

TRANSMITTAL LETTER



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November 22, 2017

Subject:
Livonia Transmission Plant
Q3 2017 Progress Report

Arcadis Project No.:
MI001322.0001

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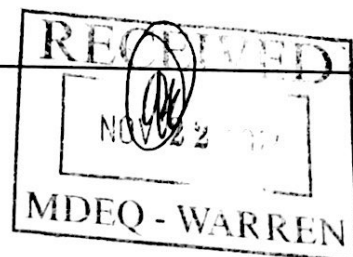
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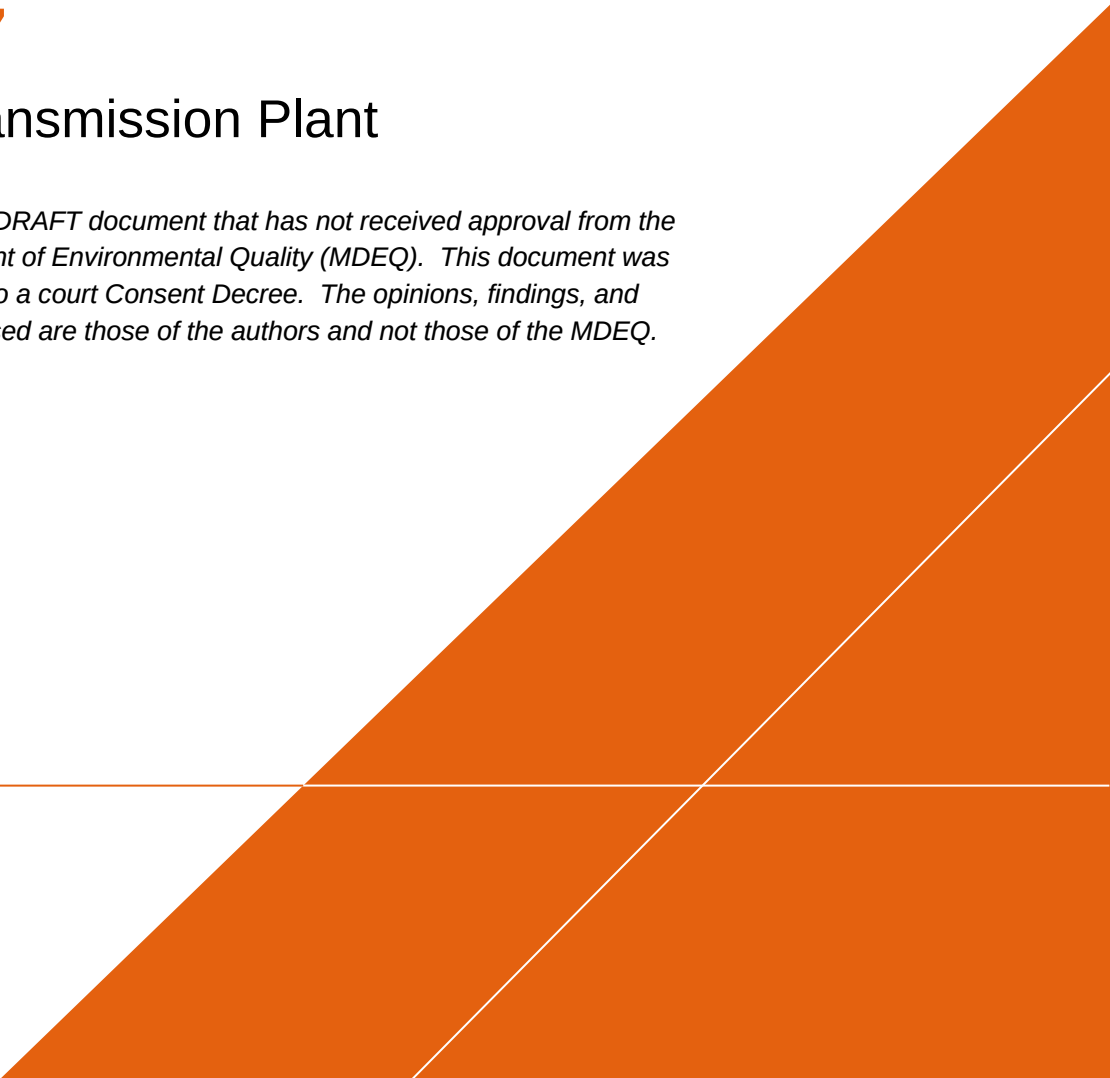
FORD MOTOR COMPANY

QUARTERLY PROGRESS REPORT - 3Q 2017

Livonia Transmission Plant

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November 21, 2017

A large, solid orange geometric shape, resembling a stylized triangle or a section of a larger triangle, is positioned in the bottom right corner of the page. It is composed of two overlapping triangles, creating a complex, angular form that extends from the bottom edge towards the top right corner.

QUARTERLY PROGRESS REPORT - 3Q 2017

Livonia Transmission Plant

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Q3 2017: Activities

On-Site

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

Total On-Site Samples

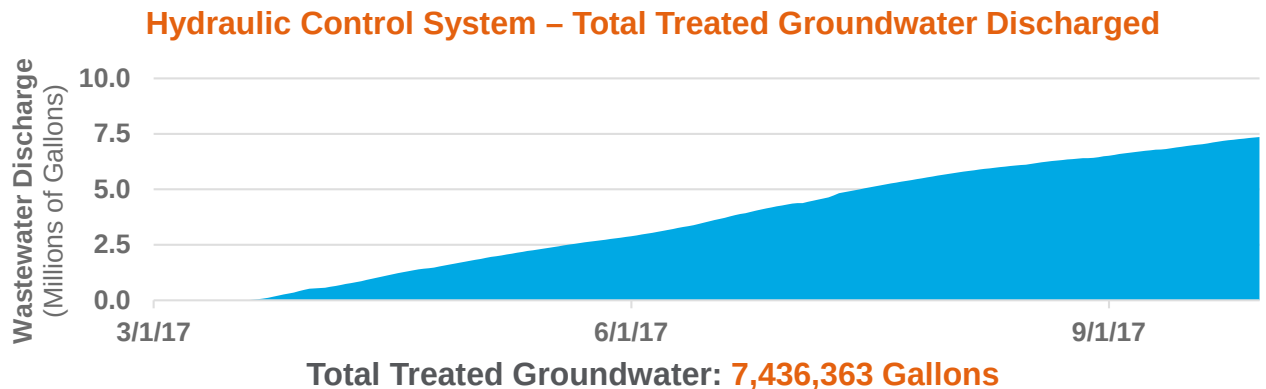
Period	Groundwater / Water	Soil/ Sediment	Vapor
Q3 2017	121	11	0
Total since Oct. 2015	477	328	152

Off-Site

1. Groundwater Sampling
2. Soil Vapor Sampling

Total Off-Site Samples

Period	Groundwater	Vapor
Q3 2017	20	31
Total since Oct. 2015	311	78



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	with MDEQ
QAPPs	8/30/2017	with MDEQ
HASP	8/30/2017	with MDEQ
Updated GW Work Plan	11/2017	In Preparation
Updated Off-Site VI Work Plan	11/2017	In Preparation

Upcoming Dates

2017

- November 6** On and Off-Site 4Q 2017 Groundwater Sampling
- November 20** 4Q 2017 Off-Site Soil Vapor Sampling

2018

- February 5** On and Off-Site 1Q 2018 Groundwater Sampling
- February 19** On and Off-Site 1Q 2018 Off-Site Soil Vapor Sampling

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APPENDICES

Appendix A - On-Site Groundwater Field Sampling Logs

Appendix B - Off-Site Groundwater Field Sampling Logs

Appendix C - Sewer and Process Waste Field Sampling Logs

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ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
3Q 2017	third 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
DO	dissolved oxygen
EDC	Eastern Diversion Chamber
GLWA	Great Lakes Water Authority
gpd	gallons per day
GSI	Groundwater Surface Water Interface
HCS	hydraulic control system
LTP	Livonia Transmission Plant
MDEQ	Michigan Department of Environmental Quality
mL	milliliter
MW	monitoring well
ORP	oxidation-reduction potential
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PLC	programmable logic controller
PW	process waste
RIASL	Residential Interim Action Screening Level
RRD	Remediation and Redevelopment Division
SVMP	soil vapor monitoring point
TCE	trichloroethene
TDL	Target Detection Limit
trans-1,2-DCE	trans-1,2-dichloroethene
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound
WDC	Western Diversion Chamber
WW	wet well
WWTP	Wastewater Treatment Plant

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1 INTRODUCTION

Purpose of This Report

At the request of the Michigan Department of Environmental Quality (MDEQ), 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 MDEQ July 22, 2017 and entered on July 28, 2017 (No: 2:1712372-GAD-RSW). The purpose of this initial progress report is to summarize continued response activities completed voluntarily by Ford. These activities were completed both at the site and the area east of the site since submittal of the CSM to the MDEQ on August 25, 2017. This progress report includes activities completed from August 25 through September 31, 2017 (3Q 2017).

