	2.41	10.74
1305	15.39	21.25	17.35	5.4	0.50	6.92	-105.4	150	2.17	10.74
1310	15.36	21.26	17.35	5.3	0.49	6.91	-106.2	150	2.06	10.74
	Sampled @		1312							
			collected ms/msd							
Total Depth of Well:		20.12								
Depth To Water Before Purging:			10.74							
Depth To Water After Purging:										

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page: 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: MW-7 | Replicate No.: | Code No.:

Weather: Sunny, 21°F | Sampling Time: Begin 1522 End 1525

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	22.50
Depth to Water (ft bmp)	7.70
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.8
Casing Diameter/Type	2" PVC
Gallons in Well	2.36
Gallons Pumped/Bailed Prior to Sampling	~ 3.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1430 end 1525
Pumping Rate (ml/min)	180
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.15
SpC (mS/cm)	11.72
CND (mS/cm)	8.854
Dissolved Oxygen (%)	3.4
Dissolved Oxygen (mg/L)	0.35
pH (s.u.)	7.43
ORP (mV)	-72.3
Turbidity (NTU)	1.21
Color	clear
Odor	none
Appearance	
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2

MI001373.0001.00002 (off)

WELL : MW-7 PROJ #:

DATE : 2/12/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1440	11.48	11.47	8.506	8.6	0.89	7.71	7.7	150	7.83	7.70
1445	11.53	11.26	8.366	6.5	0.68	7.61	-4.7	150	4.42	7.71
1450	11.78	11.21	8.380	5.3	0.55	7.54	-16.4	150	3.90	7.71
1455	11.85	11.29	8.460	4.4	0.45	7.48	-34.8	150	1.99	7.71
1500	11.90	11.38	8.533	3.9	0.40	7.46	-45.1	150	1.43	7.71
1505	11.90	11.45	8.589	3.8	0.40	7.45	-53.2	150	1.64	7.71
1510	11.93	11.56	8.676	3.7	0.39	7.44	-63.9	150	2.01	7.71
1515	11.99	11.61	8.731	3.6	0.36	7.44	-68.9	150	1.39	7.71
1520	12.15	11.72	8.854	3.4	0.35	7.43	-72.3	150	1.21	7.71
			Sampled @ 1522							
Total Depth of Well:										
Depth To Water Before Purging:			7.70							
Depth To Water After Purging:										

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/12/18

Site/Well No.: Sunny 29°F | Replicate No.: | Code No.:

Weather: MW-67 | Sampling Time: Begin 1647 End 1650

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	14.02
Depth to Water (ft bmp)	10.01
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	4.01
Casing Diameter/Type	2" PVC
Gallons in Well	0.64
Gallons Pumped/Bailed Prior to Sampling	~1.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin ~~1440~~ AR 1610 end 1650
Pumping Rate (ml/min)	157
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.01
SpC (mS/cm)	10.21
CND (mS/cm)	7.291
Dissolved Oxygen (%)	6.1
Dissolved Oxygen (mg/L)	0.73
pH (s.u.)	7.04
ORP (mV)	3.5
Turbidity (NTU)	2.31
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-67

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

DATE : 2/12/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1615	9.44	9.546	6.712	18.7	2.06	7.15	+14.1	150	2.42	10.01
1620	9.64	9.786	6.929	16.0	1.75	7.09	+0.4	150	3.15	10.01
1625	10.02	10.15	7.247	8.4	0.92	7.05	-0.1	150	4.49	10.01
1630	10.02	10.15	7.249	8.3	0.90	7.05	-0.5	150	3.47	10.01
1635	9.99	10.20	7.277	~~6.7~~	0.72	7.04	-3.5	150	3.16	10.01
1640	10.02	10.21	7.291	6.0	0.71	7.04	-3.6	150	2.61	10.01
1645	10.01	10.21	7.291	6.1	0.73	7.04	-3.5	150	2.31	10.01
		Sampled @ 1647								
Total Depth of Well:		14.02								
Depth To Water Before Purging:										
Depth To Water After Purging:										

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-4 | Replicate No.: | Code No.:

Weather: Indoors | Sampling Time: Begin 1412 End 1415

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.16
Depth to Water (ft bmp)	8.50
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.66
Casing Diameter/Type	2" PVC
Gallons in Well	1.86
Gallons Pumped/Bailed Prior to Sampling	~1.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1330 end 1415
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	21.41
SpC (mS/cm)	18.98
CND (mS/cm)	17.67
Dissolved Oxygen (%)	4.8
Dissolved Oxygen (mg/L)	0.40
pH (s.u.)	7.15
ORP (mV)	-142.3
Turbidity (NTU)	2.04
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Rubel

Well Casing Volumes

Gal./Ft.					
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47	

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-4 PROJ #:

DATE : 2/13/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1340	21.44	19.37	18.05	7.8	0.64	7.19	-134.9	150	8.89	8.01
1345	21.44	19.35	18.03	6.6	0.54	7.16	-140.9	150	5.37	8.09
1350	21.43	19.29	17.97	5.5	0.45	7.16	-141.4	150	4.10	8.09
1355	21.43	19.23	17.92	5.8	0.48	7.15	-141.0	150	3.35	8.09
1400	21.43	19.12	17.82	5.9	0.48	7.15	-141.7	150	2.37	8.09
1405	21.42	19.04	17.74	5.3	0.44	7.15	-142	150	1.95	8.09
1410	21.41	18.98	17.67	4.8	0.40	7.15	-142.3	150	2.04	8.09
	Sampled @			1412						
Total Depth of Well:		20.16								
Depth To Water Before Purging:		8.01								
Depth To Water After Purging:										

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: Indoors | Replicate No.: | Code No.:

Weather: MW-2 | Sampling Time: Begin 1222 End 1225

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.55
Depth to Water (ft bmp)	7.42
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.13
Casing Diameter/Type	2" PVC
Gallons in Well	1.94
Gallons Pumped/Bailed Prior to Sampling	~ 1.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1137 end 1225
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	21.11
SpC (mS/cm)	23.50
CND (mS/cm)	21.76
Dissolved Oxygen (%)	5.6
Dissolved Oxygen (mg/L)	0.46
pH (s.u.)	7.24
ORP (mV)	-141.9
Turbidity (NTU)	5.23
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-2 PROJ #:

DATE : 2/13/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1145	21.06	23.39	21.63	8.4	0.68	7.26	-142.3	150	6.56	7.37
1150	21.07	23.41	21.66	5.4	0.44	7.25	-138.0	150	5.57	7.73
1155	21.09	23.42	21.67	5.0	0.41	7.24	-134.5	150	6.40	7.73
1200	21.10	23.45	21.70	5.2	0.42	7.24	-142.5	150	6.28	7.73
1205	21.09	23.49	21.74	5.5	0.45	7.24	-142.8	150	8.09	7.52
1210	21.09	23.50	21.75	6.2	0.51	7.24	-149.2	150	6.79	7.52
1215	21.10	23.50	21.75	6.0	0.49	7.24	-142.9	150	7.12	7.52
1220	21.11	23.50	21.76	5.6	0.46	7.24	-141.9	150	5.23	7.52
	Sampled @ 1222									

Total Depth of Well:	19.55
Depth To Water Before Purging:	7.37
Depth To Water After Purging:	

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-5 | Replicate No.: | Code No.:

Weather: Indoors | Sampling Time: Begin 1107 End 1110

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.54
Depth to Water (ft bmp)	7.70
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.84
Casing Diameter/Type	2" PVC
Gallons in Well	1.89
Gallons Pumped/Bailed Prior to Sampling	~ 1.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1030 end 1110
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	21.21
SpC (mS/cm)	24.31
CND (mS/cm)	22.55
Dissolved Oxygen (%)	4.6
Dissolved Oxygen (mg/L)	0.37
pH (s.u.)	7.46
ORP (mV)	-159.1
Turbidity (NTU)	0.88
Color	clear w/ black flecks
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

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YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL : MW-5

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

DATE : 2/13/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1035	21.33	24.30	22.60	6.7	0.54	7.51	-151.5	150	5.52	7.63
1040	21.29	24.34	22.62	4.9	0.40	7.49	-153.9	150	4.66	7.99
1045	21.29	24.40	22.67	4.4	0.36	7.47	-153.7	150	3.00	7.99
1050	21.26	24.40	22.65	4.3	0.35	7.47	-159.4	150	1.83	7.99
1055	21.23	24.36	22.61	4.4	0.36	7.46	-162.0	150	1.13	7.99
1100	21.23	24.34	22.59	4.3	0.35	7.46	-165.1	150	0.97	7.99
1105	21.21	24.31	22.55	4.6	0.37	7.46	-169.1	150	0.88	7.99
		Sampled	@	1107						

Total Depth of Well:	19.54
Depth To Water Before Purging:	7.63
Depth To Water After Purging:	

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Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/2/18

Site/Well No.: MW-3 | Replicate No.: | Code No.:

Weather: Indoors | Sampling Time: Begin 1007 End 1010

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.87
Depth to Water (ft bmp)	7.70
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.17
Casing Diameter/Type	2" PVC
Gallons in Well	1.78
Gallons Pumped/Bailed Prior to Sampling	~ 2.0 gallons
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 927 end 1010
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	20.71
SpC (mS/cm)	23.70
CND (mS/cm)	21.76
Dissolved Oxygen (%)	8.3
Dissolved Oxygen (mg/L)	0.68
pH (s.u.)	7.83
ORP (mV)	-147.8
Turbidity (NTU)	2.88
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-3

PROJ #: MI001386.0001.20000 (on) MI001373.0001.00002 (off)

DATE : 2/13/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0935	19.99	23.80	21.53	12.3	1.02	7.56	-123.1	150	17.7	7.62
0940	20.36	23.76	21.65	7.6	0.64	7.43	-125.6	150	10.5	7.62
0945	20.52	23.72	21.69	7.0	0.58	7.39	-127.7	150	8.30	7.77
0950	20.53	23.69	21.66	7.7	0.63	7.36	-146.4	150	6.07	7.69
0955	20.57	23.69	21.69	8.3	0.69	7.35	-147.9	150	4.72	7.69
1000	20.62	23.70	21.72	8.6	0.71	7.34	-148.2	150	3.40	7.69
1005	20.71	23.70	21.76	8.3	0.68	7.33	-147.8	150	2.80	7.69
	Sampled @ 1007									
Total Depth of Well:		18.87								
Depth To Water Before Purging:			7.62							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/13/18

Site/Well No.: MW-10 | Replicate No.: | Code No.:

Weather: Indoors | Sampling Time: Begin 1522 End 1525

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	15.89
Depth to Water (ft bmp)	9.01
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	6.88
Casing Diameter/Type	2" PVC
Gallons in Well	1.10
Gallons Pumped/Bailed Prior to Sampling	~1.5
Sample Pump Intake Setting (ft bmp)	~
Purge Time	begin 1435 end 1525
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	21.32
SpC (mS/cm)	15.24
CND (mS/cm)	14.18
Dissolved Oxygen (%)	4.7
Dissolved Oxygen (mg/L)	0.40
pH (s.u.)	7.11
ORP (mV)	-112.5
Turbidity (NTU)	9.0
Color	Clear
Odor	none
Appearance	
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Rubel

Well Casing Volumes

Gal./Ft.					
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47	

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-10 PROJ #:

DATE : 2/13/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1440	21.29	14.61	13.57	11.8	0.99	7.07	-56.6	150	64.0	9.35
1445	21.30	14.61	13.58	10.1	0.86	7.06	-59.2	150	52.9	9.35
1450	21.31	14.69	13.66	8.9	0.75	7.06	-75.0	150	38.6	9.37
1455	21.32	14.84	13.80	6.5	0.54	7.07	-88.0	150	28.1	9.36
1500	21.32	14.93	13.88	5.8	0.49	7.08	-94.4	150	22.5	9.36
1505	21.32	15.06	14.01	5.3	0.45	7.09	-102.5	150	19.6	9.36
1510	21.32	15.14	14.08	5.1	0.43	7.10	-105.8	150	15.7	9.36
1515	21.32	15.23	14.16	4.8	0.42	7.11	-112.0	150	10.6	9.36
1520	21.32	15.24	14.15	4.7	0.40	7.11	-112.5	150	9.0	9.36
		Sampled @ 1522								

Total Depth of Well: 15.89

Depth To Water Before Purging: 9.01

Depth To Water After Purging:

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: TW-16-04 | Replicate No.: | Code No.:

Weather: 20°F cloudy | Sampling Time: Begin 1042 End 1045

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.73
Depth to Water (ft bmp)	6.62
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.11
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	~2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 0935 end 1045
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.04
SpC (mS/cm)	1.905
CND (mS/cm)	1.325
Dissolved Oxygen (%)	5.3
Dissolved Oxygen (mg/L)	0.61
pH (s.u.)	7.01
ORP (mV)	-97.7
Turbidity (NTU)	13.9
Color	clear w/ mustard pieces
Odor	none
Appearance	
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : TW-16-04 PROJ #:

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0940	8.44	1.898	1.298	18.0	2.11	7.36	-83.7	150	36.0	6.62
0945	8.69	1.897	1.307	18.0	2.07	7.21	-91.0	150	33.9	6.68
0950	8.94	1.893	1.313	12.6	1.44	7.15	-94.4	150	32.0	6.68
0955	9.04	1.892	1.316	9.8	1.13	7.13	-95.6	150	29.4	6.68
1000	9.13	1.886	1.314	7.8	0.90	7.10	-96.2	150	23.8	6.68
1005	9.21	1.877	1.311	6.3	0.72	7.08	-96.5	150	23.3	6.68
1010	9.22	1.874	1.309	5.9	0.67	7.07	-96.7	150	21.2	6.68
1015	9.28	1.872	1.310	5.7	0.646	7.06	-97.0	150	16.1	6.68
1020	9.22	1.892	1.321	5.3	0.60	7.06	-97.8	150	17.3	6.68
1025	9.12	1.899	1.323	5.3	0.61	7.06	-97.8	150	16.1	6.68
1030	9.07	1.90	1.324	5.3	0.61	7.06	-97.8	150	14.2	6.68
1035	9.05	1.905	1.324	5.3	0.61	7.06	-97.7	150	14.1	6.68
1040	9.04	1.905	1.325	5.3	0.61	7.06	-97.7	150	13.9	6.68
			Sampled @ 1042.							
Total Depth of Well:										
Depth To Water Before Purging:			6.62							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: PW-16-R | Replicate No.: | Code No.:

Weather: Sunny 35°F | Sampling Time: Begin 1202 End 1205

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.15
Depth to Water (ft bmp)	6.88
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.27
Casing Diameter/Type	2" PVC
Gallons in Well	1.64
Gallons Pumped/Bailed Prior to Sampling	~2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1125 end 1205
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.59
SpC (mS/cm)	1.699
CND (mS/cm)	1.232
Dissolved Oxygen (%)	6.6
Dissolved Oxygen (mg/L)	0.73
pH (s.u.)	7.02
ORP (mV)	2.7
Turbidity (NTU)	0.68
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	collected ms/msd

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Rubel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : PW-16-02 PROJ #:

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1130	10.06	1.681	1.202	22.6	2.54	7.18	-7.2	150	5.38	6.88
1135	10.31	1.689	1.217	16.6	1.84	7.10	-3.7	150	1.45	6.88
1140	10.67	1.695	1.231	9.7	1.07	7.05	-0.2	150	1.02	6.88
1145	10.61	1.698	1.232	7.9	0.88	7.03	1.4	150	0.98	6.88
1150	10.66	1.697	1.232	6.9	0.76	7.03	2.3	150	0.82	6.88
1155	10.64	1.698	1.232	6.7	0.74	7.02	2.6	150	0.71	6.88
1200	10.59	1.699	1.232	6.6	0.73	7.02	2.7	150	0.68	6.88
	Sampled @			1202	collected		ms/msd			
Total Depth of Well:										
Depth To Water Before Purging:			6.88							
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: TW-16-03 | Replicate No.: | Code No.:

Weather: Sunny 34°F | Sampling Time: Begin 1357 End 1400

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.75
Depth to Water (ft bmp)	6.26
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.49
Casing Diameter/Type	2" PVC
Gallons in Well	1.99
Gallons Pumped/Bailed Prior to Sampling	~4.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1245 end 1400
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.06
SpC (mS/cm)	2.089
CND (mS/cm)	1.471
Dissolved Oxygen (%)	3.8
Dissolved Oxygen (mg/L)	0.42
pH (s.u.)	6.98
ORP (mV)	-91.1
Turbidity (NTU)	—
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	Turbidimeter CAPERROR @1320

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A.Rubd

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : TW-16-03 PROJ #:

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1255	10.06	2.030	1.451	20.3	2.26	7.09	-67.0	150	28.2	6.26
1300	10.27	2.036	1.463	9.8	1.09	7.04	-74.3	150	26.0	6.26
1305	10.32	2.036	1.465	7.7	0.86	7.02	-78.8	150	23.2	6.26
1310	10.39	2.035	1.467	5.4	0.59	7.01	-81.9	150	22.2	6.26
1315	10.44	2.030	1.466	5.0	0.55	7.00	-83.9	150	23.6	6.26
1320	10.51	2.030	1.468	5.1	0.56	7.00	-85.8	150	—	6.26
1325	10.41	2.033	1.467	4.4	0.57	7.00	-88.6	150	—	6.26
1330	10.25	2.032	1.460	~~4.50~~	0.50	6.99	-88.7	150	—	6.26
1335	10.16	2.035	1.459	4.5	0.50	6.99	-88.8	150	—	6.26
1340	10.17	2.039	1.461	4.6	0.52	6.99	-89.4	150	—	6.26
1345	10.06	2.040	1.458	4.4	0.49	6.99	-89.9	150	—	6.26
1350	10.06	2.047	1.462	3.9	0.44	6.99	-90.5	150	—	6.26
1355	10.06	2.059	1.471	3.8	0.42	6.98	-91.1	150	—	6.26
	Sampled @			1357						
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

1320 – Turbidimete CAP ERROR

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/14/18

Site/Well No.: TW-16-02 | Replicate No.: | Code No.:

Weather: Sunny, 43°F | Sampling Time: Begin 1612 End 1615

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.15
Depth to Water (ft bmp)	7.84
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.31
Casing Diameter/Type	2" PVC
Gallons in Well	1.49
Gallons Pumped/Bailed Prior to Sampling	~2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1622 ~~1322~~ end 1615
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.12
SpC (mS/cm)	5.876
CND (mS/cm)	4.318
Dissolved Oxygen (%)	5.1
Dissolved Oxygen (mg/L)	0.55
pH (s.u.)	7.29
ORP (mV)	-117.7
Turbidity (NTU)	3.40
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Ruibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2

WELL : TW-16-02 PROJ #: MI001373.0001.00002 (off)

DATE : 2/14/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1530	11.16	5.938	4.367	9.6	1.03	7.41	-106.4	150	13.6	7.84
1535	11.24	5.664	4.175	8.4	0.90	7.33	-110.9	150	12.0	7.84
1540	11.24	5.647	4.162	8.6	0.92	7.32	-110.0	150	9.45	7.84
1545	11.18	5.634	4.146	7.2	0.77	7.30	-109.6	150	6.95	7.84
1550	11.15	5.638	4.147	6.9	0.75	7.30	-110.6	150	7.01	7.84
1555	11.15	5.676	4.175	6.1	0.66	7.29	-113.6	150	4.42	7.84
1600	11.12	5.770	4.240	5.2	0.56	7.29	-116.7	150	3.75	7.84
1605	11.09	5.793	4.254	5.2	0.56	7.29	-117.1	150	3.00	7.84
1610	11.12	5.876	4.318	5.1	0.55	7.29	-117.7	150	3.40	7.84
		Sampled @ 1612								

Total Depth of Well:	
Depth To Water Before Purging:	7.84
Depth To Water After Purging:	

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-12-18
Site/Well No.	MW-70	Replicate No.	~	Code No.	-
Weather	24° SUNNY / CLEAR	Sampling Time: Begin	935	End	1035

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.12
Depth to Water (ft bmp)	10.91
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.21
Casing Diameter/Type	2" PVC
Gallons in Well	1.47
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 935 end 1035
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.19
SpC (mS/cm)	4.931
CND (mS/cm)	-
Dissolved Oxygen (%)	2.0
Dissolved Oxygen (mg/L)	0.21
pH (s.u.)	12.56
ORP (mV)	-47.4
Turbidity (NTU)	2.34
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel KACAW BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : ~~MW-46~~ MW-70 PROJ #:

DATE : 2-12-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
935	12.92	4.483	-	13.7	1.26	7.58	229.1	200	23.5	10.91
940	12.63	4.472	-	5.7	0.60	7.52	114.9	200	14.8	10.91
945	12.29	4.466	-	4.6	0.48	9.67	-2.1	200	12.2	10.91
950	12.00	4.474	-	4.3	0.45	10.04	-33.3	200	11.6	10.91
955	11.81	4.487	-	4.6	0.49	10.74	-43.4	200	7.94	10.91
1000	11.80	4.523	-	4.0	0.42	11.22	-49.0	200	6.92	10.91
1005	11.52	4.580	-	3.8	0.40	13.04	-53.7	200	5.89	10.91
1010	11.46	4.636	-	2.7	0.29	14.25	-58.6	200	6.79	10.91
1015	11.51	4.684	-	2.7	0.29	14.35	-55.5	200	4.30	10.91
1020	11.66	4.759	-	2.1	0.23	13.79	-52.2	200	3.04	10.91
1025	11.87	4.834	-	2.9	0.31	13.22	-48.9	200	2.39	10.91
1030	12.03	4.860	-	3.4	0.37	13.09	-51.0	200	2.44	10.91
1035	12.19	4.931	-	2.0	0.21	12.56	-47.6	200	2.34	10.91
		20.12								
Total Depth of Well:		~~19.81~~ (MW-70)								
Depth To Water Before Purging:				10.91						
Depth To Water After Purging:		10.91								

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page: 1 of 2

Location: Livonia, MI | Date: 2-12-18

Site/Well No.: MW-45 | Replicate No.: — | Code No.: —

Weather: 24°F Sunny | Sampling Time: Begin 1134 End 1234

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.72
Depth to Water (ft bmp)	10.41
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.31
Casing Diameter/Type	2" PVC
Gallons in Well	1.49
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1134 end 1234
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.76
SpC (mS/cm)	2.863
CND (mS/cm)	—
Dissolved Oxygen (%)	2.6
Dissolved Oxygen (mg/L)	0.27
pH (s.u.)	10.60
ORP (mV)	-58.0
Turbidity (NTU)	21.1
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-45 PROJ #:

DATE : 2-12-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1134	11.59	2.089	-	23.3	2.40	9.85	52.7	200	85.8	10.41
1139	11.02	2.092	-	7.6	0.83	10.33	46.1	200	88.6	10.41
1144	11.69	2.317	-	5.5	0.59	11.10	35.8	200	77.5	10.41
1149	11.51	2.812	-	4.9	0.53	11.19	8.5	200	73.1	10.41
1154	11.51	2.966	-	5.3	0.57	10.97	-27.5	200	68.0	10.41
1159	11.58	2.993	-	5.1	0.56	10.77	-36.6	200	59.0	10.41
1204	11.76	3.029	-	5.4	0.58	10.75	-43.5	200	50.3	10.41
1209	11.84	3.092	-	4.2	0.45	10.81	-47.5	200	46.3	10.41
1214	12.07	3.116	-	3.6	0.38	10.51	-46.6	200	36.6	10.41
1219	12.16	3.095	-	4.3	0.45	10.62	-50.1	200	31.7	10.41
1224	12.61	2.992	-	2.9	0.30	10.49	-55.6	200	27.4	10.41
1229	12.66	2.949	-	2.7	0.28	10.53	-57.7	200	24.6	10.41
1234	12.76	2.863	-	2.6	0.27	10.60	-58.0	200	21.1	10.41
Total Depth of Well:		19.72								
Depth To Water Before Purging:				10.41						
Depth To Water After Purging:				10.41						

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-12-18
Site/Well No.	MW-9	Replicate No.	—	Code No.	—
Weather	24°F CLEAR	Sampling Time:	Begin 1316	End	1416

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	24.35
Depth to Water (ft bmp)	7.19
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	17.16
Casing Diameter/Type	2" PVC
Gallons in Well	2.75
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1316 end 1416
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.85
SpC (mS/cm)	5.783
CND (mS/cm)	—
Dissolved Oxygen (%)	1.6
Dissolved Oxygen (mg/L)	0.17
pH (s.u.)	—
ORP (mV)	-96.3
Turbidity (NTU)	11.7
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: ICALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-9 PROJ #:

DATE : 2-12-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1316	12.38	6.122	-	7.6	0.79	-	21.3	200	39.4	7.16
1321	12.56	6.196	-	6.4	0.67	-	3.7	200	41.4	7.19
1326	12.60	6.225	-	4.8	0.50	-	-2.6	200	39.9	7.19
1331	12.34	6.259	-	3.3	0.35	-	-28.3	200	42.4	7.19
1336	12.03	6.247	-	3.8	0.39	-	-58.1	200	34.9	7.19
1341	11.96	6.075	-	2.7	0.28	-	-76.0	200	28.0	7.19
1346	11.87	6.000	-	2.8	0.30	-	-85.1	200	21.0	7.19
1351	11.59	5.946	-	2.4	0.26	-	-93.0	200	18.2	7.19
1356	11.64	5855	-	2.0	0.22	-	-92.8	200	16.1	7.19
1401	11.68	5.834	-	1.9	0.21	-	-92.5	200	13.0	7.19
1406	11.80	5.806	-	1.7	0.18	-	-91.2	200	12.5	7.19
1411	11.86	5.805	-	1.8	0.19	-	-93.4	200	10.4	7.19
1416	11.85	5.783	-	1.6	0.17	-	-96.3	200	11.7	7.19
Total Depth of Well:		24.35								
Depth To Water Before Purging:				7.16						
Depth To Water After Purging:				7.19						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-12-18

Site/Well No.: MW-14 | Replicate No.: — | Code No.: —

Weather: 29°F CLEAR | Sampling Time: Begin 1450 End 1550

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.80
Depth to Water (ft bmp)	7.21
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.59
Casing Diameter/Type	2" PVC
Gallons in Well	2.01
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1450 end 1550
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.94
SpC (mS/cm)	13.04
CND (mS/cm)	—
Dissolved Oxygen (%)	6.7
Dissolved Oxygen (mg/L)	0.71
pH (s.u.)	7.00
ORP (mV)	8.5
Turbidity (NTU)	40.9
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-14 PROJ #:

DATE : 2-12-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1450	11.52	24.74	+	10.3	1.03	7.37	88.6	200	246	7.21
1455	10.85	23.83	-	6.2	0.62	7.20	54.6	200	173	7.17
1500	10.11	23.03	-	6.2	0.63	7.13	28.9	200	113	7.17
1505	9.77	22.68	-	5.5	0.57	7.11	18.1	200	92.6	7.17
1510	9.86	22.37	-	5.6	0.58	7.12	13.7	200	58.5	7.17
1515	9.92	22.22	-	8.0	0.83	7.05	12.8	200	128	7.17
1520	11.05	21.99	-	8.7	0.87	7.04	11.4	200	118	7.17
1525	10.93	19.05	-	7.0	0.72	7.04	8.8	200	104	7.17
1530	10.84	17.55	-	6.7	0.70	7.01	8.4	200	78.4	7.17
1535	10.71	15.79	-	6.5	0.67	7.02	7.7	200	66.8	7.17
1540	10.81	14.74	-	6.5	0.68	7.01	7.4	200	53.1	7.17
1545	10.91	13.92	-	6.6	0.69	7.01	7.6	200	48.6	7.17
1550	10.94	13.04	-	6.7	0.71	7.00	8.5	200	40.9	7.17
Total Depth of Well:		19.80								
Depth To Water Before Purging:				7.21						
Depth To Water After Purging:				7.17						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-12-18

Site/Well No.: MW-20 | Replicate No.: — | Code No.: —

Weather: 24°F CLEAR | Sampling Time: Begin 1636 End 1736

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	16.62
Depth to Water (ft bmp)	7.20
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.42
Casing Diameter/Type	2" PVC
Gallons in Well	1.51
Gallons Pumped/Bailed Prior to Sampling	3.16
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1636 end 1736
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.05
SpC (mS/cm)	17.82
CND (mS/cm)	—
Dissolved Oxygen (%)	1.2
Dissolved Oxygen (mg/L)	0.13
pH (s.u.)	7.73
ORP (mV)	-118.4
Turbidity (NTU)	23.5
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN ORIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-20 PROJ #:

DATE : 2-12-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1636	11.16	14.38	-	18.1	1.77	7.83	8.9	200	103	7.20
1641	11.43	15.42	-	1.8	0.18	7.79	-66.2	200	85.2	7.20
1646	11.35	16.48	-	0.5	0.04	7.81	-100.3	200	51.9	7.20
1651	11.19	16.74	-	0.0	0.0	7.80	-117.9	200	41.8	7.20
1656	11.04	16.72	-	0.2	0.02	7.77	-123.2	200	40.4	7.20
1701	10.97	16.87	-	0.0	0.00	7.75	-125.4	200	30.8	7.20
1706	10.96	17.24	-	0.0	0.00	7.74	-126.8	200	28.7	7.20
1711	11.23	17.56	-	0.2	0.02	7.74	-127.2	200	28.0	7.20
1716	11.13	17.67	-	0.2	0.02	7.74	-127.0	200	27.5	7.20
1721	11.13	17.79	-	0.5	0.02	7.75	-125.7	200	26.9	7.20
1726	11.09	17.81	-	0.7	0.08	7.74	-124.8	200	31.1	7.20
1731	11.07	17.83	-	1.1	0.12	7.74	-123	200	25.3	7.20
1736	11.05	17.82	-	1.2	0.13	7.73	-118.4	200	23.5	7.20
Total Depth of Well:		16.62								
Depth To Water Before Purging:				7.20						
Depth To Water After Purging:			7.20							

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-13-18
Site/Well No.	MW-48	Replicate No.	—	Code No.	—
Weather	19°F PARTLY CLOUDY	Sampling Time: Begin	817	End	917

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.35
Depth to Water (ft bmp)	10.68
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.67
Casing Diameter/Type	2" PVC
Gallons in Well	1.55
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 817 end 917
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.77
SpC (mS/cm)	8.600
CND (mS/cm)	—
Dissolved Oxygen (%)	-0.1
Dissolved Oxygen (mg/L)	-0.01
pH (s.u.)	7.75
ORP (mV)	-100.7
Turbidity (NTU)	16.6
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	DUP-02_021318 TAKEN

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-48 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
817	11.08	9.456	-	98.6	9.59	8.50	144.4	200	32.6	10.77
822	10.95	10.25	-	5.1	0.55	8.28	114.8	200	33.8	10.68
827	11.15	10.39	-	2.9	0.31	8.16	31.9	200	31.4	10.68
832	11.19	10.55	-	1.1	0.12	8.09	-25.0	200	27.2	10.68
837	11.23	10.46	-	0.5	0.05	8.01	-60.9	200	37.6	10.68
842	11.27	10.80	-	0.3	0.02	8.02	-76.3	200	42.0	10.68
847	11.28	10.01	-	0.2	0.02	7.95	-93.7	200	33.2	10.68
852	11.19	9.715	-	0.1	0.02	7.94	-101.8	200	32.9	10.68
857	11.20	9.465	-	-0.1	-0.01	7.88	-107.6	200	29.5	10.68
902	11.41	9.109	-	-0.1	-0.01	7.85	-111.1	200	25.0	10.68
907	11.44	8.912	-	-0.1	-0.01	7.81	-110.7	200	26.2	10.68
912	11.57	8.760	-	-0.1	-0.01	7.77	-108.4	200	21.5	10.68
917	11.77	8.600	-	-0.1	-0.01	7.75	-100.7	200	16.6	10.68
Total Depth of Well:		20.35								
Depth To Water Before Purging:				10.77						
Depth To Water After Purging:				10.68						

DUP-02_021318 TAKEN

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-13-18

Site/Well No.: MW-21 | Replicate No.: — | Code No.: —

Weather: 14°F PARTLY CLOUDY | Sampling Time: Begin 1011 End 1111

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.74
Depth to Water (ft bmp)	7.94
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.8
Casing Diameter/Type	2" PVC
Gallons in Well	1.57
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1011 end 1111
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.32
SpC (mS/cm)	11.14
CND (mS/cm)	—
Dissolved Oxygen (%)	10.6
Dissolved Oxygen (mg/L)	1.12
pH (s.u.)	6.78
ORP (mV)	-46.0
Turbidity (NTU)	15.1
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	MS / MSD TAKEN

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-21 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1011	11.82	11.79	~~29.7~~	29.2	2.71	6.91	44.4	200	91.6	7.97
1016	11.69	11.89	–	20.0	2.08	6.86	40.4	200	77.0	7.94
1021	10.96	11.82	–	23.8	2.50	6.84	31.8	200	63.6	7.94
1026	10.26	11.61	–	22.4	2.40	6.81	5.1	200	44.5	7.94
1031	10.17	11.60	–	14.4	1.54	6.83	-11.8	200	27.8	7.94
1036	10.67	11.53	–	5.0	0.53	6.81	-19.5	200	27.0	7.94
1041	10.70	11.43	–	5.1	0.54	6.81	-35.4	200	24.7	7.94
1046	10.83	11.36	–	10.0	1.09	6.81	-46.0	200	25.2	7.94
1051	10.90	11.25	–	12.9	1.37	6.80	-45.1	200	28.9	7.94
1056	10.93	11.24	–	13.7	1.45	6.80	-43.0	200	27.2	7.94
1101	11.28	11.19	–	12.7	1.33	6.79	-42.3	200	28.3	7.94
1106	11.31	11.12	–	11.7	1.23	6.78	-43.9	200	16.7	7.94
1111	11.32	11.14	–	10.6	1.12	6.78	-46.0	200	15.1	7.94
Total Depth of Well:		17.74								
Depth To Water Before Purging:				7.97						
Depth To Water After Purging:				7.94						

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-13-18
Site/Well No.	MW-49	Replicate No.	—	Code No.	—
Weather	14°F PARTLY CLOUDY	Sampling Time:	Begin 1140	End	1235

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.44
Depth to Water (ft bmp)	7.64
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.8
Casing Diameter/Type	2" PVC
Gallons in Well	1.57
Gallons Pumped/Bailed Prior to Sampling	2.84
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1140 end 1235
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.20
SpC (mS/cm)	2.349
CND (mS/cm)	—
Dissolved Oxygen (%)	0.1
Dissolved Oxygen (mg/L)	0.01
pH (s.u.)	7.16
ORP (mV)	-127.7
Turbidity (NTU)	7.83
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-49 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1140	10.69	3.894	~~8~~	7.6	0.79	7.10	-87.6	200	52.2	7.64
1145	10.50	3.642	—	1.1	0.12	7.10	-94.5	200	27.3	7.64
1150	10.85	3.420	—	1.1	0.12	7.05	-102.6	200	31.7	7.64
1155	10.88	3.310	—	0.7	0.00	7.10	-108.2	200	28.0	7.64
1200	11.00	3.065	—	0.6	0.07	7.11	-113.1	200	22.4	7.64
1205	10.90	2.913	—	0.4	0.04	7.13	-116.4	200	15.7	7.64
1210	10.79	2.760	—	0.3	0.03	7.14	-119.8	200	13.5	7.64
1215	10.75	2.663	—	0.2	0.02	7.15	-121.8	200	11.5	7.64
1220	10.93	2.587	—	0.1	0.01	7.16	-123.7	200	12.9	7.64
1225	11.05	2.525	—	-0.1	-0.01	7.14	-124.9	200	9.03	7.64
1230	11.23	2.442	—	-0.1	-0.01	7.16	-126.4	200	8.66	7.64
1235	11.20	2.399	—	0.1	0.01	7.16	-127.7	200	7.83	7.64
Total Depth of Well:		17.44								
Depth To Water Before Purging:				7.64						
Depth To Water After Purging:				7.64						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page: 1 of 2

Location: Livonia, MI | Date: 2-13-18

Site/Well No.: MW-30 | Replicate No.: — | Code No.: —

Weather: 19°F PARTLY CLOUDY | Sampling Time: Begin 1336 End 1426

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	24.69
Depth to Water (ft bmp)	11.22
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	13.47
Casing Diameter/Type	2" PVC
Gallons in Well	2.16
Gallons Pumped/Bailed Prior to Sampling	2.58
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1336 end 1426
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	12.16
SpC (mS/cm)	3.177
CND (mS/cm)	—
Dissolved Oxygen (%)	1.5
Dissolved Oxygen (mg/L)	0.16
pH (s.u.)	7.35
ORP (mV)	-85.6
Turbidity (NTU)	5.67
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

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MI001373.0001.00002 (off)

WELL : MW-30 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1336	11.80	3.176	–	14.2	1.50	7.34	44.7	200	40.8	11.20
1341	11.83	3.186	–	11.0	1.18	7.30	39.4	200	22.7	11.22
1346	11.83	3.192	–	6.4	0.69	7.29	29.4	200	10.5	11.22
1351	11.77	3.192	–	3.9	0.43	7.27	17.8	200	9.88	11.22
1356	11.90	3.191	–	2.2	0.23	7.30	-3.6	200	7.43	11.22
1401	11.79	3.189	–	3.1	0.32	7.32	-32.9	200	8.98	11.22
1406	11.88	3.185	–	2.3	0.24	7.33	-56.2	200	6.10	11.22
1411	12.11	3.184	–	1.7	0.18	7.33	-66.0	200	5.46	11.22
1416	12.16	3.180	–	2.6	0.27	7.33	-75.4	200	6.42	11.22
1421	12.09	3.179	–	1.6	0.18	7.34	-80.7	200	6.13	11.22
1426	12.16	3.177	–	1.5	0.16	7.35	-85.6	200	5.67	11.22
Total Depth of Well:		24.69								
Depth To Water Before Purging:				11.20						
Depth To Water After Purging:				11.22						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-13-18

Site/Well No.: MW-42 | Replicate No.: — | Code No.: —

Weather: 20°F PARTLY CLOUDY | Sampling Time: Begin 1445 End 1545

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.55
Depth to Water (ft bmp)	9.57
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.98
Casing Diameter/Type	2" PVC
Gallons in Well	1.76
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1445 end 1545
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.86
SpC (mS/cm)	3.108
CND (mS/cm)	—
Dissolved Oxygen (%)	0.1
Dissolved Oxygen (mg/L)	0.01
pH (s.u.)	7.18
ORP (mV)	-107.3
Turbidity (NTU)	42.0
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

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MI001373.0001.00002 (off)

WELL : MW-42 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1445	11.02	3.081	-	9.1	0.95	7.24	13.4	200	142	9.57
1450	11.21	3.080	-	2.5	0.26	7.24	9.4	200	122	9.57
1455	11.45	3.080	-	2.0	0.23	7.20	0.7	200	109	9.57
1500	11.63	3.085	-	1.1	0.09	7.22	-33.9	200	100	9.57
1505	11.77	3.090	-	0.5	0.06	7.22	-60.2	200	94	9.57
1510	11.85	3.095	-	0.4	0.05	7.21	-78.7	200	87.7	9.57
1515	11.72	3.095	-	0.6	0.07	7.19	-87.3	200	82.5	9.57
1520	11.72	3.688	-	0.7	0.07	7.19	-89.5	200	75.3	9.57
1525	11.93	3.092	-	0.5	0.05	7.18	-90.6	200	68.7	9.57
1530	11.95	3.097	-	0.3	0.04	7.18	-98.0	200	62.6	9.57
1535	11.84	3.104	-	0.3	0.03	7.18	-103.1	200	51.9	9.57
1540	11.93	3.102	-	0.0	0.00	7.18	-104.7	200	41.9	9.57
1545	11.86	3.108	-	0.1	0.01	7.18	-107.3	200	42.0	9.57
Total Depth of Well:		20.55								
Depth To Water Before Purging:				9.57						
Depth To Water After Purging:				9.57						

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-13-18
Site/Well No.	MW-43	Replicate No.	—	Code No.	—
Weather	20°F PARTLY CLOUDY	Sampling Time:	Begin 1607	End	1707

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.80
Depth to Water (ft bmp)	8.72
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	13.08
Casing Diameter/Type	2" PVC
Gallons in Well	2.09
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1607 end 1707
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.75
SpC (mS/cm)	4.391
CND (mS/cm)	—
Dissolved Oxygen (%)	0.6
Dissolved Oxygen (mg/L)	0.07
pH (s.u.)	7.46
ORP (mV)	-114.1
Turbidity (NTU)	45.7
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: YACAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-43 PROJ #:

DATE : 2-13-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1607	11.95	4.371	-	9.9	0.99	7.37	-9.9	200	96.8	8.72
1612	11.52	4.361	-	2.0	0.21	7.37	-46.9	200	82.2	8.72
1617	11.34	4.364	-	1.2	0.12	7.37	-63.7	200	77.6	8.72
1622	11.28	4.353	-	0.8	0.09	7.37	-78.1	200	77.7	8.72
1627	11.59	4.342	-	0.8	0.08	7.38	-91.2	200	63.7	8.72
1632	11.74	4.341	-	0.5	0.06	7.39	-99.2	200	67.4	8.72
1637	11.72	4.340	-	0.5	0.05	7.39	-101.6	200	59.6	8.72
1642	11.70	4.338	-	4.1	0.44	7.38	-105.3	200	52.2	8.72
1647	11.75	4.334	-	1.1	0.11	7.38	-108.8	200	47.2	8.72
1652	11.78	4.336	-	0.8	0.08	7.39	-108.3	200	47.1	8.72
1657	11.81	4.342	-	0.8	0.09	7.39	-109.4	200	47.3	8.72
1702	11.76	4.344	-	0.6	0.06	7.39	-111.4	200	42.5	8.72
1707	11.75	4.341	-	0.6	0.07	7.40	-114.1	200	45.7	8.72
Total Depth of Well:		21.80								
Depth To Water Before Purging:				8.72						
Depth To Water After Purging:				8.72						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-69 | Replicate No.: – | Code No.: –

Weather: 20°F CLOUDY | Sampling Time: Begin 804 End 904

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.01
Depth to Water (ft bmp)	10.03
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.98
Casing Diameter/Type	2" PVC
Gallons in Well	1.60
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	–
Purge Time	begin 804 end 904
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.73
SpC (mS/cm)	8.086
CND (mS/cm)	–
Dissolved Oxygen (%)	0.9
Dissolved Oxygen (mg/L)	0.16
pH (s.u.)	7.26
ORP (mV)	-96.0
Turbidity (NTU)	14.4
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-69 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
804	11.98	8.498	-	11.6	1.15	7.51	185.5	200	68.1	10.03
809	11.93	8.541	-	2.6	0.20	7.38	191.5	200	61.3	10.03
814	11.88	8.508	-	1.4	0.15	7.35	109.1	200	51.8	10.03
819	11.85	8.462	-	1.8	0.19	7.34	69.1	200	40.7	10.03
824	11.85	8.415	-	1.4	0.15	7.33	6.2	200	43.3	10.03
829	11.88	8.333	-	1.2	0.12	7.31	-61.1	200	31.5	10.03
834	11.93	8.262	-	1.3	0.13	7.29	-86.8	200	30.2	10.03
839	11.96	8.196	-	1.0	0.10	7.28	-93.1	200	25.3	10.03
844	11.38	8.130	-	2.7	0.28	7.27	-100.6	200	25.1	10.03
849	10.96	8.114	-	1.0	0.11	7.26	-106.4	200	25.0	10.03
854	10.70	8.102	-	1.8	0.19	7.25	-103.2	200	20.6	10.03
859	10.69	8.097	-	0.9	0.09	7.26	-98.4	200	19.8	10.03
904	10.73	8.086	-	0.9	0.10	7.26	-96.0	200	14.4	10.03
915 (KB)										
Total Depth of Well:		20.01								
Depth To Water Before Purging:				10.03						
Depth To Water After Purging:				10.03						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-31 | Replicate No.: — | Code No.: —