The 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.

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**). The on-site utility layout, including storm sewers, sanitary, and all known subsurface utilities, are presented on **Figure 3**.

2 SUMMARY OF RESPONSE ACTIVITIES

The following table summarizes all response activities completed during 3Q 2017. Refer to the subsequent sections for further detail on each respective event and associated tables and figures.

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Date	Activity	Tables	Figures
July 2017	On-Site Groundwater Sampling	1, 2	4, 5, 6, 7, 8
July 2017	Off-Site Groundwater Sampling	3, 4	4, 9, 10
July 2017	Storm Sewer and Waste Water Sampling	5	11, 12
August 2017	Storm Sewer Sediment Sampling	6	13, 14
September 2017	Off-Site Residential Soil Vapor Sampling	7	15, 16, 17, 18
July through September 2017	Hydraulic Control System Monitoring	8, 9	

On-Site Groundwater Sampling

Arcadis completed site-wide groundwater gauging on July 24 and 25, 2017, which included 69 monitoring wells (**Figure 2**). Out of the 69 total monitoring wells on-site, 65 were successfully gauged. The remaining four monitoring wells event (MW-5, MW-19, MW-21, 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 3Q 2017 groundwater elevations is included on the on-site quarterly groundwater elevation summary table (**Table 1**). Groundwater elevation contours and apparent groundwater flow for the 3Q 2017 response activity are provided on **Figure 4**.

On-site groundwater sampling was completed following gauging from July 26 through 31, 2017. Groundwater was purged from the well at a low flow rate (i.e. 100-300 milliliters per minute) until field parameters (conductivity, pH, turbidity, temperature, dissolved oxygen [DO], and oxygen reduction potential [ORP]) had stabilized. Once field parameters were stable, a groundwater sample was collected into laboratory supplied bottles. On-site groundwater field sampling logs are provided for reference in **Appendix A**.

A total of 70 groundwater samples were collected and submitted on ice under chain-of-custody seal to TestAmerica Laboratories in Canton, Ohio (Test America), including three duplicate samples and two 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 turn-around time of ten business days. The groundwater analytical results are discussed below.

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Off-Site Groundwater Sampling

Arcadis completed off-site gauging on July 24, 2017, 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 3Q 2017 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 4**.

Off-site groundwater sampling was completed following gauging from July 26 through 31, 2017. Groundwater was purged from the well at a low flow rate (i.e. 100-300 milliliters per minute) until field parameters (conductivity, pH, turbidity, temperature, DO, and ORP) had stabilized. Once field parameters were stable, a groundwater sample was collected into laboratory supplied bottles. Off-site groundwater field sampling logs are provided for reference in **Appendix B**.

A total of 22 groundwater samples were collected and submitted on ice under chain-of-custody seal to Test America, including one duplicate sample and one trip blank. All groundwater samples were submitted for analysis of VOCs via USEPA Method 8260B and 1,4-dioxane via USEPA Method 8260B-SIM based on a standard turn-around time of 10 business days. The groundwater analytical results are discussed below.

Sewer and Process Waste Sampling

From October 2016 to July 2017, Arcadis oversaw the rehabilitation of over 95% of the eastern storm sewer system. Water and sediment samples were collected during and after the rehabilitation to evaluate if chlorinated volatile organic compounds (CVOCs) were still present within the storm system stemming from infiltration of impacted groundwater, and evaluate presence or absence of other constituents. In addition, water and sediment samples were collected within the sanitary sewers and process waste lines to evaluate presence or absence of potential COCs and other chemicals in those subsurface systems.

Arcadis collected 60 water samples from 34 storm sewer manholes, a wet well, seven sanitary sewer manholes, the Eastern and Western Diversion Chambers, as well as two duplicate samples, and two trip blanks in July, August, and September 2017 (**Table 5**).

Arcadis also collected 13 sediment samples from 10 storm sewers, one sanitary sewer manhole, one duplicate sample, and one trip blank (**Table 6**).

The water and sediment samples were submitted on ice under chain-of-custody seal to Test America for analysis of the following constituents:

- VOC (limited to the seven COCs) via USEPA Method 8260B;
- 1,4-dioxane via USEPA Method 8260B-SIM; and
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082.

Storm sewer, sanitary sewer, and process waste field sampling logs are provided as **Appendix C**. Analytical results are discussed below.

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Off-Site Soil Vapor Sampling

Arcadis completed off-site soil vapor sampling between September 18 and 21, 2017. A total of 31 soil vapor samples were collected from soil vapor monitoring points (SVMPs) within the area east of the site (**Figure 2**). The SVMPs were sampled 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 and leak-checked using an MGD-2002 Helium leak detector and ultra-pure helium. All locations passed the leak check. Field screening was completed for VOCs using a photoionization detector equipped with an 11.7-electrovolt (eV) lamp in addition to ambient air temperature, wind speed, and barometric pressure.

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

Hydraulic Control System

System Overview

The hydraulic control system (HCS) was installed as an interim measure 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).

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 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 is monitored to evaluate system performance. Treated water discharge volumes are documented daily and tabulated monthly. Minor system shutdown events are documented and resolved

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within 1 to 2 days 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. Groundwater elevation trend, 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 4**.

The on-site monitoring well groundwater results are compared to Michigan Part 201 Non-residential Generic Cleanup Criteria (Dec. 2013). The analytical results are summarized on **Table 2**. Compounds 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 5 through 8**, respectively. All other site-specific compounds (1,1-DCE, PCE, and 1,4-dioxane) were either non-detect or 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 4**.

The off-site monitoring well groundwater results are compared to the Part 201 Residential Generic Cleanup Criteria (Dec. 2013) and the site-specific groundwater vapor intrusion screening levels included as part of the Consent Decree filed by MDEQ on July 22, 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 has requested the use of the MDEQ Remediation and Redevelopment Division (RRD) TDLs for TCE and VC of 1.0 µg/L as the groundwater screening level protective of vapor intrusion at residential structures where there is potential for GWIC.

The off-site groundwater results are summarized on **Table 4**. Only VC was detected in off-site monitoring wells at concentrations above the 1.0 µg/L TDL. TCE had no detections above the 1.0 µg/L TDL. The results for TCE and VC are provided on **Figures 9 and 10**, respectively. All other site-specific compounds (1,1-DCE, cis-DCE, trans-DCE, PCE, and 1,4-dioxane) were either non-detect or detected at concentrations below Part 201 Criterion.

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Sewer and Process Waste Line Sampling

The storm sewer, sanitary sewer, and process waste water results are compared to MDEQ Part 201 Groundwater Surface Water Interface (GSI) Criteria (December 2013). Results are summarized in **Table 5**, compound-specific results for VOC detections are provided on **Figure 11**, and PCB results are provided on **Figure 12**.

The storm sewer, sanitary sewer, and process waste sediment results are compared to MDEQ Part 201 GSI Criteria (Dec. 2013). Results are summarized in **Table 6**, compound-specific results for VOC detections are provided on **Figure 13**, and PCB results are provided on **Figure 14**.

Results indicated that VOCs were not detected within the western storm sewer system or the process waste lines. However, VOCs are present within the eastern storm system and sanitary sewer system. Response activity options are being evaluated.

PCBs were not found within the majority of the eastern storm sewer system, western storm sewer system, nor within the sanitary sewer system. Therefore, no pervasive issues were identified; however, PCBs were detected just above laboratory reporting limits in some localized areas. In August and September 2017, a portion of the sanitary sewer system was jetted and cleaned in those localized areas (**Figure 12**). All contents were collected and stored in frac tanks and roll offs, pending off-site transport and disposal by the on-site Ford-approved Total Waste Management supplier.

Off-Site Soil Vapor Monitoring

The soil vapor analytical results are compared to site-specific recommended interim action screening levels (RIASLs) provided by the MDEQ. Results are summarized in **Table 7**, and compound-specific results for detections of cis-DCE, PCE, TCE, and VC are provided on **Figures 15, 16, 17 and 18**, respectively. All other site-specific compounds (1,1-DCE, trans-DCE, and 1,4-dioxane) were not detected at concentrations above laboratory reporting limits. There were no off-site exceedances of the RIASLs for the above mentioned COCs.

Hydraulic Control System Operation and Performance Monitoring

System Operation

The HCS operated for more than 95% of this reporting period with minimal maintenance downtime. **Exhibit 1** below describes the system shutdowns, approximate durations, and dates.

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Exhibit 1: HCS Shutdown Summary

Date of Shutdown	Duration of Shutdown	Summary of Shutdown
July 4, 2017	Less than 2 days	System shut down due to regular plant electrical maintenance. The HCS was shut down on July 3 and resumed normal operation on July 5, 2017.
July 10, 2017	Less than 1 day	System shut down due to high-pressure alarms associated with the sediment clogging the influent bag filter. Bag filters were changed, and operation resumed on the same day as shutdown.
September 1, 2017	Less than 1 day	System shut down due to high water level in the air stripper sump and high pressure at the influent of the lead carbon vessel restricted discharge pump flow. The carbon vessel was backwashed, and operation resumed on the same day as shutdown.
September 11, 2017	Less than 1 day	System shut down due to the catalytic oxidizer failing to maintain target temperature for vapor treatment. The catalytic oxidizer was restarted, and operation resumed on the same day as shutdown.
September 20, 2017	Less than 1 day	System shut down due to the catalytic oxidizer failing to maintain target temperature for vapor treatment. The catalytic oxidizer was restarted, and operation resumed on the same day as shutdown.

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 9** for the 3Q 2017 reporting period. Discharge through the 3Q 2017 reporting period totaled 7,436,363 gallons. Discharge has generally decreased through the first 6 months of operation (March-September). This is due to dewatering of the vadose zone as the system reached steady state conditions, as well as a falling water table related to seasonal fluctuation. Flow rates are expected to increase moderately through the upcoming wet season.

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Exhibit 2: HCS Treated Discharge Water Volume and Flowrate Summary – 3Q 2017

Month	Volume Treated (Gallons)	Average Flowrate (GPM)
July	1,381,747	31
August	835,783	19
September	869,934	20

Exhibit 3 below depicts the cumulative constituent-specific mass removal of the above VOCs through the 3Q 2017 reporting period. Some site-specific compounds (1,1-DCE and trans-1,2-DCE) were detected at extremely low concentrations and are not included on the graph, while other site-specific compounds (1-4-dioxane and PCE) were not detected. Notable concentrations of styrene (used during recently completed storm sewer rehabilitation activities) were detected during the reporting period, primarily in June and July, with diminished concentrations detected in August and September. Vapor analytical concentrations are provided in **Table 8**.

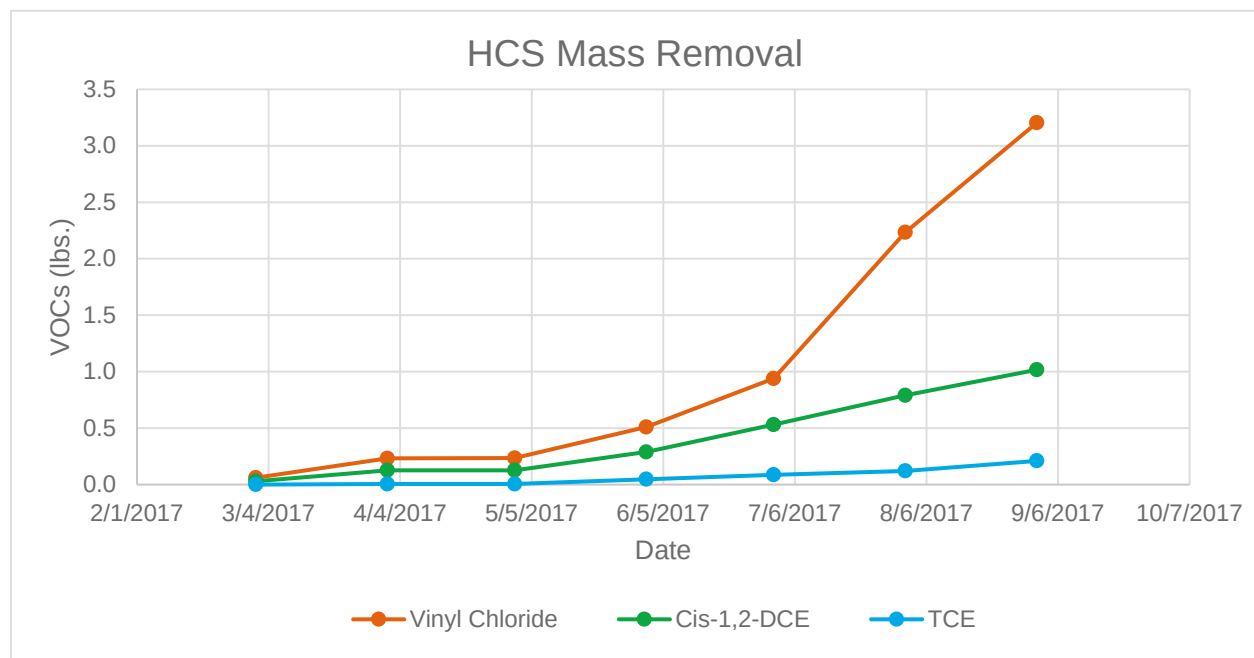


Exhibit 3: HCS Mass Removal – 3Q 2017

Hydraulic Capture

HCS performance is being evaluated in 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

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east of the HCS. Two lines of evidence will be used to evaluate system performance: groundwater gradient and groundwater analytical trends.

A groundwater elevation contour map, including the area around the HCS system is included as **Figure 4**. Due to anomalous water levels observed in several wells near the HCS (e.g. MW-46, MW-47, MW-48 and MW-50), all the HCS performance monitoring wells were resurveyed in October 2017. The resurvey showed that elevation recorded for the original wells installed at the Site (i.e. MW-1 through MW-58) were off by up to a foot (high) relative to the newly installed monitoring wells (e.g. MW-59 to MW-87). The July contour map, included as part of this submittal, has been revised to account for the new survey data, and does not include monitoring wells west of the test track that have not yet been re-surveyed. The remaining wells will be resurveyed in November 2017. In addition, the July contour map also uses an estimated pumping water level at each of the HCS wells (ESD-1 through 4) to help determine groundwater gradient. Groundwater elevation at the HCS wells are determined by estimating an apparent ambient groundwater elevation near the HCS and subtracting the pumping water level recorded on the date of the July gauging event.

As shown on **Figure 4**, 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 total pumping rates (~20 to 30 gallons per minutes [gpm]) are consistent with the ambient groundwater flux values calculated for the site and used as a basis for HCS design. Near the northern portion of the system (ESD-1 & ESD-2) a water table depression has developed around the ESD wells. There is an observed groundwater divide beneath the ATNPC building with groundwater west of the divide flowing to the HCS, and groundwater east of the divide continuing to flow east; however, the extent of downgradient capture has not been calculated due to limited performance well network coverage in this area. Additional piezometers are being considered for installation to better document the gradient and zone of depression east of the HCS, particularly within the hydraulically flat area between the northern portion of the HCS and the eastern property boundary. Additional wells will further support evaluation of HCS capture and provide data sufficient to represent site groundwater flow using more traditional gradient maps as outlined in the USEPA guidance document. Near the southern portion of the system (ESD-3 & ESD-4), where most of groundwater impacts are observed, an inward hydraulic gradient is maintained that extends to the eastern and southern property boundaries.