Weather: 23°F cloudy | Sampling Time: Begin 925 End 950

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	21.48
Depth to Water (ft bmp)	10.84
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.64
Casing Diameter/Type	2" PVC
Gallons in Well	1.70
Gallons Pumped/Bailed Prior to Sampling	1.29
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 925 end 950
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.51
SpC (mS/cm)	24.46
CND (mS/cm)	—
Dissolved Oxygen (%)	0.0
Dissolved Oxygen (mg/L)	0.00
pH (s.u.)	7.16
ORP (mV)	-84.2
Turbidity (NTU)	6.41
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-31 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
925	11.86	26.76	–	12.0	1.14	7.10	-50.5	200	32.9	10.84
930	11.69	26.85	–	2.8	0.27	7.14	-71.0	200	17.5	10.84
935	11.69	26.81	–	0.5	0.04	7.16	-78.8	200	11.4	10.84
940	11.59	26.63	–	0.1	0.01	7.16	-82.7	200	6.67	10.84
945	11.57	26.50	-	0.1	0.01	7.15	-86.3	200	6.44	10.84
950	11.51	26.46	–	0.0	0.00	7.16	-89.2	200	6.41	10.84
Total Depth of Well:		21.48								
Depth To Water Before Purging:				10.84						
Depth To Water After Purging:				10.84						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-35 | Replicate No.: — | Code No.: —

Weather: 25°F CLOUDY | Sampling Time: Begin 1017 End 1117

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	24.50
Depth to Water (ft bmp)	9.64
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.86
Casing Diameter/Type	2" PVC
Gallons in Well	2.38
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1017 end 1117
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.65
SpC (mS/cm)	3.981
CND (mS/cm)	—
Dissolved Oxygen (%)	-0.3
Dissolved Oxygen (mg/L)	~0.03
pH (s.u.)	7.60
ORP (mV)	-149.4
Turbidity (NTU)	58.8
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-35 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1017	11.41	4.710	—	7.9	0.81	7.72	-34.6	200	36.7	9.64
1022	11.14	4.586	-	2.7	0.29	7.67	-62.4	200	76.7	9.64
1027	10.38	4.143	-	1.7	0.19	7.66	-96.0	200	95.9	9.64
1032	10.76	4.092	-	0.9	0.10	7.65	-112.3	200	81.8	9.64
1037	10.89	4.074	-	0.7	0.08	7.65	-116.9	200	95.4	9.64
1042	11.28	4.054	-	0.3	0.03	7.64	-130.1	200	95.4	9.64
1047	11.19	4.057	-	0.1	0.01	7.64	-134.5	200	84.1	9.64
1052	11.28	4.043	-	0.0	0.00	7.63	-139.2	200	76.4	9.64
1057	11.35	4.039	-	-0.1	-0.01	7.62	-141.6	200	78.3	9.64
(MS) ~~10~~ 1102	11.30	4.020	-	-0.2	-0.02	7.61	-143.9	200	75.9	9.64
1107	11.37	4.018	-	-0.2	-0.02	7.61	-145.3	200	63.7	9.64
1112	11.57	3.994	-	-0.3	-0.03	7.60	-147.7	200	53.3	9.64
1117	11.65	3.981	-	-0.3	-0.03	7.60	-149.4	200	58.8	9.64
Total Depth of Well:		24.50								
Depth To Water Before Purging:				9.64						
Depth To Water After Purging:				9.64						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-18 | Replicate No.: — | Code No.: —

Weather: 28°F CLOUDY | Sampling Time: Begin 1258 End 1358

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.85
Depth to Water (ft bmp)	7.45
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.4
Casing Diameter/Type	2" PVC
Gallons in Well	1.66
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1258 end 1358
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.22
SpC (mS/cm)	5.166
CND (mS/cm)	—
Dissolved Oxygen (%)	0.8
Dissolved Oxygen (mg/L)	0.08
pH (s.u.)	6.93
ORP (mV)	-71.0
Turbidity (NTU)	67.5
Color	CLEAR
Odor	NONE
Appearance	TURBID
Sampling Method	Low Flow
Remarks	DUP-03_021418 TAKEN

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-18 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1258	10.74	5.814	–	29.5	2.96	7.09	-31.6	200	215	7.45
1303	10.76	5.792	–	2.2	0.23	6.99	-49.6	200	171	7.45
1308	9.14	5.697	–	1.3	0.15	6.96	-62.5	200	129	7.45
1313	9.08	5.680	–	1.2	0.13	6.96	-64.8	200	110	7.45
1318	8.84	5.605	–	0.9	0.10	6.94	-67.9	200	103	7.45
1323	8.51	5.556	–	0.8	0.09	6.94	-70.2	200	101	7.45
1328	9.07	5.436	–	0.8	0.09	6.92	-70.0	200	103	7.45
1333	9.77	5.433	–	0.8	0.08	6.92	-62.9	200	101	7.45
1338	10.36	5.366	–	1.1	0.12	6.94	-66.1	200	94.5	7.45
1343	10.29	5.296	–	1.4	0.15	6.93	-65.5	200	83.9	7.45
1348	10.48	5.224	–	0.5	0.06	6.92	-62.2	200	76.4	7.45
1353	10.39	5.205	–	0.4	0.05	6.92	-68.4	200	72.4	7.45
1358	10.22	5.166	–	0.8	0.08	6.93	-71.0	200	67.5	7.45
Total Depth of Well:		17.85								
Depth To Water Before Purging:				7.45						
Depth To Water After Purging:				7.45						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-56 | Replicate No.: — | Code No.: —

Weather: 35°F cloudy | Sampling Time: Begin 1441 End 1541

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	20.59
Depth to Water (ft bmp)	8.50
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.09
Casing Diameter/Type	2" PVC
Gallons in Well	1.93
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1441 end 1541
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.76
SpC (mS/cm)	12.05
CND (mS/cm)	—
Dissolved Oxygen (%)	0.0
Dissolved Oxygen (mg/L)	0.00
pH (s.u.)	7.39
ORP (mV)	-114.1
Turbidity (NTU)	54.1
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-56 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1441	12.64	11.43	—	14.4	1.38	7.57	36.1	200	47.7	8.48
1446	12.45	11.54	-	2.7	0.27	7.51	18.1	200	34.8	8.50
1451	12.35	11.64	—	0.8	0.08	7.45	-47.9	200	37.2	8.50
1456	12.35	11.67	-	0.4	0.04	7.44	-63.4	200	31.5	8.50
1501	12.33	11.75	-	-0.1	0.00	7.44	-82.5	200	32.2	8.50
1506	12.40	11.84	-	-0.1	-0.01	7.42	-97.9	200	36.7	8.50
1511	12.12	11.99	-	0.0	0.00	7.42	-106.0	200	40.0	8.50
1516	11.91	12.03	—	-0.1	-0.01	7.41	-110.2	200	41.0	8.50
1521	11.80	12.04	-	-0.2	-0.02	7.40	-112.3	200	43.0	8.50
1526	11.70	12.04	—	-0.1	-0.01	7.40	-112.5	200	47.1	8.50
1531	11.68	12.04	—	-0.1	-0.02	7.40	-112.9	200	50.2	8.50
1536	11.76	12.05	—	0.0	0.00	7.39	-113.9	200	52.2	8.50
1541	11.76	12.05	—	0.0	0.00	7.39	-114.1	200	54.1	8.50
Total Depth of Well:		20.59								
Depth To Water Before Purging:				8.48						
Depth To Water After Purging:				8.50						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page: 1 of 2

Location: Livonia, MI | Date: 2-14-18

Site/Well No.: MW-24 | Replicate No.: — | Code No.: —

Weather: 35°F Cloudy | Sampling Time: Begin 1611 End 1711

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	23.99
Depth to Water (ft bmp)	10.56
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	13.43
Casing Diameter/Type	2" PVC
Gallons in Well	2.15
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1611 end 1711
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.62
SpC (mS/cm)	3.936
CND (mS/cm)	—
Dissolved Oxygen (%)	1.5
Dissolved Oxygen (mg/L)	0.16
pH (s.u.)	7.02
ORP (mV)	-67.9
Turbidity (NTU)	~~20~~ (KB) 61.6
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-24 PROJ #:

DATE : 2-14-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1611	11.59	4.034	-	24.1	2.50	7.01	43.2	200	163	10.56
1616	11.51	4.030	-	8.1	0.83	7.00	42.4	200	140	10.56
1621	10.84	3.952	-	2.3	0.25	7.02	8.9	200	118	10.56
1626	10.72	3.944	-	1.9	0.21	7.02	-21.9	200	115	10.56
1631	10.61	3.941	-	2.4	0.27	7.02	-32.6	200	109	10.56
1636	10.66	3.940	-	2.5	0.27	7.03	-36.5	200	104	10.56
1641	10.66	3.940	-	2.7	0.30	7.02	-37.7	200	97.5	10.56
1646	10.68	3.937	-	1.8	0.20	7.02	-46.0	200	94.2	10.56
1651	10.70	3.935	-	1.7	0.18	7.02	-53.6	200	89.9	10.56
1656	10.66	3.937	-	2.0	0.21	7.01	-58.0	200	81.6	10.56
1701	10.65	3.936	-	2.1	0.23	7.02	-60.4	200	72.3	10.56
1706	10.62	3.937	-	2.1	0.23	7.02	-65.2	200	64.1	10.56
1711	10.62	3.936	-	1.5	0.16	7.02	-67.9	200	61.6	10.56
Total Depth of Well:		23.99								
Depth To Water Before Purging:				10.56						
Depth To Water After Purging:				10.56						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-15-18

Site/Well No.: MW-36 | Replicate No.: — | Code No.: —

Weather: 34°F PARTLY CLOUDY | Sampling Time: Begin 807 End 907

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	24.91
Depth to Water (ft bmp)	10.69
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.22
Casing Diameter/Type	2" PVC
Gallons in Well	2.28
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 807 end 907
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.73
SpC (mS/cm)	9.437
CND (mS/cm)	—
Dissolved Oxygen (%)	2.9
Dissolved Oxygen (mg/L)	0.30
pH (s.u.)	7.24
ORP (mV)	-74.4
Turbidity (NTU)	21.0
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	DUP-04-021518 TAKEN

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-36 PROJ #:

DATE : 2-15-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
807	12.04	9.470	-	19.4	1.97	7.40	203.3	200	55.2	10.69
812	11.95	9.526	-	12.1	1.25	7.35	185.8	200	47.4	10.69
817	11.82	9.556	-	10.0	1.04	7.30	128.4	200	34.7	10.69
822	11.68	9.553	-	8.0	0.84	7.28	57.2	200	27.2	10.69
827	11.59	9.540	-	6.7	0.70	7.27	-38.5	200	27.2	10.69
832	11.59	9.525	-	6.0	0.63	7.26	-51.8	200	20.1	10.69
837	11.61	9.501	-	5.3	0.55	7.27	-64.7	200	24.4	10.69
842	11.63	9.486	-	4.0	0.43	7.26	-70.7	200	21.0	10.69
847	11.66	9.470	-	3.9	0.41	7.26	-72.5	200	19.0	10.69
852	11.67	9.461	-	3.7	0.38	7.25	-73.4	200	19.5	10.69
857	11.71	9.448	-	3.2	0.33	7.25	-73.2	200	18.9	10.69
902	11.72	9.441	-	2.7	0.28	7.25	-74.7	200	18.7	10.69
907	11.73	9.437	-	2.9	0.30	7.24	-74.4	200	21.0	10.69
Total Depth of Well:		24.91								
Depth To Water Before Purging:				10.69						
Depth To Water After Purging:				10.69						

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-15-18

Site/Well No.: MW-38 | Replicate No.: — | Code No.: —

Weather: 36°F PARTLY CLOUDY | Sampling Time: Begin 934 End 1034

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.65
Depth to Water (ft bmp)	9.15
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.5
Casing Diameter/Type	2" PVC
Gallons in Well	1.68
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 934 end 10.34
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.20
SpC (mS/cm)	2.654
CND (mS/cm)	—
Dissolved Oxygen (%)	0.2
Dissolved Oxygen (mg/L)	0.02
pH (s.u.)	7.24
ORP (mV)	-80.8
Turbidity (NTU)	71.2
Color	CLEAR
Odor	NONE
Appearance	TURBID
Sampling Method	Low Flow
Remarks	MS/MSD TAKEN

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-38 PROJ #:

DATE : 2-15-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
9:34	10.95	2.795	-	6.8	0.71	7.44	3.0	200	140	9.17
9:39	11.23	2.725	-	1.7	0.19	7.39	-3.7	200	155	9.15
9:44	11.26	2.707	-	0.8	0.09	7.34	-21.5	200	143	9.15
9:49	11.29	2.701	-	0.4	0.05	7.31	-34.9	200	127	9.15
9:54	11.18	2.699	-	0.3	0.03	7.29	-36.3	200	117	9.15
9:59	11.09	2.693	-	0.2	0.02	7.28	-48.3	200	113	9.15
10:04	11.05	2.689	-	0.4	0.05	7.28	-63.3	200	108	9.15
10:09	11.06	2.686	-	0.5	0.06	7.27	-64.3	200	104	9.15
10:14	11.09	2.682	-	0.1	0.01	7.26	-64.3	200	99.6	9.15
10:19	11.05	2.677	-	0.0	0.00	7.25	-66.2	200	95.0	9.15
10:24	11.07	2.670	-	0.4	0.05	7.26	-65.0	200	87.6	9.15
10:29	11.14	2.666	-	0.3	0.03	7.24	-75.0	200	79.4	9.15
10:34	11.20	2.659	-	0.2	0.02	7.24	-80.8	200	71.2	9.15
Total Depth of Well:		19.65		KO						
Depth To Water Before Purging:				~~9.15~~	9.17					
Depth To Water After Purging:					9.15					