Groundwater Analytical Trends

To date, only two rounds of groundwater samples have been collected from the performance monitoring wells since the HCS startup (2nd and 3rd quarter 2017). Analytical results for both quarterly events are included on **Figures 5 through 10**. As additional samples are collected, Ford will evaluate analytical trends in key monitoring wells located east of the HCS system. Observations and measurements to date indicate the HCS system operates as designed and prevents further migration of groundwater impacts to the east of the HCS. Analytical trends near the system will take time to develop, particularly within or near zones of stagnation that have developed east of the system (i.e. east of ESD-1 and ESD-2).

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Summary of Compliance Actions

Monthly compliance sampling for the HCS GLWA discharge permit was completed in the first week of 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.

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
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 micrograms per liter (µg/L)

Exhibit 4: GLWA Discharge Limitations for HCS

In addition, the GLWA discharge permit limits discharge to 100,800 gallons per day (gpd) and/or 70 gallons per minute (gpm). Discharge volumes are documented daily and tabulated monthly. Discharge volumes were within discharge limits during 3Q 2017. Tabulated discharge volumes for the 3Q 2017 reporting period are presented in **Table 9**.

The vapor discharge from the air stripper is treated with a catalytic oxidizer and is discharged in accordance with the air permitting exemption contained in R 336.1290 (Rule 290) of the Michigan Air Pollution Control Rules. 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 8**.

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Livonia Transmission Plant Vapor Mitigation System

In response to the presence of VOCs and methane beneath the LTP building, Ford has designed and started installation of an interim measure sub-slab depressurization (SSD) system to limit the potential for vapor intrusion into the LTP building. Initial steps towards construction of the SSD system included a review of building construction, completion of SSD pilot testing, and design/installation of an interim measure SSD system targeting the areas with the highest levels of VOCs in soil vapor beneath the LTP building. Pilot testing was conducted in December 2016. Based on the results of the pilot test and sub-slab soil vapor data, the first phase of the SSD system has been designed.

Construction of the interim measure 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. The second phase of construction will involve installing the overhead horizontal conveyance piping and is expected to begin in November 2017. 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 Q3 2017 reporting period.

5 OTHER RELEVANT INFORMATION

Due Care Obligations

Interim response activities are ongoing and maintaining the due care obligation.

Official Communications

MDEQ and Ford have had an open line of communication during the 3Q 2017 reporting period.

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 3Q 2017 reporting period is included in **Exhibit 5** below.

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Report Title	Submission Date
Conceptual Site Model	August 30, 2017
Quality Assurance Project Plan – On-Site	August 30, 2017
Quality Assurance Project Plan – Off-Site	August 30, 2017
Health and Safety Plan	August 30, 2017

Exhibit 5: Submitted Reporting Documents – 3Q 2017

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:

Response Activity	Proposed Schedule	Anticipated Completion
4Q 2017 On-site groundwater sampling	Week of November 6, 2017	December 1, 2017
4Q 2017 Off-site groundwater sampling	Week of November 6, 2017	December 1, 2017
4Q 2017 Off-site soil vapor sampling	November 20 through 22, 2017	December 11, 2017
Hydraulic control system performance monitoring	Monthly intervals	Ongoing

Exhibit 6: Response Activity Schedule

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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)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
LMW-15-01	673.98	7-12	11/16/15	8.42	11.36	2.94	664.97
			11/25/15	8.44	11.35	2.91	664.96
			11/30/15	8.38	11.36	2.98	665.01
			12/08/15	8.35	11.35	3.00	665.03
LMW-15-02	673.90	7-12	11/16/15	7.70	10.10	2.40	665.72
			11/25/15	7.68	9.83	2.15	665.79
			11/30/15	7.66	9.84	2.18	665.80
			12/09/15	7.60	9.76	2.16	665.86
LMW-15-03	670.23	7-12	11/16/15	6.01	7.46	1.45	663.93
			11/25/15	5.92	7.04	1.12	664.08
			11/30/15	5.81	6.94	1.13	664.19
			12/11/15	5.83	7.26	1.43	664.11
LMW-15-04	673.92	6-11	11/16/15	7.10	8.79	1.69	666.48
			11/25/15	7.10	8.79	1.69	666.48
			11/30/15	7.06	8.79	1.73	666.52
			12/09/15	7.00	8.86	1.86	666.55
LMW-15-05	673.93	7-12	11/16/15	8.50	10.20	1.70	665.09
			11/25/15	8.50	9.99	1.49	665.14
			11/30/15	8.47	9.98	1.51	665.16
			12/08/15	8.42	9.92	1.50	665.21
LMW-15-06	673.93	7-12	11/16/15	6.92	8.82	1.90	666.63
			11/25/15	6.89	8.52	1.63	666.72
			11/30/15	6.74	8.39	1.65	666.86
			12/09/15	6.62	8.40	1.78	666.96
LMW-15-07	673.52	7-12	11/16/15	NP	7.70	NM	665.82
			11/25/15	NP	7.32	NM	666.20
			11/30/15	7.14	7.15	0.01	666.38
			12/11/15	7.08	7.09	0.01	666.44
LMW-15-08	673.88	7.5-12.5	11/16/15	NP	6.30	NM	667.58
			11/25/15	6.25	6.26	0.01	667.63
			11/30/15	6.12	6.13	0.01	667.76
			12/11/15	6.09	6.10	0.01	667.79
LMW-15-09	673.93	7-12	11/16/15	7.82	10.62	2.80	665.55
			11/25/15	7.76	10.51	2.75	665.62
			11/30/15	7.72	10.32	2.60	665.69
			12/10/15	7.73	10.38	2.65	665.67

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Livonia, Michigan

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LMW-15-10	673.89	7-12	11/16/15	8.40	9.26	0.86	665.32
			11/25/15	8.32	9.13	0.81	665.41
			11/30/15	8.24	8.96	0.72	665.51
			12/10/15	8.18	8.79	0.61	665.59
MW-15-59D	675.17	94-99	01/07/16	NP	21.83	NM	653.34
			01/19/16	NP	21.91	NM	653.26
			04/19/17	NP	21.37	NM	653.80
			07/24/17	NP	28.71	NM	646.46
MW-15-60D	675.75	93-98	01/07/16	NP	19.47	NM	656.28
			01/19/16	NP	19.71	NM	656.04
			04/19/17	NP	18.65	NM	657.10
			07/24/17	NP	24.09	NM	651.66
MW-15-61D	670.03	88-93	01/07/16	NP	76.49	NM	593.54
			01/08/16	NP	88.02	NM	582.01
			01/19/16	NP	73.23	NM	596.80
			01/20/16	NP	89.31	NM	580.72
			01/26/16	NP	84.09	NM	585.94
			01/27/16	NP	82.42	NM	587.61
			01/28/16	NP	80.71	NM	589.32
			04/19/17	NP	24.71	NM	645.32
			07/24/17	NP	24.74	NM	645.29
MW-1*	671.67	14-19	04/17/17	NP	3.82	NM	667.85
			07/24/17	NP	3.57	NM	668.10
MW-2	674.02	15.5-20.5	05/12/16	NP	6.35	NM	667.67
			04/17/17	NP	6.91	NM	667.11
			07/24/17	NP	6.99	NM	667.03
MW-3*	674.44	14-19	05/12/16	NP	5.82	NM	668.62
			04/17/17	NP	7.09	NM	667.35
			07/24/17	NP	7.29	NM	667.15
MW-4*	674.66	15.5-20.5	05/13/16	NP	7.15	NM	667.51
			04/17/17	NP	7.57	NM	667.09
			07/24/17	NP	7.61	NM	667.05
MW-5*	674.40	15.5-20.5	05/13/16	NP	6.49	NM	667.91
			07/24/17	NP	NM	NM	NM
MW-7*	671.77	18-23	07/24/17	NP	4.79	NM	666.98

See Notes on Last page.

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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)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-9*	672.04	19.5-24.5	05/09/16	NP	5.82	NM	666.22
			04/17/17	NP	6.79	NM	665.25
			07/24/17	NP	5.88	NM	666.16
MW-10*	674.59	16.5-21.5	05/13/16	NP	8.16	NM	666.43
			04/17/17	NP	8.15	NM	666.44
			07/24/17	NP	8.58	NM	666.01
MW-14*	672.10	15-20	07/24/17	NP	6.63	NM	665.47
MW-18*	671.33	13-18	05/09/16	NP	6.29	NM	665.04
			04/17/17	NP	6.67	NM	664.66
			07/24/17	NP	6.92	NM	664.41
MW-19*	670.78	15-20	05/13/16	LNAPL			
			04/17/17				
			07/24/17				
MW-20*	670.51	13.5-18.5	07/24/17	NP	6.29	NM	664.22
MW-21*	670.76	13.5-18.5	05/13/16	No Access, broken bolt			
			04/17/17	Well Damaged			
			07/24/17	Well Damaged			
MW-22	670.18	16.5-21.5	05/10/16	NP	6.18	NM	664.00
			04/17/17	NP	7.13	NM	663.05
			07/24/17	NP	7.53	NM	662.65
MW-23	669.24	15-20	05/09/16	NP	6.23	NM	663.01
			04/17/17	NP	6.67	NM	662.57
			07/24/17	NP	6.69	NM	662.55
MW-24*	676.32	19-24	04/17/17	NP	9.32	NM	667.00
			07/24/17	NP	10.01	NM	666.31
MW-25*	675.88	16-21	04/17/17	NP	5.35	NM	670.53
			07/24/17	NP	6.34	NM	669.54
MW-26*	675.71	4.5-14.5	07/24/17	NP	5.96	NM	669.75
MW-27*	671.66	4-14	07/24/17	CNL			

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Livonia, Michigan

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MW-28	668.16	2-12	05/09/16	NP	3.21	NM	664.95
			04/17/17	NP	3.78	NM	664.38
			07/24/17	NP	4.61	NM	663.55
MW-29*	670.35	5-15	05/13/16	NP	4.10	NM	666.25
			04/17/17	NP	4.53	NM	665.82
			07/24/17	NP	5.41	NM	664.94
MW-30	670.70	19-24	05/09/16	NP	9.37	NM	661.33
			04/17/17	NP	9.86	NM	660.84
			07/24/17	NP	9.93	NM	660.77
MW-31	670.82	17-22	05/09/16	NP	9.96	NM	660.86
			04/17/17	NP	10.13	NM	660.69
			07/24/17	NP	10.19	NM	660.63
MW-32	670.43	18-23	05/09/16	NP	9.64	NM	660.79
			04/17/17	NP	9.52	NM	660.91
			07/24/17	NP	9.71	NM	660.72
MW-33	669.94	14-19	05/09/16	NP	8.68	NM	661.26
			04/17/17	NP	8.76	NM	661.18
			07/24/17	NP	8.84	NM	661.10
MW-34	670.49	16.5-21.5	05/09/16	NP	7.98	NM	662.51
			04/17/17	NP	8.83	NM	661.66
			07/24/17	NP	9.45	NM	661.04
MW-35	669.44	19.5-24.5	05/09/16	NP	6.62	NM	662.82
			04/17/17	NP	7.16	NM	662.28
			07/24/17	NP	8.55	NM	660.89
MW-36*	677.22	20-25	07/24/17	NP	9.49	NM	667.73
MW-37	671.27	18-23	07/24/17	NP	8.14	NM	663.13
MW-38	671.70	15-20	04/17/17	NP	8.23	NM	663.47
			07/24/17	NP	8.69	NM	663.01
MW-39	672.19	19.5-24.5	04/19/17	NP	11.08	NM	661.11
			07/24/17	NP	11.41	NM	660.78

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MW-40	670.65	15-20	05/09/16	NP	9.94	NM	660.71
			04/19/17	NP	9.98	NM	660.67
			07/24/17	NP	10.10	NM	660.55
MW-41	670.34	16-21	05/09/16	NP	8.20	NM	662.14
			04/19/17	NP	8.97	NM	661.37
			07/24/17	NP	9.39	NM	660.95
MW-42	670.10	16-21	05/09/16	NP	7.29	NM	662.81
			04/19/17	NP	8.01	NM	662.09
			07/24/17	NP	9.13	NM	660.97
MW-43	669.24	17-22	05/09/16	NP	6.34	NM	662.90
			04/19/17	NP	6.80	NM	662.44
			07/24/17	NP	8.34	NM	660.90
MW-44	671.48	16-21	05/09/16	NP	6.59	NM	664.89
			04/19/17	NP	7.48	NM	664.00
			07/24/17	NP	8.38	NM	663.10
MW-45	670.83	15-20	05/09/16	NP	14.22	NM	656.61
			04/19/17	NP	11.45	NM	659.38
			07/24/17	NP	11.07	NM	659.76
MW-46	670.84	16-21	05/09/16	NP	8.42	NM	662.42
			04/19/17	NP	10.61	NM	660.23
			07/24/17	NP	10.33	NM	660.51
MW-47	671.34	16-21	05/09/16	NP	7.53	NM	663.81
			04/19/17	NP	9.88	NM	661.46
			07/24/17	NP	10.11	NM	661.23
MW-48	670.98	17-22	05/09/16	NP	6.33	NM	664.65
			04/19/17	NP	8.93	NM	662.05
			07/24/17	NP	9.70	NM	661.28
MW-49	669.07	12.5-17.5	05/12/16	NP	6.57	NM	662.50
			04/19/17	NP	7.03	NM	662.04
			07/24/17	NP	6.94	NM	662.13
MW-50	670.16	16-21	05/09/16	NP	5.42	NM	664.74
			04/19/17	NP	6.77	NM	663.39
			07/24/17	NP	8.16	NM	662.00

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MW-51	671.07	15-20	04/19/17	NP	6.12	NM	664.95
			07/24/17	NP	7.82	NM	663.25
MW-52	669.16	15-20	05/09/16	NP	6.39	NM	662.77
			04/19/17	NP	6.59	NM	662.57
			07/24/17	NP	8.33	NM	660.83
MW-53	668.59	16-21	05/09/16	NP	6.05	NM	662.54
			04/18/17	NP	6.03	NM	662.56
			07/24/17	NP	7.92	NM	660.67
MW-54	668.49	16-21	04/19/17	NP	6.01	NM	662.48
			07/24/17	NP	8.08	NM	660.41
MW-55	670.04	15-20	04/19/17	NP	6.84	NM	663.20
			07/24/17	NP	8.95	NM	661.09
MW-56	670.26	16-21	04/19/17	NP	6.67	NM	663.59
			07/24/17	NP	8.18	NM	662.08
MW-57	668.93	17-22	04/19/17	NP	5.89	NM	663.04
			07/24/17	NP	7.83	NM	661.10
MW-58	668.73	15-20	05/09/16	NP	3.51	NM	665.22
			04/19/17	NP	4.28	NM	664.45
			07/24/17	NP	5.68	NM	663.05
MW-62	671.06	16.3-21.3	04/20/17	NP	7.89	NM	663.17
			07/24/17	NP	10.11	NM	660.95
MW-63	669.96	7-12	04/20/17	NP	7.32	NM	662.64
			07/24/17	NP	8.45	NM	661.51
MW-64	671.09	15-20	04/20/17	NP	8.55	NM	662.54
			07/24/17	NP	9.83	NM	661.26
MW-65	671.98	16-21	04/20/17	NP	8.26	NM	663.72
			07/24/17	NP	9.87	NM	662.11
MW-66	669.83	15-20	04/20/17	NP	6.55	NM	663.28
			07/24/17	NP	7.81	NM	662.02
MW-67	671.32	9-14	04/20/17	NP	9.44	NM	661.88
			07/24/17	NP	9.84	NM	661.48

See Notes on Last page.

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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)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-68	670.71	15-20	04/20/17	NP	9.39	NM	661.32
			07/24/17	NP	9.55	NM	661.16
MW-69	670.27	15-20	04/20/17	NP	9.71	NM	660.56
			07/24/17	NP	NM	NM	NM
MW-70	671.36	15-20	04/20/17	NP	11.46	NM	659.90
			07/24/17	NP	11.02	NM	660.34
MW-71	671.04	15-20	04/20/17	NP	12.45	NM	658.59
			07/24/17	NP	11.84	NM	659.20
PW-16-01	670.23	9.7-19.7	07/24/17	NP	9.04	NM	661.19
PW-16-02	669.97	6-21	07/24/17	NP	6.77	NM	663.20
TW-16-01	669.53	12-17	07/24/17	NP	8.36	NM	661.17
TW-16-02	669.43	12-17	04/20/17	NP	4.48	NM	664.95
			07/24/17	NP	8.00	NM	661.43
TW-16-03	669.34	9-19	07/24/17	NP	6.10	NM	663.24
TW-16-04	669.80	9-19	04/20/17	NP	4.90	NM	664.90
			07/24/17	NP	6.46	NM	663.34

Notes:

Water level measurements collected from top of well casing.