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2-15-18

Site/Well No.: MW-39 | Replicate No.: — | Code No.: —

Weather: 38°F PARTLY CLOUDY | Sampling Time: Begin 1108 End 1208

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	24.30
Depth to Water (ft bmp)	11.64
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	12.64
Casing Diameter/Type	2" PVC
Gallons in Well	2.03
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1108 end 1208
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.73
SpC (mS/cm)	4.748
CND (mS/cm)	—
Dissolved Oxygen (%)	0.6
Dissolved Oxygen (mg/L)	0.08
pH (s.u.)	7.05
ORP (mV)	2.1
Turbidity (NTU)	15.2
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-39 PROJ #:

DATE : 2-15-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1108	11.51	4.305	-	48.8	5.13	7.34	32.0	200	47.8	11.64
1113	11.80	4.609	-	17.6	1.83	7.15	28.4	200	30.4	11.64
1118	11.68	4.703	-	4.2	0.44	7.10	19.1	200	16.9	11.64
1123	11.71	4.707	-	3.1	0.33	7.09	13.4	200	17.8	11.64
1128	11.67	4.717	-	2.8	0.29	7.08	10.4	200	17.5	11.64
1133	11.69	4.727	-	2.1	0.22	7.08	6.9	200	18.0	11.64
1138	11.79	4.734	-	1.7	0.18	7.07	4.8	200	20.3	11.64
1143	11.72	4.733	-	1.2	0.11	7.06	4.2	200	20.4	11.64
1148	11.75	4.733	-	1.1	0.11	7.06	3.0	200	21.0	11.64
1153	11.78	4.733	-	0.9	0.09	7.05	1.9	200	18.9	11.64
1158	11.76	4.737	-	0.8	0.09	7.06	1.2	200	16.0	11.64
1203	11.77	4.745	-	0.9	0.09	7.05	1.0	200	16.4	11.64
1208	11.73	4.748	-	0.6	0.08	7.05	2.1	200	15.2	11.64
Total Depth of Well:		24.30								
Depth To Water Before Purging:				11.64						
Depth To Water After Purging:				11.64						

APPENDIX B

Off-Site Groundwater Field Sampling Logs

ARCADIS

Water Sampling Log

MI001373 0001.00002

Project: Ford LTP | Project No. ~~MI001386.0001.20000~~ | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-79S | Replicate No.: – | Code No.: –

Weather: COLD, OVERCAST, 18°F | Sampling Time: Begin 1046 End 1050

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	9.78
Depth to Water (ft bmp)	5.46
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	4.32
Casing Diameter/Type	2" PVC
Gallons in Well	0.6912
Gallons Pumped/Bailed Prior to Sampling	~2.5
Sample Pump Intake Setting (ft bmp)	7.78
Purge Time	begin 1010 end 1045
Pumping Rate (ml/min)	250
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	6.76
SpC (mS/cm)	2.249
CND (mS/cm)	1.466
Dissolved Oxygen (%)	4.4
Dissolved Oxygen (mg/L)	0.53
pH (s.u.)	7.53
ORP (mV)	-52.9
Turbidity (NTU)	1.12
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-79S

PROJ #: ~~MI001386.0001.20000 (on)~~ MI001373.0001.00002 (off)

DATE : 2/8/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1020	6.56	1.573	1.021	16.7	2.03	7.56	190.7	250	5.50	5.46
1025	6.60	1.997	1.297	7.8	0.96	7.32	94.7	|	3.82	|
1030	6.72	2.140	1.394	5.7	0.69	7.49	29.8	|	2.33	|
1035	6.72	2.191	1.426	5.2	0.63	7.39	-1.9	|	1.51	|
1040	6.63	2.231	1.448	5.0	0.61	7.30	-25.8	|	1.12	|
1045	6.76	2.249	1.466	4.4	0.53	7.53	-52.9	↓	1.12	↓
1046	COLLECT SAMPLE									

Total Depth of Well:	9.78
Depth To Water Before Purging:	5.46
Depth To Water After Purging:	5.46

ARCADIS

Water Sampling Log

BK DK

Project: Ford LTP | Project No.: MI001386.0001.20000 → 1373 00002 | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-79D | Replicate No.: – | Code No.: –

Weather: COLD, SUNNY, 18°F | Sampling Time: Begin 1136 End 1143

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	14.69
Depth to Water (ft bmp)	5.51
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	9.18
Casing Diameter/Type	2" PVC
Gallons in Well	1.4688
Gallons Pumped/Bailed Prior to Sampling	~2.5
Sample Pump Intake Setting (ft bmp)	12.69
Purge Time	begin 1105 end 1135
Pumping Rate (ml/min)	250
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.34
SpC (mS/cm)	3.034
CND (mS/cm)	2.068
Dissolved Oxygen (%)	4.1
Dissolved Oxygen (mg/L)	0.47
pH (s.u.)	7.40
ORP (mV)	-51.8
Turbidity (NTU)	5.60
Color	NONE
Odor	NONE
Appearance	CLEAR BUT SOME SUSPENDED PARTICU VISIBLE
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DCAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

~~MI001386.0001.20000 (on)~~ PAGE 2 OF 2

WELL : MW-79D

PROJ #: MI001373.0001.00002 (off)

DATE : 2/8/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1110	8.39	2.939	2.008	33.6	3.90	7.26	-44.9	250	10.9	5.51
1115	8.40	2997	2.047	17.2	1.99	7.40	-49.3	↓	8.07	↓
1120	8.52	3.020	2.069	9.3	1.07	7.24	-49.8	↓	7.27	↓
1125	8.47	3029	2.074	7.2	0.83	7.45	-50.4	↓	5.38	↓
1130	8.45	3.036	2.076	6.5	0.74	7.34	-50.2	↓	5.60	↓
1135	8.34	3.034	2.068	4.1	0.47	7.40	-51.8	↓	5.60	↓
1140	COLLECT	SAMPLE								

Total Depth of Well:	14.69	
Depth To Water Before Purging:		5.51
Depth To Water After Purging:		5.51

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.00002 (73 written over; initials "DK") | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-84 | Replicate No.: — | Code No.: —

Weather: SUNNY, 18°F | Sampling Time: Begin 1255 | End 1300

Evacuation Data		Field Parameters	
Measuring Point	TOC	Temperature (°C)	7.03
MP Elevation (ft)	NA	SpC (mS/cm)	4.014
Land Surface Elevation (ft)	NA	CND (mS/cm)	2.636
Sounded Well Depth (ft bmp)	12.60	Dissolved Oxygen (%)	6.1
Depth to Water (ft bmp)	4.60	Dissolved Oxygen (mg/L)	0.73
Water-Level Elevation (ft)	NA	pH (s.u.)	7.73
Water Column in Well (ft)	1.28	ORP (mV)	-47.3
Casing Diameter/Type	2" PVC	Turbidity (NTU)	7.96
Gallons in Well		Color	NONE
Gallons Pumped/Bailed Prior to Sampling	2.5	Odor	NONE
		Appearance	CLEAR BUT SUSPENDED PARTICLES VISIBLE (PICTURE AVAILABLE → Sent to AngelaD)
Sample Pump Intake Setting (ft bmp)		Sampling Method	Low Flow
Purge Time	begin 1200 end 1250	Remarks	
Pumping Rate (ml/min)	200		
Evacuation Method	Peristaltic Pump		

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

~~MI001386.0001.20000 (on)~~ PAGE 2 OF 2

WELL : MW-84

PROJ #: MI001373.0001.00002 (off)

DATE : 2/8/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1205	7.79	4.785	3.213	8.4	0.99	7.35	-35.2	200	5.60	4.60
1210	7.15	3.211	2.115	6.0	0.72	7.37	-40.8	↓	59.1	↓
~~1215~~	~~5.88~~	~~0.028~~	~~0.016~~							→ Pumped water out due to water being turbid (many susp. particles)
~~1220~~ 1220	6.98	3.811	2.500	12.4	1.48	7.32	-31.6		15.4	
1225	7.30	3.900	2.584	5.6	0.67	7.32	-35.0		13.8	
1230	7.61	3.944	2.636	5.4	0.64	7.32	-36.8		12.7	
1235	7.35	3.985	2.643	5.6	0.66	7.75	-39.8		11.6	
1240	7.14	4.001	2.636	6.1	0.73	7.36	-42.6		10.2	
1245	7.16	4.006	2.641	6.5	0.77	7.33	-44.9		8.70	
1250	7.03	4.014	2.636	6.1	0.73	7.73	-47.3	↓	7.96	↓
1255	COLLECT SAMPLE									

Total Depth of Well:	12.60	
Depth To Water Before Purging:		4.60
Depth To Water After Purging:		4.60

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: ~~MI001386.0001.20000~~ 1373 BK | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-86 | Replicate No.: – | Code No.: –

Weather: OVERCAST, 18°F | Sampling Time: Begin 1345 End 1350

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	16.72
Depth to Water (ft bmp)	7.87
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	8.85
Casing Diameter/Type	2" PVC
Gallons in Well	1.416
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	14.72
Purge Time	begin 1310 end 1340
Pumping Rate (ml/min)	220
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.46
SpC (mS/cm)	1.553
CND (mS/cm)	1.062
Dissolved Oxygen (%)	5.9
Dissolved Oxygen (mg/L)	0.67
pH (s.u.)	8.08
ORP (mV)	-56.5
Turbidity (NTU)	0.34
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-86

PROJ #: ~~MI001386.0001.20000 (on)~~ MI001373.0001.00002 (off)

DATE : 2/8/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1315	7.90	1.045	0.703	21.6	2.49	7.95	-17.4	220	2.39	7.87
1320	8.19	1.016	0.690	7.2	0.84	7.88	-20.2	↓	1.37	↓
1325	8.06	1.024	0.693	7.2	0.84	7.87	-22.3	↓	1.54	↓
1330	8.35	1.101	0.752	5.3	0.62	7.67	-27.1	↓	0.92	↓
1335	8.35	1.335	0.912	2.9	0.34	7.87	-45.3	↓	0.66	↓
1340	8.46	1.553	1.062	5.9	0.67	8.08	-56.5	↓	0.34	↓
1345	COLLECT SAMPLE									

Total Depth of Well:	16.72
Depth To Water Before Purging:	7.87
Depth To Water After Purging:	7.87

ARCADIS

Water Sampling Log

BK

Project: Ford LTP | Project No.: MI001386.0001.20009 (73) | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-87 | Replicate No.: – | Code No.: –

Weather: OVERCAST, 18°F | Sampling Time: Begin 1505 End 1570

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.86
Depth to Water (ft bmp)	11.06
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	7.80
Casing Diameter/Type	2" PVC
Gallons in Well	1.248
Gallons Pumped/Bailed Prior to Sampling	~2
Sample Pump Intake Setting (ft bmp)	16.86
Purge Time	begin 1430 end 1505
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	7.24
SpC (mS/cm)	0.350
CND (mS/cm)	0.232
Dissolved Oxygen (%)	7.8
Dissolved Oxygen (mg/L)	0.95
pH (s.u.)	10.28
ORP (mV)	−52.8
Turbidity (NTU)	2.13
Color	NONE
Odor	NONE
Appearance	CLEAR
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: DKAMATH

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

*UNUSUAL pH. WILL RE-CALIBRATE YSI BEFORE NEXT WELL

ARCADIS

YSI/LOW FLOW SAMPLING LOG

~~MI001386.0001.20000 (on)~~ PAGE 2 OF 2

WELL : MW-87

PROJ #: MI001373.0001.00002 (off)

DATE : 2/8/18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1440	8.66	0.296	0.203	16.2	1.86	10.20	-26.0	200	10.0	11.06
1445	7.94	0.300	0.202	9.2	1.10	10.23	-37.4	↓	5.26	↓
1450	7.63	0.304	0.203	10.7	1.28	10.37*	-43.7	↓	3.28	↓
1455	7.45	0.315	0.210	6.9	0.83	10.27	-48.6	↓	2.58	↓
1500	7.24	0.350	0.232	7.8	0.95	10.28	-52.8	↓	2.13	↓
1505	COLLECT SAMPLE									

Total Depth of Well:	18.86		
Depth To Water Before Purging:	11.06		
Depth To Water After Purging:	11.06		

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/8/17

Site/Well No.: MW-85 | Replicate No.: | Code No.:

Weather: Cloudy 18°F | Sampling Time: Begin 1027 End 1032

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	12.76
Depth to Water (ft bmp)	5.53 *Value from gauging event
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	7.23
Casing Diameter/Type	2" PVC
Gallons in Well	1.15
Gallons Pumped/Bailed Prior to Sampling	~1.5
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 0940 end 1032
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	6.00
SpC (mS/cm)	4.432
CND (mS/cm)	2.823
Dissolved Oxygen (%)	5.8
Dissolved Oxygen (mg/L)	0.71
pH (s.u.)	7.30
ORP (mV)	-61.7
Turbidity (NTU)	9.2
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-85 PROJ #:

DATE : 2/8/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0945	6.50	4.734	3.058	32.0	3.85	7.58	-51.1	150	88.6	
0950	6.41	4.657	3.003	14.7	1.24	7.52	-52.2	150	82.2	
0955	6.21	4.581	2.936	13.5	1.64	7.45	-52.6	150	69.4	
1000	6.11	4.528	2.694	10.2	1.25	7.40	-55.2	150	37.2	
1005	6.09	4.512	2.863	8.7	1.05	7.37	-56.7	150	30.2	
1010	6.05	4.501	2.672	7.6	0.93	7.35	-58.1	150	20.1	
1015	5.98	4.491	2.872	6.8	0.84	7.34	-59.1	150	14.3	
1020	6.01	4.442	2.830	6.0	0.74	7.31	-61.2	150	12.1	
1025	6.00	4.432	2.823	5.8	0.71	7.30	-61.7	150	9.2	
	Sampled @	1027		MS/MSD collected						
Total Depth of Well:										
Depth To Water Before Purging:		6.53								
Depth To Water After Purging:										

* NO DTW gauged due to potential cross contamination

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date:

Site/Well No.: MW-83 | Replicate No.: | Code No.:

Weather: Cloudy. | Sampling Time: Begin 1222 End 1225

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	12.48
Depth to Water (ft bmp)	—
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1130 end 1225
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.99
SpC (mS/cm)	4.682
CND (mS/cm)	3.216
Dissolved Oxygen (%)	5.8
Dissolved Oxygen (mg/L)	0.66
pH (s.u.)	7.39
ORP (mV)	-41.9
Turbidity (NTU)	1.56
Color	Clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

&DTW NOT gauged

Sampling Personnel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-83 PROJ #:

DATE : 2/8/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1135	8.24	4.431	3.013	8.8	1.02	7.60	13.9	150	20.2	
1140	8.62	4.537	3.118	6.4	0.74	7.50	12.9	150	10.3	
1145	8.70	4.638	3.195	7.4	0.85	7.45	5.0	150	7.45	
1150	8.73	4.671	3.219	7.3	0.83	7.43	-6.6	150	4.46	
1155	8.69	4.688	3.224	6.8	0.78	7.42	-17.6	150	3.06	
1200	8.60	4.668	3.206	6.5	0.74	7.42	-28.8	150	2.75	
1205	8.87	4.666	3.228	6.1	0.70	7.41	-34.4	150	2.43	
1210	8.95	4.662	3.233	6.0	0.68	7.40	-38.8	150	2.36	
1215	8.90	4.665	3.229	6.0	0.68	7.40	-40.7	150	2.06	
1220	8.99	4.632	3.216	5.8	0.66	7.39	-41.9	150	1.56	
1225										
		Sampled	@	1222						
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

* NO DTW gauged due to potential cross contamination

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date:

Site/Well No.: MW-80S | Replicate No.: | Code No.:

Weather: 24°F snow/cloudy | Sampling Time: Begin 1347 End 1350

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	~ 2.0
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1255 end 1350
Pumping Rate (ml/min)	150
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	6.66
SpC (mS/cm)	3.955
CND (mS/cm)	2.570
Dissolved Oxygen (%)	4.4
Dissolved Oxygen (mg/L)	0.53
pH (s.u.)	7.27
ORP (mV)	-74.4
Turbidity (NTU)	6.28
Color	clear
Odor	none
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

* DTW/DTB not gauged

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-8OS PROJ #:

DATE : 2/8/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1305	7.10	3.957	2.604	4.9	0.59	7.43	25.1	150	116	
1310	7.06	3.914	2.573	5.2	0.62	7.34	8.4	150	96.9	
1315	6.80	3.903	2.548	6.5	0.79	7.30	-8.5	150	75.8	
1320	6.83	3.900	2.547	7.8	0.93	7.28	-26.5	150	45.9	
1325	6.66	3.908	2.538	6.5	0.77	7.27	-46.6	150	24.5	
1330	6.60	3.928	2.549	4.9	0.59	7.27	-61.5	150	17.2	
1335	6.57	3.945	2.531	5.0	0.61	7.27	-69.0	150	8.64	
1340	6.67	3.952	2.569	4.6	0.55	7.27	-73.4	150	7.83	
1345	6.66	3.955	2.570	4.4	0.53	7.27	-74.4	150	6.28	
		Sampled @ 1347								
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

* DTW NOT GAUGED DUE to possible

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date:

Site/Well No.: MW-78 | Replicate No.: | Code No.:

Weather: | Sampling Time: Begin 1527 End 1530

Evacuation Data

Measuring Point: TOC

MP Elevation (ft): NA

Land Surface Elevation (ft): NA

Sounded Well Depth (ft bmp):

Depth to Water (ft bmp):

Water-Level Elevation (ft): NA

Water Column in Well (ft):

Casing Diameter/Type: 2" PVC

Gallons in Well:

Gallons Pumped/Bailed Prior to Sampling: ~ 2.0

Sample Pump Intake Setting (ft bmp):

Purge Time: begin ~~1340~~ 1450 end 1530

Pumping Rate (ml/min): 150

Evacuation Method: Peristaltic Pump

Field Parameters

Temperature (°C): 5.92

SpC (mS/cm): 6.514

CND (mS/cm): 4.146

Dissolved Oxygen (%): 6.3

Dissolved Oxygen (mg/L): 0.76

pH (s.u.): 7.56

ORP (mV): -99.7

Turbidity (NTU): 2.89

Color: Clear

Odor: none

Appearance: —

Sampling Method: Low Flow

Remarks:

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

@ DTW/ DTB not gauged

Sampling Personnel: A. Reibel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-78 PROJ #:

DATE : 2/8/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1455	6.75	7.146	4.658	70.0	7.40	7.76	-67.2	150	20.5	
1500	6.85	7.108	4.640	7.4	0.88	7.68	-83.5	150	13.6	
1505	6.45	6.741	4.351	5.9	0.71	7.60	-93.9	150	5.47	
1510	6.28	6.685	4.291	5.7	0.69	7.59	-95.6	150	5.76	
1515	6.19	6.590	4.221	6.0	0.72	7.57	-97.7	150	3.82	
1520	6.09	6.546	4.182	6.1	0.74	7.56	-98.8	150	3.04	
1525	5.92	6.514	4.146	6.3	0.76	7.56	-99.9	150	2.09	
1530										
	Sampled @ 1527									
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

DTW NOT GAUGED due to potential cross contamination

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001386.0001.20000 | Page 1 of 2

Location: Livonia, MI | Date: 2/8/18

Site/Well No.: MW-77 | Replicate No.: | Code No.:

Weather: p.cloudy 24°F | Sampling Time: Begin 1617 End 1620

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	
Depth to Water (ft bmp)	
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	
Sample Pump Intake Setting (ft bmp)	
Purge Time	begin 1540 end 1620
Pumping Rate (ml/min)	
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.35
SpC (mS/cm)	1.377
CND (mS/cm)	0.940
Dissolved Oxygen (%)	5.4
Dissolved Oxygen (mg/L)	0.63
pH (s.u.)	7.85
ORP (mV)	-85.4
Turbidity (NTU)	1.47
Color	clear
Odor	NONE
Appearance	—
Sampling Method	Low Flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
1,4-dioxane	40mL voa	3	HCL
VOCs	40mL voa	3	HCL

* DTW + DTB not gauged due to potential cross contamination

Sampling Personnel: A.Reibel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-77 PROJ #:

DATE : 2/9/18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1545	8.48	1.930	1.320	13.0	1.50	7.95	-92.1	150	8.12	
1550	8.54	1.752	1.198	8.5	0.99	7.90	-93.4	150	5.42	
1555	8.46	1.594	1.089	7.0	0.81	7.89	-92.8	150	3.25	
1600	8.34	1.448	0.987	6.1	0.72	7.87	-89.0	150	2.43	
1605	8.34	1.385	0.944	5.5	0.65	7.86	-86.2	150	1.78	
1610	8.37	1.379	0.941	5.6	0.63	7.86	-85.5	150	1.62	
1615	8.35	1.377	0.940	5.4	0.63	7.85	-85.4	150	1.47	
	Sampled @ 1617									
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

DTW NOT GAUGED DUE TO POTENTIAL CROSS CONTAMINATION

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-6-18
Site/Well No.	MW-73D	Replicate No.	—	Code No.	—
Weather	10°F SUNNY / CLEAR	Sampling Time: Begin	907	End	1007

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	17.52
Depth to Water (ft bmp)	6.65
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.87
Casing Diameter/Type	2" PVC
Gallons in Well	1.74
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 907 end 1007
Pumping Rate (ml/min)	200 ml/min
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.66
SpC (mS/cm)	3.894
CND (mS/cm)	—
Dissolved Oxygen (%)	2.0
Dissolved Oxygen (mg/L)	0.23
pH (s.u.)	
ORP (mV)	83.4
Turbidity (NTU)	3.32
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: K. BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-73D PROJ #:

DATE : 2-6-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
907	9.73	3.311	-	9.3	1.04	18.55	155.1	200	95.6	6.69
912	9.49	3.409	-	7.0	0.79	16.59	122.4		99.9	6.65
917	9.54	3.528	-	5.5	0.61	16.12	116.5		75.2	6.65
922	9.75	3.569	-	4.4	0.49	16.05	113.1		66.3	6.65
927	10.03	3.628	-	3.5	0.39	16.08	108.1		50.6	6.65
932	10.26	3.680	-	3.0	0.34	16.01	102.3		32.0	6.65
937	10.33	3.731	-	2.7	0.30	15.94	98.9		22.9	6.65
942	10.47	3.789	-	2.5	0.28	15.88	95.8		13.4	6.65
947	10.48	3.826	-	2.3	0.26	15.94	94.3		11.3	6.65
952	10.49	3.842	-	2.2	0.24	15.97	92.0		7.60	6.65
957	10.56	3.857	-	2.1	0.23	16.02	89.0		5.59	6.65
1002	10.55	3.881	-	2.0	0.22	16.05	86.6		4.05	6.65
1007	10.66	3.894	-	2.0	0.23	16.10	83.4		3.32	6.65
Total Depth of Well:		17.52								
Depth To Water Before Purging:				6.69						
Depth To Water After Purging:			6.65							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-6-18

Site/Well No.: MW-74 | Replicate No.: — | Code No.: —

Weather: 21° F CLEAR | Sampling Time: Begin 1059 End 1144

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	18.85
Depth to Water (ft bmp)	7.52
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.33
Casing Diameter/Type	2" PVC
Gallons in Well	1.81
Gallons Pumped/Bailed Prior to Sampling	2.32
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1059 end 1144
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.34
SpC (mS/cm)	5.027
CND (mS/cm)	—
Dissolved Oxygen (%)	1.3
Dissolved Oxygen (mg/L)	0.14
pH (s.u.)	—
ORP (mV)	74.6
Turbidity (NTU)	2.37
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-74 PROJ #:

DATE : 2-6-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1059	10.93	4.242	–	7.9	0.86	–	91.4	200	12.4	7.52
1104	11.48	4.390	–	4.9	0.52	–	89.8	200	8.93	7.52
1109	11.59	4.561	–	3.7	0.40	–	87.5		7.01	7.52
1114	11.89	4.684	–	2.5	0.27	–	84.9		5.13	7.52
1119	11.56	4.788	–	1.9	0.20	–	82.9		5.79	7.52
1124	11.58	4.933	–	1.6	0.17	–	80.8		3.07	7.52
1129	11.31	4.985	–	1.4	0.15	–	78.1		2.81	7.52
1134	10.71	5.033	–	1.3	0.14	–	77.0		2.82	7.52
1139	10.47	5.006	–	1.3	0.14	–	75.7		2.53	7.52
1144	10.34	5.027	–	1.3	0.14	–	74.6		2.37	7.52
Total Depth of Well:		18.85								
Depth To Water Before Purging:				7.52						
Depth To Water After Purging:			7.52							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page: 1 of 2

Location: Livonia, MI | Date: 2-6-17

Site/Well No.: MW-75D | Replicate No.: — | Code No.: —

Weather: 26°F PARTY CLOUDY | Sampling Time: Begin 1217 End 1317

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	16.83
Depth to Water (ft bmp)	6.70
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	10.13
Casing Diameter/Type	2" PVC
Gallons in Well	1.62
Gallons Pumped/Bailed Prior to Sampling	3.10
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1217 end 1317
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.44
SpC (mS/cm)	6.482
CND (mS/cm)	—
Dissolved Oxygen (%)	0.9
Dissolved Oxygen (mg/L)	0.09
pH (s.u.)	—
ORP (mV)	53.0
Turbidity (NTU)	14.1
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on)
MI001373.0001.00002 (off)

WELL : MW-75D

PROJ #:

DATE : 2-6-18

LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1217	10.82	6.232	–	8.9	0.96	–	114.8	200	27.2	6.72
1222	10.70	6.292	–	5.7	0.62	–	93.0	200	14.3	6.70
1227	10.49	6.334	–	3.2	0.35	–	85.9	200	10.7	6.70
1232	10.80	6.350	–	2.3	0.25	–	83.2	200	68.3	6.70
1237	10.57	6.389	–	1.8	0.19	–	79.5	200	45.0	6.70
1242	10.73	6.410	–	1.4	0.15	–	77.4	200	38.1	6.70
1247	10.86	6.416	–	1.1	0.12	–	72.5	200	29.1	6.70
1252	11.13	6.422	–	1.1	0.12	–	68.3	200	24.2	6.70
1257	11.23	6.445	–	0.9	0.10	–	64.9	200	16.9	6.70
1302	11.21	6.464	–	0.8	0.09	–	62.0	200	16.4	6.70
1307	11.28	6.464	–	0.8	0.08	–	57.5	200	13.1	6.70
1312	11.39	6.494	–	0.8	0.09	–	55.2	200	12.8	6.70
1317	11.44	6.482	–	0.9	0.09	–	53.0	200	14.1	6.70
Total Depth of Well:		16.83								
Depth To Water Before Purging:				6.72						
Depth To Water After Purging:			6.70							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-6-18

Site/Well No.: MW-755 | Replicate No.: — | Code No.: —

Weather: 26°F PARTLY CLOUDY | Sampling Time: Begin 1333 End 1413

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	9.82
Depth to Water (ft bmp)	6.61
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	3.21
Casing Diameter/Type	2" PVC
Gallons in Well	0.51
Gallons Pumped/Bailed Prior to Sampling	2.07
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1333 end 1413
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	7.59
SpC (mS/cm)	3.362
CND (mS/cm)	—
Dissolved Oxygen (%)	0.8
Dissolved Oxygen (mg/L)	0.09
pH (s.u.)	—
ORP (mV)	35.9
Turbidity (NTU)	0.55
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-75S PROJ #:

DATE : 2-6-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1333	8.59	3.714	–	8.7	1.00	–	48.6	200	12.0	6.62
1338	8.90	3.520	–	4.4	0.51	–	45.0	200	4.96	6.61
1343	8.13	3.376	–	3.3	0.37	–	43.0	200	2.21	6.61
1348	7.98	3.344	–	2.0	0.24	–	41.6	200	1.42	6.61
1353	7.96	3.322	–	1.5	0.17	–	40.5	200	1.10	6.61
1358	7.93	3.316	–	1.2	0.13	–	39.3	200	0.68	6.61
1403	7.94	3.323	–	0.8	0.10	–	38.0	200	0.64	6.61
1408	7.81	3.342	–	0.8	0.10	–	37.1	200	0.59	6.61
1413	7.59	3.362	–	0.8	0.09	–	35.9	200	0.55	6.61
Total Depth of Well:		9.82								
Depth To Water Before Purging:				6.62						
Depth To Water After Purging:			6.61							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-6-18