⁽¹⁾ TOC elevation re-surveyed on October 12 and 13, 2017 by Geodetic Designs Inc.

* Monitoring well TOC pending re-survey.

Abbreviations:

ft.	Feet
ft. amsl	Feet above mean sea level
ft. bgs	Feet below ground surface
ft. btoc	Feet below top of casing
CNL	Could not locate
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 2
On-Site Groundwater Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: Screen Interval (ft. bgs): Date:	Unit	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-01 14-19		MW-02 15.5-20.5		MW-03 14-19		MW-04 15.5-20.5		MW-05 15.5-20.5	MW-07 18-23	MW-09 19.5-24.5	MW-10 16.5-21.5	
				4/26/2017	7/28/2017	4/27/2017	8/3/2017	4/27/2017	8/3/2017	4/27/2017	8/3/2017	8/3/2017	7/31/2017	7/28/2017	4/27/2017	8/4/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	< 2.0	< 2.0	1.5 J	1.8 J	0.67 J	0.79 J	1.1 J	0.78 J	0.35 J	< 2.0	8.6	5.9	4.5
Volatile Organic Comppounds (VOCs)																
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 130	< 250	< 5.0	< 5.0	< 5,000	< 5,000	< 5.0	< 5.0	< 5.0	< 250	< 330
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	1.0 J	< 250	< 500	< 10	< 10	< 10,000	< 10,000	< 10	< 10	< 10	< 500	< 670
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 250	< 500	< 10	< 10	< 10,000	< 10,000	< 10	< 10	< 10	< 500	< 670
Acetone	µg/L	2,100	1,700	< 10	4.0 J	< 250	< 500	< 10	< 10	< 10,000	< 10,000	< 10	< 10	< 10	< 500	< 670
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 130	< 250	< 5.0	< 5.0	< 5,000	< 5,000	< 5.0	< 5.0	< 5.0	< 250	< 330
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	630	1,200	< 1.0	< 1.0	32,000	27,000	< 1.0	< 1.0	< 1.0	< 50	< 67
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 130	< 250	< 5.0	< 5.0	< 5,000	< 5,000	< 5.0	< 5.0	< 5.0	< 250	< 330
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 50	< 100	< 2.0	< 2.0	< 2,000	< 2,000	< 2.0	< 2.0	< 2.0	< 100	< 130
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 250	< 500	< 10	< 10	< 10,000	< 10,000	< 10	< 10	< 10	< 500	< 670
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 250	< 500	< 10	< 10	< 10,000	< 10,000	< 10	< 10	< 10	< 500	< 670
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67

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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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-01 14-19		MW-02 15.5-20.5		MW-03 14-19		MW-04 15.5-20.5		MW-05 15.5-20.5	MW-07 18-23	MW-09 19.5-24.5	MW-10 16.5-21.5	
				4/26/2017	7/28/2017	4/27/2017	8/3/2017	4/27/2017	8/3/2017	4/27/2017	8/3/2017	8/3/2017	7/31/2017	7/28/2017	4/27/2017	8/4/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Toluene	µg/L	790	270	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 50	< 100	< 2.0	< 2.0	< 2,000	< 2,000	< 2.0	< 2.0	< 2.0	< 100	< 130
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	200	270	< 1.0	< 1.0	1,200	1,100	< 1.0	< 1.0	< 1.0	< 50	< 67
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	< 1,000	< 1,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 25	< 50	< 1.0	< 1.0	21,000	18,000	< 1.0	< 1.0	< 1.0	< 50	< 67
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	200	160	< 1.0	< 1.0	570 J	640 J	< 1.0	< 1.0	5.5	1,200	2,100
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-14 15-20	MW-15-59D 94-99		MW-15-60D 93-98		MW-15-61D 88-93		MW-18 13-18		MW-20 13.5-18.5	MW-22 16.5-21.5		MW-23 15-20
				7/28/2017	4/26/2017	8/1/2017	4/26/2017	8/1/2017	4/26/2017	8/1/2017	4/21/2017	7/28/2017	7/31/2017	4/25/2017	8/2/2017	8/3/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	< 2.0	NA	< 2.0	NA	< 2.0	NA	< 2.0	< 2.0	< 2.0	< 2.0	32	26	0.50 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	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
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	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 5.0	< 310	< 500	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
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	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 630	< 1,000	< 10,000
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 630	< 1,000	< 10,000
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 630	< 1,000	< 10,000
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.57 J	< 1.0	< 1.0	< 1.0	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
Carbon Disulfide	µg/L	2,300	ID	< 5.0	1.6 J	< 5.0	0.51 J	< 5.0	0.91 J	0.58 J	< 5.0	< 5.0	< 5.0	< 310	< 500	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
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	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
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	130	210	21,000
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	< 1.0	< 63	< 100	< 1,000
Cyclohexane	µg/L	NA	ID	< 1.0	0.86 J	0.58 J	< 1.0	< 1.0	0.48 J	< 1.0	< 1.0	< 1.0	< 1.0	< 63	< 100	< 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	< 5.0	140 J	< 500	< 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	< 2.0	< 130	< 200	< 2,000
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.50 J	< 1.0	< 1.0	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 630	< 1,000	< 10,000
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 630	< 1,000	< 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	< 1.0	< 63	< 100	< 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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-14 15-20	MW-15-59D 94-99		MW-15-60D 93-98		MW-15-61D 88-93		MW-18 13-18		MW-20 13.5-18.5	MW-22 16.5-21.5		MW-23 15-20
				7/28/2017	4/26/2017	8/1/2017	4/26/2017	8/1/2017	4/26/2017	8/1/2017	4/21/2017	7/28/2017	7/31/2017	4/25/2017	8/2/2017	8/3/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.27 J	< 1.0	< 1.0	< 1.0	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 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	< 1.0	< 63	< 100	< 1,000
Toluene	µg/L	790	270	< 1.0	0.35 J	0.46 J	< 1.0	0.33 J	< 1.0	0.28 J	< 1.0	< 1.0	< 1.0	< 63	< 100	< 1,000
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	0.25 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 130	< 200	< 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	< 1.0	< 63	< 100	1,200
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	< 63	< 100	< 1,000
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	< 63	< 100	5,300
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	2,300	2,100	1,100
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-24 19-24		MW-25 16-21		MW-26 4.5-14.5	MW-28 2-12	MW-29 5-15		MW-30 19-24		MW-31 17-22		MW-32 18-23
				4/26/2017	8/2/2017	4/21/2017	8/2/2017	8/4/2017	8/3/2017	4/26/2017	8/4/2017	4/25/2017	7/27/2017	4/21/2017	7/28/2017	7/28/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	< 2.0	0.26 J	0.75 J	1.1 J	0.25 J	0.44 J	1.4 J	3.8	10	11	< 2.0	0.47 J	0.28 J
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	28	< 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	< 1.0
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	< 1.0
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	< 1.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	< 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	0.71 J	< 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	< 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	< 1.0
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	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 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	< 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	< 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	< 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	< 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	< 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	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 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	< 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	< 1.0

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Location: Screen Interval (ft. bgs): Date:	Unit	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-24 19-24		MW-25 16-21		MW-26 4.5-14.5	MW-28 2-12	MW-29 5-15		MW-30 19-24		MW-31 17-22		MW-32 18-23
				4/26/2017	8/2/2017	4/21/2017	8/2/2017	8/4/2017	8/3/2017	4/26/2017	8/4/2017	4/25/2017	7/27/2017	4/21/2017	7/28/2017	7/28/2017
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	< 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	< 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	< 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	< 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	< 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	< 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	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.68 J	< 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	0.68 J	< 1.0
Gases																
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 0.50	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 0.50	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	65	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	2.6	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 1.0	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	52	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	2.1	NA	NA	NA	NA
Metals																
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	< 100	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA	NA	NA	630	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	77	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA	NA	NA	70	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-33 14-19	MW-34 16.5-21.5		MW-35 19.5-24.5	MW-36 20-25	MW-37 18-23	MW-38 15-20		MW-39 20-25		MW-40 20-25	MW-41 16-21	
				7/28/2017	4/24/2017	7/27/2017	7/27/2017	7/28/2017	8/1/2017	4/26/2017	7/28/2017	4/26/2017	7/28/2017	7/28/2017	4/24/2017	7/27/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	< 2.0	8.3	6.1	4.9	< 2.0	0.37 J	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	1.9 J	1.4 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	< 1.0	< 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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 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	< 1.0
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	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
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	< 1.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 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	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	0.37 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.7	1.9	1.8
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	< 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	< 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	< 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	< 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	< 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	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 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	< 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	< 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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-33 14-19	MW-34 16.5-21.5		MW-35 19.5-24.5	MW-36 20-25	MW-37 18-23	MW-38 15-20		MW-39 20-25		MW-40 20-25	MW-41 16-21	
				7/28/2017	4/24/2017	7/27/2017	7/27/2017	7/28/2017	8/1/2017	4/26/2017	7/28/2017	4/26/2017	7/28/2017	7/28/2017	4/24/2017	7/27/2017
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	< 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	< 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	< 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	< 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	< 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	0.41 J	< 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	< 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	< 1.0
Vinyl chloride	µg/L	2.0	13	< 1.0	0.52 J	1.5	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.77 J	3.2	1.9
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-42 16-21		MW-43 17-22		MW-44 16-21		MW-45 15-20		MW-46 16-21		MW-47 16-21	
				4/24/2017	7/27/2017	4/27/2017	7/27/2017	4/25/2017	8/2/2017	4/24/2017	8/1/2017	4/24/2017	7/31/2017	4/24/2017	7/31/2017
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	37	2,800	1.3 J	1.8 J	3.6	3.5	12	7.1	4.1	2.5	21	0.83 J	0.72 J	0.62 J
Volatile Organic Compounds (VOCs)															
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	2.2 J
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	1.9 J	2.8	3.7 J	3.5 J
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	0.78 J	< 5.0	< 4.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 31	< 50	< 2,500	< 2,500	< 25	< 5.0	< 25	< 20
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 63	< 100	< 5,000	< 5,000	< 50	< 10	< 50	< 40
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 63	< 100	< 5,000	< 5,000	< 50	< 10	< 50	< 40
Acetone	µg/L	2,100	1,700	< 10	< 10	< 10	< 10	< 63	< 100	< 5,000	< 5,000	< 50	< 10	< 50	< 40
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 31	< 50	< 2,500	< 2,500	< 25	< 5.0	< 25	< 20
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	10,000	8,100	21	15	69	69
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	8.3 J	< 50	330 J	< 2,500	4.1 J	< 5.0	3.4 J	< 20
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 13	< 20	< 1,000	< 1,000	< 10	< 2.0	< 10	< 8.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 63	< 100	< 5,000	< 5,000	< 50	< 10	< 50	< 40
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 63	< 100	< 5,000	< 5,000	< 50	< 10	< 50	< 40
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0

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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-42 16-21		MW-43 17-22		MW-44 16-21		MW-45 15-20		MW-46 16-21		MW-47 16-21	
				4/24/2017	7/27/2017	4/27/2017	7/27/2017	4/25/2017	8/2/2017	4/24/2017	8/1/2017	4/24/2017	7/31/2017	4/24/2017	7/31/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	7.9	< 1.0	< 5.0	< 4.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 13	< 20	< 1,000	< 1,000	< 10	< 2.0	< 10	< 8.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	1.6 J	2.6	7.1	8.6
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 6.3	< 10	< 500	< 500	< 5.0	< 1.0	< 5.0	< 4.0
Vinyl chloride	µg/L	2.0	13	0.81 J	0.99 J	8.4	3	230	380	7,600	5,400	150	13	120	110
Gases															
Ethane	µg/L	NS	NS	NA	NA	0.48 J	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	190	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other															
Carbon, Dissolved	mg/L	NS	NS	NA	NA	4.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	< 0.50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	220	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	1,700	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	210	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	210	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-48 17-22		MW-49 12.5-17.5		MW-50 16-21		MW-51 15-20		MW-52 15-20	MW-53 16-21		MW-54 16-21	MW-55 15-20
				4/21/2017	8/1/2017	4/21/2017	7/28/2017	4/21/2017	7/31/2017	4/25/2017	8/3/2017	7/27/2017	4/24/2017	7/27/2017	7/27/2017	7/27/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	< 2.0	9.5	12	9.4	1.5 J	2.2	0.75 J	1.2 J	1.3 J	1.1 J	2	1.5 J	1.2 J
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	0.41 J	0.72 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 10,000	< 5,000	< 25	< 20	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 20,000	< 10,000	< 50	< 40	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 20,000	< 10,000	< 50	< 40	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	µg/L	2,100	1,700	< 10	< 10	< 20,000	< 10,000	< 50	< 40	< 10	< 10	2.2 J	< 10	< 10	< 10	< 10
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 10,000	< 5,000	< 25	< 20	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	43,000	29,000	13	15	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 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	1,100 J	< 5,000	< 25	< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 4,000	< 2,000	< 10	< 8.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 20,000	< 10,000	< 50	< 40	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 20,000	< 10,000	< 50	< 40	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Location: Screen Interval (ft. bgs): Date:	Unit	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-48 17-22		MW-49 12.5-17.5		MW-50 16-21		MW-51 15-20		MW-52 15-20	MW-53 16-21		MW-54 16-21	MW-55 15-20
				4/21/2017	8/1/2017	4/21/2017	7/28/2017	4/21/2017	7/31/2017	4/25/2017	8/3/2017	7/27/2017	4/24/2017	7/27/2017	7/27/2017	7/27/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 4,000	< 2,000	< 10	< 8.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 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	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 2,000	< 1,000	< 5.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	2.0	13	0.85 J	11	10,000	9,800	48	140	0.57 J	0.97 J	7	< 1.0	0.63 J	0.88 J	0.84 J
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-56 16-21		MW-57 17-22	MW-58 15-20	MW-62 16.3-21.3		MW-63 7-12			MW-64 15-20		MW-65 16-21	
				4/24/2017	7/28/2017	7/27/2017	7/28/2017	4/21/2017	7/31/2017	4/21/2017	5/25/2017	7/31/2017	4/24/2017	7/27/2017	4/25/2017	8/2/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	3.8	2.7	4.6	10	2.8	3.7	19	NA	0.36 J	< 2.0	0.32 J	3.8	3.1
Volatile Organic Compmpounds (VOCs)																
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
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	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 5.0	< 5.0	< 10	< 20
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 10	< 10	< 20	< 40
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 10	< 10	< 20	< 40
Acetone	µg/L	2,100	1,700	< 10	< 10	1.8 J	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 10	< 10	< 20	< 40
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 5.0	< 5.0	< 10	< 20
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	< 1,000	< 1,000	< 100	< 1.0	0.37 J	3.3	4.1
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5,000	< 5,000	< 500	< 5.0	< 5.0	< 10	< 20
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000	< 2,000	< 200	< 2.0	< 2.0	< 4.0	< 8.0
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 10	< 10	< 20	< 40
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 10	< 10	< 10	< 10	< 10,000	< 10,000	< 1,000	< 10	< 10	< 20	< 40
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-56 16-21		MW-57 17-22	MW-58 15-20	MW-62 16.3-21.3		MW-63 7-12			MW-64 15-20		MW-65 16-21	
				4/24/2017	7/28/2017	7/27/2017	7/28/2017	4/21/2017	7/31/2017	4/21/2017	5/25/2017	7/31/2017	4/24/2017	7/27/2017	4/25/2017	8/2/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13,000	13,000	3,900	< 1.0	< 1.0	< 2.0	< 4.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2,000	< 2,000	< 200	< 2.0	< 2.0	< 4.0	< 8.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1,000	< 1,000	< 100	< 1.0	< 1.0	< 2.0	< 4.0
Vinyl chloride	µg/L	2.0	13	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1,000	< 1,000	< 100	2.4	4.8	61	49
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-66 15-20		MW-67 9-14		MW-68 15-20		MW-69 15-20	MW-70 15-20		MW-71 15-20		PW-16-01 9.7-19.7	PW-16-02 6-21
				4/25/2017	8/2/2017	4/21/2017	7/31/2017	4/24/2017	8/1/2017	4/25/2017	4/24/2017	8/1/2017	4/24/2017	8/1/2017	8/2/2017	8/3/2017
Semi-volatile Organic Compounds (SVOCs)																
1,4-Dioxane	µg/L	37	2,800	0.76 J	0.99 J	1.8 J	0.33 J	0.40 J	0.69 J	12	0.76 J	0.68 J	4.3	1.4 J	< 2.0	0.51 J
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane	µg/L	200	89	< 1.0	< 1.0	2.3 J	2.0 J	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,1-Dichloroethane	µg/L	2,500	740	< 1.0	< 1.0	< 10	1.0 J	1.6	1.7	< 1.0	2.4 J	3.3 J	< 1.0	< 1.0	< 1.0	< 5.0
1,1-Dichloroethene	µg/L	7.0	130	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 5.0	< 5.0	< 50	< 20	< 5.0	< 5.0	< 5.0	< 33	< 50	< 5.0	< 5.0	< 5.0	< 25
1,2,4-Trichlorobenzene	µg/L	70	99	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dichlorobenzene	µg/L	600	13	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dichloroethane	µg/L	5.0	360	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,2-Dichloropropane	µg/L	5.0	230	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,3-Dichlorobenzene	µg/L	19	28	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
1,4-Dichlorobenzene	µg/L	75	17	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 10	< 10	< 100	< 40	< 10	< 10	< 10	< 67	< 100	< 10	< 10	< 10	< 50
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 10	< 10	< 100	< 40	< 10	< 10	< 10	< 67	< 100	< 10	< 10	< 10	< 50
Acetone	µg/L	2,100	1,700	< 10	< 10	< 100	< 40	< 10	< 10	4.4 J	< 67	< 100	< 10	< 10	< 10	< 50
Benzene	µg/L	5.0	200	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Bromodichloromethane	µg/L	80	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Bromoform	µg/L	80	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Bromomethane	µg/L	29	35	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Carbon Disulfide	µg/L	2,300	ID	< 5.0	< 5.0	< 50	< 20	< 5.0	< 5.0	< 5.0	< 33	< 50	< 5.0	< 5.0	< 5.0	< 25
Carbon Tetrachloride	µg/L	5.0	45	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
CFC-11	µg/L	7,300	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
CFC-12	µg/L	4,800	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Chlorobenzene	µg/L	100	25	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Chlorodibromomethane	µg/L	80	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Chloroethane	µg/L	1,700	1,100	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	0.55 J	< 5.0
Chloroform	µg/L	80	350	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Chloromethane	µg/L	1,100	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
cis-1,2-Dichloroethene	µg/L	70	620	< 1.0	< 1.0	47	36	20	18	< 1.0	190	200	< 1.0	< 1.0	2.2	63
cis-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Cyclohexane	µg/L	NA	ID	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Dichloromethane	µg/L	5.0	1,500	< 5.0	< 5.0	< 50	< 20	< 5.0	< 5.0	< 5.0	8.9 J	< 50	< 5.0	< 5.0	< 5.0	< 25
Diethyl ether	µg/L	10	ID	< 2.0	< 2.0	< 20	< 8.0	< 2.0	< 2.0	< 2.0	< 13	< 20	< 2.0	< 2.0	< 2.0	< 10
Ethylbenzene	µg/L	74	18	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Isopropylbenzene	µg/L	2,300	28	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Methyl Acetate	µg/L	NA	NA	< 10	< 10	< 100	< 40	< 10	< 10	< 10	< 67	< 100	< 10	< 10	< 10	< 50
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 10	< 10	< 100	< 40	< 10	< 10	< 10	< 67	< 100	< 10	< 10	< 10	< 50
Methylcyclohexane	µg/L	NA	NA	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0