Site/Well No.: MW-81 | Replicate No.: — | Code No.: —

Weather: 28°F MOSTLY CLOUDY | Sampling Time: Begin 1456 End 1541

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	12.71
Depth to Water (ft bmp)	7.88
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	4.83
Casing Diameter/Type	2" PVC
Gallons in Well	0.77
Gallons Pumped/Bailed Prior to Sampling	2.32
Sample Pump Intake Setting (ft bmp)	—
Purge Time	begin 1456 end 1541
Pumping Rate (ml/min)	200
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.19
SpC (mS/cm)	1.950
CND (mS/cm)	—
Dissolved Oxygen (%)	1.6
Dissolved Oxygen (mg/L)	0.19
pH (s.u.)	—
ORP (mV)	30.4
Turbidity (NTU)	3.65
Color	CLEAR
Odor	NONE
Appearance	NORMAL
Sampling Method	Low Flow
Remarks	DUP-01-020618 TAKEN

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

Sampling Personnel: KALAN BRIGGS

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-81 PROJ #:

DATE : 2-6-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1456	9.10	2.043	–	14.5	1.64	–	37.1	200	11.4	7.68
1501	8.80	1.988	–	7.4	0.84	–	34.8	200	9.68	7.81
1506	8.87	1.972	–	4.6	0.53	–	33.3	200	9.30	7.88
1511 ~~1601~~	8.59	1.976	–	3.2	0.37	–	31.7	200	7.26	7.88
1516 ~~1606~~	8.24	1.969	–	2.5	0.29	–	32.0	200	7.23	7.88
1521 ~~1611~~	8.08	1.969	–	2.0	0.24	–	31.8	200	6.01	7.88
1526 ~~1616~~	8.01	1.970	–	1.8	0.22	–	31.7	200	5.30	7.88
1531	8.14	1.963	–	1.7	0.20	–	31.4	200	5.22	7.88
1536	8.19	1.955	–	1.6	0.19	–	30.8	200	3.78	7.88
1541	8.19	1.950	–	1.6	0.19	–	30.4	200	3.65	7.88
Total Depth of Well:		12.71								
Depth To Water Before Purging:				7.68						
Depth To Water After Purging:			7.88							

ARCADIS

Water Sampling Log

Project: Ford LTP | Project No.: MI001373.0001.00002 | Page 1 of 2

Location: Livonia, MI | Date: 2-6-18

Site/Well No.: mw-735 | Replicate No.: - | Code No.: -

Weather: Sunny 10°F | Sampling Time: Begin 945 End -

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	11.62
Depth to Water (ft bmp)	6.30
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	5.32
Casing Diameter/Type	2" PVC
Gallons in Well	0.85
Gallons Pumped/Bailed Prior to Sampling	3.87
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 855 end 945
Pumping Rate (ml/min)	~300
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	6.80
SpC (mS/cm)	3.263
CND (mS/cm)	-
Dissolved Oxygen (%)	-
Dissolved Oxygen (mg/L)	0.21
pH (s.u.)	6.24
ORP (mV)	344.1
Turbidity (NTU)	11.6
Color	clear
Odor	none
Appearance	normal
Sampling Method	Low Flow
Remarks	-

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

Sampling Personnel: S. Presswood

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-735 PROJ #:

DATE : 2-6-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
900	9.10	3.620	-	-	1.94	6.57	343.0	~300	22.0	6.30
905	9.05	3.483	-	-	0.81	6.38	344.3	~300	20.7	6.32
910	8.89	3.392	-	-	0.60	6.31	344.5	~300	19.4	6.32
915	8.97	3.352	-	-	0.41	6.26	345.0	~300	20.4	6.32
920	8.83	3.299	-	-	0.37	6.25	347.7	~300	18.6	6.32
925	8.81	3.289	-	-	0.34	6.24	344.3	~300	17.0	6.32
930	8.82	3.269	-	-	0.29	6.23	344.0	~300	16.8	6.32
935	8.91	3.270	-	-	0.23	6.24	344.1	~300	12.0	6.32
940	8.79	3.261	-	-	0.21	6.24	344.2	~300	11.8	6.32
945	8.80	3.263	-	-	0.21	6.24	344.1	~300	11.6	6.32
Total Depth of Well:		11.62								
Depth To Water Before Purging:			6.30							
Depth To Water After Purging:			6.32							

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	2-6-18
Site/Well No.	MW-72	Replicate No.	-	Code No.	-
Weather	Sunny 10°F	Sampling Time:	Begin 1145	End	-

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.86
Depth to Water (ft bmp)	8.58
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	11.28
Casing Diameter/Type	2" PVC
Gallons in Well	1.80
Gallons Pumped/Bailed Prior to Sampling	4.26
Sample Pump Intake Setting (ft bmp)	SMP 2-6-18 ~~300~~ NA
Purge Time	begin 1050 end 1145
Pumping Rate (ml/min)	~300
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	11.07
SpC (mS/cm)	3.712
CND (mS/cm)	-
Dissolved Oxygen (%)	-
Dissolved Oxygen (mg/L)	0.20
pH (s.u.)	7.26
ORP (mV)	334.4
Turbidity (NTU)	9.9
Color	clear
Odor	none
Appearance	normal
Sampling Method	Low Flow
Remarks	-

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

Sampling Personnel: S. Pressweed

Well Casing Volumes

Gal./Ft.					
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47	

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-72 PROJ #:

DATE : 02-06-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1055	12.76	3.931	–	–	3.93	7.39	309.8	~300	24.9	8.58
1100	12.13	3.900	–	–	0.78	7.41	323.3	~300	22.2	8.62
1105	11.55	3.820	–	–	2.78	7.38	372.7	~300	19.1	8.62
1110	11.37	3.817	–	–	0.52	7.31	347.3	~300	16.7	8.62
1115	11.29	3.814	–	–	0.41	7.27	339.4	~300	15.9	8.62
1120	11.33	3.812	–	–	0.35	7.27	337.3	~300	15.2	8.62
1125	11.40	3.810	–	–	0.30	7.26	335.2	~300	14.1	8.62
1130	11.22	3.717	–	–	0.28	7.26	334.9	~300	13.0	8.62
1135	10.99	3.732	–	–	0.21	7.26	334.6	~300	12.1	8.62
1140	11.04	3.717	–	–	0.20	7.26	334.4	~300	10.2	8.62
1145	11.07	3.712	–	–	0.20	7.26	334.4	~300	9.9	8.62

Total Depth of Well:	19.86
Depth To Water Before Purging:	8.58
Depth To Water After Purging:	8.62

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	02-06-18
Site/Well No.	MW-76	Replicate No.	-	Code No.	-
Weather	Sunny 10°F	Sampling Time:	Begin 1330	End	-

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	19.71
Depth to Water (ft bmp)	10.87
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	8.84
Casing Diameter/Type	2" PVC
Gallons in Well	1.41
Gallons Pumped/Bailed Prior to Sampling	5.03
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 1225 end 1330
Pumping Rate (ml/min)	~300
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	10.77
SpC (mS/cm)	5.532
CND (mS/cm)	-
Dissolved Oxygen (%)	-
Dissolved Oxygen (mg/L)	0.18
pH (s.u.)	6.91
ORP (mV)	331.5
Turbidity (NTU)	1.22
Color	clear
Odor	none
Appearance	normal
Sampling Method	Low Flow
Remarks	-

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

Sampling Personnel: S. Presswood

Well Casing Volumes

Gal./Ft.					
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47	

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-76 PROJ #:

DATE : 02-06-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1230	10.68	3.379	-	-	3.48	7.55	331.6	~300	7.16	10.87
1235	10.37	3.401	-	-	0.99	7.47	331.6	~300	5.22	10.91
1240	10.25	3.429	-	-	0.91	7.31	331.6	~300	3.81	10.91
1245	10.42	4.177	-	-	0.68	7.12	331.8	~300	2.98	10.91
1250	10.92	5.058	-	-	0.41	6.93	332.0	~300	1.34	10.91
1255	10.78	5.111	-	-	0.38	6.95	332.1	~300	1.31	10.91
1300	10.69	5.210	-	-	0.25	7.00	331.8	~300	1.30	10.91
1305	10.73	5.287	-	-	0.23	6.99	331.6	~300	1.28	10.91
1310	10.85	5.384	-	-	0.22	6.98	331.5	~300	1.25	10.91
1315	10.79	5.401	-	-	0.21	6.97	331.3	~300	1.24	10.91
1320	10.78	5.418	-	-	0.20	6.92	330.9	~300	1.24	10.91
1325	10.77	5.513	-	-	0.19	6.92	331.2	~300	1.23	10.91
1330	10.77	5.532	-	-	0.18	6.91	331.5	~300	1.22	10.91

Total Depth of Well:	19.71	
Depth To Water Before Purging:		10.37
Depth To Water After Purging:		10.91

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	02-06-18
Site/Well No.	MW-82S	Replicate No.	-	Code No.	-
Weather	Sunny 20°F	Sampling Time:	Begin 1455	End	-

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	13.44
Depth to Water (ft bmp)	SMP 02-6-18 ~~13.44~~ 8.32
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	5.12
Casing Diameter/Type	2" PVC
Gallons in Well	0.82
Gallons Pumped/Bailed Prior to Sampling	4.26
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 1400 end 1455
Pumping Rate (ml/min)	~300
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	8.87
SpC (mS/cm)	0.839
CND (mS/cm)	-
Dissolved Oxygen (%)	-
Dissolved Oxygen (mg/L)	0.43
pH (s.u.)	6.69
ORP (mV)	325.1
Turbidity (NTU)	2.98
Color	clear
Odor	none
Appearance	normal
Sampling Method	Low Flow
Remarks	-

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

Sampling Personnel: S. Presswood

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-82S PROJ #:

DATE : 02-06-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
~~1400~~	~~8.30~~	~~0.5~~		~~0.913~~				~300	~~5.66~~	~~8.32~~
				SMP	02-06-18					
1400	8.43	0.911	–	–	2.52	7.47	328.3	~300	5.66	8.32
1405	8.27	0.871	–	–	1.13	7.42	327.7	~300	5.57	8.35
1410	8.17	0.825	–	–	0.76	7.30	325.9	~300	6.93	8.35
1415	8.21	0.819	–	–	0.65	7.12	325.8	~300	6.58	8.35
1420	8.26	0.814	–	–	0.54	6.81	325.7	~300	6.37	8.35
1425	8.38	0.816	–	–	0.50	6.79	324.9	~300	5.17	8.35
1430	8.52	0.820	–	–	0.45	6.76	324.8	~300	4.82	8.35
1435	8.69	0.819	–	–	0.50	6.74	325.1	~300	4.19	8.35
1440	8.93	0.837	–	–	0.53	6.70	325.2	~300	3.94	8.35
1445	8.89	0.837	–	–	0.42	6.70	325.2	~300	3.12	8.35
1450	8.88	0.839	–	–	0.43	6.69	325.1	~300	3.01	8.35
1455	8.87	0.839	–	–	0.43	6.69	325.1	~300	2.98	8.35
Total Depth of Well:		13.44								
Depth To Water Before Purging:			8.32							
Depth To Water After Purging:			8.35							

Kevin Pruitt

ARCADIS

Water Sampling Log

Project	Ford LTP	Project No.	MI001373.0001.00002	Page	1 of 2
Location	Livonia, MI			Date	02-06-18
Site/Well No.	MW-82D	Replicate No.	-	Code No.	-
Weather	Sunny 12°F	Sampling Time: Begin	1555	End	-

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	22.81
Depth to Water (ft bmp)	8.65
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	14.16
Casing Diameter/Type	2" PVC
Gallons in Well	2.27
Gallons Pumped/Bailed Prior to Sampling	3.87
Sample Pump Intake Setting (ft bmp)	-
Purge Time	begin 1505 end 1555
Pumping Rate (ml/min)	~300
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	9.85
SpC (mS/cm)	1.113
CND (mS/cm)	-
Dissolved Oxygen (%)	-
Dissolved Oxygen (mg/L)	0.13
pH (s.u.)	6.92
ORP (mV)	327.9
Turbidity (NTU)	4.89
Color	clear
Odor	none
Appearance	normal
Sampling Method	Low Flow
Remarks	-

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

Sampling Personnel: S. Presswood

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

MI001386.0001.20000 (on) PAGE 2 OF 2
MI001373.0001.00002 (off)

WELL : MW-82D PROJ #:

DATE : 02-06-18 LOC: Ford LTP, Livonia, MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1510	10.60	1.083	-	-	2.76	6.84	329.1	~300	18.7	8.65
1515	9.96	1.080	-	-	0.91	6.85	328.9	~300	15.3	8.68
1520	9.98	1.078	-	-	0.52	6.88	328.8	~300	13.27	8.68
1525	10.17	1.101	-	-	0.38	6.90	329.0	~300	9.91	8.68
1530	10.29	1.105	-	-	0.29	6.91	329.2	~300	7.04	8.68
1535	10.30	1.113	-	-	0.22	6.92	329.1	~300	6.53	8.68
1540	10.31	1.125	-	-	0.17	6.93	329.1	~300	5.98	8.68
1545	9.91	1.119	-	-	0.15	6.91	328.3	~300	5.07	8.68
1550	9.87	1.114	-	-	0.14	6.91	328.2	~300	4.93	8.68
1555	9.85	1.113	-	-	0.13	6.92	327.9	~300	4.89	8.68

Total Depth of Well:	22.81
Depth To Water Before Purging:	8.65
Depth To Water After Purging:	8.68

APPENDIX C

Off-Site Soil Gas Field Sampling Logs

ARCADIS

Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): **ARCADIS of Michigan, LLC, 28550 Cabot Drive, Suite 500, Novi, MI 48377**	Project Name: **Ford LTP - Residential VI Sampling** Project Number: **MI001386.0001.20000**
Project Manager: **Kris Hinskey** Task Manager: **Angela DeGrandis**	Site Address **36200 Plymouth Road** **Livonia, MI**
Phone: **248-994-2240** Fax: **248-994-2241** Special Instructions	
Email Address for Result Reporting: Kristoffer.Hinskey@arcadis.com	Sampler Name, Phone Number: **Ashley Reibel – (m: 586-792-9639); Kalan Briggs – (m: 248-635-4576).**
Helium Detector Used / Helium Leak Test Method: **Bucket shroud**	Summa Canister Size (1L, 2.7 L, 6L): **1 L with a 20-minute flow controller** / Lab: **Eurofins**

Sample ID	Sample Location Description	Date	Leak/Tracer Test (completed prior to sample collection)							Canister No.	Time Collected Start	Initial Canister Pressure (in Hg)	Time Collected End	Final Canister Pressure (in Hg)	Flow Controller No.	Notes
			Shut In Test Pass/Fail?	Initial Purge Reading (ppm)	Shroud Helium Concentration (%)	End Purge Reading (ppm)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SVMP-22-3(091817)	1234 Plymouth Road	12/1/17	Pass	0	30	5	Pass	120	120	2595	0835	-30	0841	-5	10002434	Debris noted under steel cap and in annular space around vapor pin. Cleaned out prior to sampling.
SVMP-01S(021918)	34965 Standish	02/19/18	Pass	0	32.0%	0	Pass	200	50	IL1849	0940	-29	1005	-5	23346	
SVMP-01D(021918)	34965 Standish	2/19/18	Pass	0	31.8%	0	Pass	200	50	IL2956	1032	-27	1055	-5	23496	
SVMP-07-3.5(021918)	34965 Wadsworth	2/19/18	Pass	0	30.8%	0	Pass	200	50	IL2721	1225	-27	1250	-5	23120	
SVMP-19-3(022018)	34401 Capitol	2/20/18	Pass	0	31.2%	—*1	Pass	200	50	IL3086	0946	-30	0955	-7	23820	water in vault
SVMP-18-3(022018)	34367 Capitol	2/20/18	Pass	0	30.0%	0	Pass	200	50	IL3020	1052	-26	1125	-5	23145	
SVMP-23-3(022018)	Rosati	2/20/18	Pass	0	30.0%	0	Pass	200	50	IL1938	1426	-30	1503	-5	23261	

Meteorological Data

Date	Time	Temp. (°F) Indoor	Temp. (°F) Outdoor	% Humidity	Barometric Pressure (in.)
Example - 12/1/2017	0800	73	22	38	30.10
2/19/18	0929	—	34	86%	
2/20/18	1430	—	59	93%	

General Notes or Observations

Rain expected @ 1300

Rain began @ 1200 2/19/18

Total of 1.07" rain 2/20 @ 1430

*1 During 2nd helium trace tap water filled sample train.

Air Parameters (completed after sample collection)

Location ID	CO2 %	O2 %	
SVMP-22-3(091817)	0.3	15.6	
SVMP-01S	1.8	18.5	
SVMP-01D	1.9	18.9	
SVMP-07	1.0	20.4	
SVMP-19	—	—	*1
SVMP-18	2.7	16.6	
SVMP-23			

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Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): ARCADIS of Michigan, LLC, 28550 Cabot Drive, Suite 500, Novi, MI 48377	Project Name: Ford LTP - Residential VI Sampling Project Number: MI001386.0001.20000
Project Manager: Kris Hinskey Task Manager: Angela DeGrandis	Site Address: 36200 Plymouth Road Livonia, MI
Phone: 248-994-2240 Fax: 248-994-2241 Special Instructions:	
Email Address for Result Reporting: Kristoffer.Hinskey@arcadis.com	Sampler Name, Phone Number: Ashley Reibel – (m: 586-792-9639); Kalan Briggs – (m: 248-635-4576).
Helium Detector Used: Helium Leak Test Method: Bucket shroud	Summa Canister Size (1L, 2.7 L, 6L): 1 L with a 20-minute flow controller Lab: Eurofins

Sample ID	Sample Location Description	Date	Leak/Tracer Test (completed prior to sample collection)							Canister No.	Time Collected Start	Initial Canister Pressure (in Hg)	Time Collected End	Final Canister Pressure (in Hg)	Flow Controller No.	Notes
			Shut In Test Pass/Fail?	Initial Purge Reading (ppm)	Shroud Helium Concentration (%)	End Purge Reading (ppm)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SVMP-22-3(091817)	1234 Plymouth Road	12/1/17	Pass	0	30	5	Pass	120	120	2595	0835	-30	0841	-5	10002434	Debris noted under steel cap and in annular space around vapor pin. Cleaned out prior to sampling.
SVMP-24-4(2218)	Rosati	2/21/18	P	0	33.3	0	Pass	200	80	2272	952	-29	917	-5	23110	
SVMP-06-4.5	34935 Wadsworth	2/21/18	P	0	31.2	0	Pass	200	80	1595	1110	-29	1132	-5	23187	
SVMP-05-4.5	34851 Wadsworth	2/21/18	P	0	30.0	0	Pass	200	80	2855	1211	-30	1241	-5	23430	
SVMP-04-3.5	11866 B. Post	2/21/18	P	0	36.6	0	Pass	200	80	2498	1329	-29	1353	-5	23462	

Meteorological Data

Date	Time	Temp. (°F) Indoor	Temp. (°F) Outdoor	% Humidity	Barometric Pressure ~~in~~ mb
Example - 12/1/2017	0800	73	22	38	30.10
2/21/18	855	-	36	98	1025.7
2/21/18	1213	-	36	96	1301.5

General Notes or Observations

Raining during sample collection SVMP-24
Rain stopped @ 1080
Total Rain accumulation 0.80" 2/21/18

Air Parameters (completed after sample collection)

Location ID	CO2 %	O2 %
SVMP-22-3(091817)	0.3	15.6
SVMP-24	2.0	19.2
SVMP-06	0.4	20.8
SVMP-05	1.2	19.6
SVMP-04	1.6	16.2

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Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): **ARCADIS of Michigan, LLC, 28550 Cabot Drive, Suite 500, Novi, MI 48377**	Project Name: **Ford LTP - Residential VI Sampling**
Project Manager: **Kris Hinskey** Task Manager: **Angela DeGrandis**	Project Number: **MI001386.0001.20000**
Phone: **248-994-2240** Fax: **248-994-2241** Special Instructions	Site Address: **36200 Plymouth Road, Livonia, MI**
Email Address for Result Reporting: Kristoffer.Hinskey@arcadis.com	Sampler Name, Phone Number: **Ashley Reibel – (m: 586-792-9639); Kalan Briggs – (m: 248-635-4576).**
Helium Detector Used Helium Leak Test Method: **Bucket shroud**	Summa Canister Size (1L, 2.7 L, 6L): **1 L with a 20-minute flow controller** Lab: **Eurofins**

Sample ID	Sample Location Description	Date	Leak/Tracer Test (completed prior to sample collection)							Canister No.	Time Collected Start	Initial Canister Pressure (in Hg)	Time Collected End	Final Canister Pressure (in Hg)	Flow Controller No.	Notes
			Shut In Test Pass/Fail?	Initial Purge Reading (ppm)	Shroud Helium Concentration (%)	End Purge Reading (ppm)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SVMP-22-3(091817)	1234 Plymouth Road	12/1/17	Pass	0	30	5	Pass	120	120	2595	0835	-30	0841	-5	10002434	Debris noted under steel cap and in annular space around vapor pin. Cleaned out prior to sampling.
~~SVMP-25(091817)~~	~~34963 STANDISH~~	~~9/14/18~~	~~PASS~~	~~0~~	~~30~~	~~0~~	~~PASS~~	~~180~~	~~200~~	~~IL2547~~	~~0945~~	~~-30~~				2-19-18
SVMP-25(021918)	34963 STANDISH	2/19/18	PASS	0	30	0	PASS	180	200	IL2547	0945	-30	1010	-5	~~1705~~ 23241	
SVMP-20(021918)	34963 STANDISH	2/19/18	PASS	0	30	0	PASS	240	40	IL2975	1100	-30	1130	-7	~~1724~~ 23299	2-19-18
SVMP-35(021918)	34851 STANDISH	2/19/18	PASS	0	30	0	PASS	240	40	TL2625	1214	-30	1246	-6	23497	
SVMP-30(021918)	34851 STANDISH	2/19/18	PASS	0	30	0	PASS	240	40	IL1583	1447	-28	1511	-6	23494	

KH 2-19-18

Meteorological Data

Date	Time	Temp. (°F) Indoor	Temp. (°F) Outdoor	% Humidity	Barometric Pressure (in.)
Example - 12/1/2017	0800	73	22	38	30.10
2/19/2018	1000	—	35°F	84	30.02

General Notes or Observations

Air Parameters (completed after sample collection)

Location ID	CO2 %	O2 %
SVMP-22-3(091817)	0.3	15.6
SVMP-25	0.1	21.6
SVMP-20	0.0	21.6
SVMP-35	0.0	21.4
SVMP-30	0.0	21.2

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Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): **ARCADIS of Michigan, LLC, 28550 Cabot Drive, Suite 500, Novi, MI 48377**	Project Name: **Ford LTP - Residential VI Sampling**
	Project Number: **MI001386.0001.20000**
Project Manager: **Kris Hinskey** Task Manager: **Angela DeGrandis**	Site Address **36200 Plymouth Road** **Livonia, MI**
Phone: **248-994-2240** Fax: **248-994-2241** Special Instructions	
Email Address for Result Reporting: Kristoffer.Hinskey@arcadis.com	Sampler Name, Phone Number: **Ashley Reibel – (m: 586-792-9639); Kalan Briggs – (m: 248-635-4576).**
Helium Detector Used Helium Leak Test Method: **Bucket shroud**	Summa Canister Size (1L, 2.7 L, 6L): **1 L with a 20-minute flow controller** Lab: **Eurofins**

Sample ID	Sample Location Description	Date	Leak/Tracer Test (completed prior to sample collection)							Canister No.	Time Collected Start	Initial Canister Pressure (in Hg)	Time Collected End	Final Canister Pressure (in Hg)	Flow Controller No.	Notes
			Shut In Test Pass/Fail?	Initial Purge Reading (ppm)	Shroud Helium Concentration (%)	End Purge Reading (ppm)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SVMP-22-3(091817)	1234 Plymouth Road	12/1/17	Pass	0	30	5	Pass	120	120	2595	0835	-30	0841	-5	10002434	Debris noted under steel cap and in annular space around vapor pin. Cleaned out prior to sampling.
SVMP-08-3.5(022018)	34969 CLARK	02/20/18	PASS	0	18	0	PASS	240	40	1L1684	928	-30	956	-6	23486	
SVMP-09-4.0(022018)	34921 CLARK	02/20/18	PASS	0	30	0	PASS	240	40	1L2615	1034	-29	1056	-5	23141	
SVMP-10-3.0(022018)	34851 CLARK	02/20/18	PASS	0	30	0	PASS	240	40	1L1820	1137	-27.5	1205	-5	23817	
SVMP-12-3.5(022018)	12100 BEACON	02/20/18	PASS	0	30	0	PASS	240	40	1L1660	1304	-30	1328	-5	23493	
SVMP-22-3.0(022018)	ROSATI	02/20/18	PASS	0	30	0	PASS	240	40	1L2801	1614	-29	1642	-6.5	23311	

Meteorological Data

Date	Time	Temp. (°F)		% Humidity	Barometric Pressure (in.)
		Indoor	Outdoor		
Example - 12/1/2017	0800	73	22	38	30.10
02/20/2018	920	-	52°F	97	29.99
02/20/2018	1617	—	59	94	30.00

General Notes or Observations

Air Parameters (completed after sample collection)

Location ID	CO2 %	O2 %
SVMP-22-3(091817)	0.3	15.6
SVMP-08(022018)	0.3	20.8
SVMP-09-4.0(022018)	0.0	21.0
SVMP-10-3.0(022018)	0.1	20.9
SVMP-12-3.5(022018)	0.0	20.9
SVMP-22-3.0(022018)	0.0	21.0

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Soil Vapor Collection Log Sheet

Office Name & Address (Reporting Information): **ARCADIS of Michigan, LLC, 28550 Cabot Drive, Suite 500, Novi, MI 48377**	Project Name: **Ford LTP - Residential VI Sampling** Project Number: **MI001386.0001.20000**
Project Manager: **Kris Hinskey** Task Manager: **Angela DeGrandis**	Site Address **36200 Plymouth Road** **Livonia, MI**
Phone: **248-994-2240** Fax: **248-994-2241** Special Instructions	
Email Address for Result Reporting: Kristoffer.Hinskey@arcadis.com	Sampler Name, Phone Number: **Ashley Reibel – (m: 586-792-9639); Kalan Briggs – (m: 248-635-4576).**
Helium Detector Used Helium Leak Test Method: **Bucket shroud**	Summa Canister Size (1L, 2.7 L, 6L): **1 L with a 20-minute flow controller** Lab: **Eurofins**

Sample ID	Sample Location Description	Date	Leak/Tracer Test (completed prior to sample collection)							Canister No.	Time Collected Start	Initial Canister Pressure (in Hg)	Time Collected End	Final Canister Pressure (in Hg)	Flow Controller No.	Notes
			Shut In Test Pass/Fail?	Initial Purge Reading (ppm)	Shroud Helium Concentration (%)	End Purge Reading (ppm)	Helium Test Pass/Fail?	Purge Volume (mL)	Purge Rate (mL/min)							
SVMP-22-3(091817)	1234 Plymouth Road	12/1/17	Pass	0	30	5	Pass	120	120	2595	0835	-30	0841	-5	10002434	Debris noted under steel cap and in annular space around vapor pin. Cleaned out prior to sampling.
SVMP-25S-3.0(022118)	12555 BELDEN CT.	2-21-18	PASS	0	30	6	PASS	240	40	0000003049	0911	-29	0939	-5	23499	
SVMP-25D-6.0(022118)	12555 BELDEN CT.	2-21-18	PASS	0	30	0	PASS	240	40	IL1565	1005	-28.5	1031	-5	23502	
SVMP-26-4.0(022118)	11897 BELDEN CT	2-21-18	PASS	0	30	0	PASS	240	40	IL2301	1111	-30	1143	-5	23244	
SVMP-28-3.0(022118)	11771 BELDEN CT.	2-21-18	PASS	0	30	0	PASS	240	40	IL2831	1241	-30	1314	-6	23298	
SVMP-27-4.5(022118)	11875 BELDEN CT.	2-21-18	PASS	0	30	0	PASS	240	40	IL1902	1353	-30	1420	-5	23498	

Meteorological Data

Date	Time	Temp. (°F)		% Humidity	Barometric Pressure (in.)
		Indoor	Outdoor		
Example - 12/1/2017	0800	73	22	38	30.10
02/21/2018	0830	–	36	93	30.33
02/21/2018	1247	–	37	93	30.46

General Notes or Observations

Air Parameters (completed after sample collection)

Location ID	CO2 %	O2 %
SVMP-22-3(091817)	0.3	15.6
SVMP-25S-3.0(022118)	0.2	20.9
SVMP-25D-6.0(022118)	0.0	21.0
SVMP-26-4.0(022118)	0.6	20.7
SVMP-28-3.0(022118)	0.1	21.1
SVMP-27-4.5(022118)	0.1	21.3

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