See Notes on Last Page.

Location: Screen Interval (ft. bgs): Date:	Unit	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	MW-66 15-20		MW-67 9-14		MW-68 15-20		MW-69 15-20	MW-70 15-20		MW-71 15-20		PW-16-01 9.7-19.7	PW-16-02 6-21
				4/25/2017	8/2/2017	4/21/2017	7/31/2017	4/24/2017	8/1/2017	4/25/2017	4/24/2017	8/1/2017	4/24/2017	8/1/2017	8/2/2017	8/3/2017
Methyl-tert-butylether	µg/L	40	7,100	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Styrene (Monomer)	µg/L	100	80	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	0.35 J	< 5.0
Tetrachloroethene	µg/L	5.0	60	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Toluene	µg/L	790	270	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Total Xylenes	µg/L	280	41	< 2.0	< 2.0	< 20	< 8.0	< 2.0	< 2.0	< 2.0	< 13	< 20	< 2.0	< 2.0	< 2.0	< 10
trans-1,2-Dichloroethene	µg/L	100	1,500	< 1.0	< 1.0	< 10	2.4 J	1.9	1.9	< 1.0	3.8 J	4.2 J	< 1.0	< 1.0	< 1.0	< 5.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 1.0	< 1.0	< 10	< 4.0	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Trichloroethene	µg/L	5.0	200	< 1.0	< 1.0	94	91	< 1.0	< 1.0	< 1.0	< 6.7	< 10	< 1.0	< 1.0	< 1.0	< 5.0
Vinyl chloride	µg/L	2.0	13	5.6	5.4	14	< 4.0	12	2.1	2.8	120	100	< 1.0	0.68 J	24	160
Gases																
Ethane	µg/L	NS	NS	NA	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	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other																
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	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	NA
Iron	µg/L	300	NS	NA	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	NA
Manganese	µg/L	50	NS	NA	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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	TW-16-01 12-17	TW-16-02 12-17		TW-16-03 9-19	TW-16-04 9-19	
				8/2/2017	4/25/2017	8/2/2017	8/3/2017	4/25/2017	8/3/2017
Semi-volatile Organic Compounds (SVOCs)									
1,4-Dioxane	µg/L	37	2,800	0.32 J	7.2	3.9	0.54 J	1.7 J	0.81 J
Volatile Organic Comppounds (VOCs)									
1,1,1-Trichloroethane	µg/L	200	89	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,1,2,2-Tetrachloroethane	µg/L	35	78	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	32	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,1,2-Trichloroethane	µg/L	5.0	330	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,1-Dichloroethane	µg/L	2,500	740	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,1-Dichloroethene	µg/L	7.0	130	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2,3-Trimethylbenzene	µg/L	130	ID	< 50	< 3,100	< 2,500	< 20	< 20	< 20
1,2,4-Trichlorobenzene	µg/L	70	99	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2,4-Trimethylbenzene	µg/L	63	17	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2-Dibromo-3-chloropropane	µg/L	0.20	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2-Dibromoethane	µg/L	0.05	5.7	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2-Dichlorobenzene	µg/L	600	13	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2-Dichloroethane	µg/L	5.0	360	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,2-Dichloropropane	µg/L	5.0	230	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,3,5-Trimethylbenzene	µg/L	72	45	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,3-Dichlorobenzene	µg/L	19	28	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
1,4-Dichlorobenzene	µg/L	75	17	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
2-Butanone (MEK)	µg/L	38,000	2,200	< 100	< 6,300	< 5,000	< 40	< 40	< 40
4-Methyl-2-Pentanone	µg/L	5,200	ID	< 100	< 6,300	< 5,000	< 40	< 40	< 40
Acetone	µg/L	2,100	1,700	< 100	< 6,300	< 5,000	< 40	< 40	< 40
Benzene	µg/L	5.0	200	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Bromodichloromethane	µg/L	80	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Bromoform	µg/L	80	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Bromomethane	µg/L	29	35	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Carbon Disulfide	µg/L	2,300	ID	< 50	< 3,100	< 2,500	< 20	< 20	< 20
Carbon Tetrachloride	µg/L	5.0	45	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
CFC-11	µg/L	7,300	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
CFC-12	µg/L	4,800	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Chlorobenzene	µg/L	100	25	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Chlorodibromomethane	µg/L	80	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Chloroethane	µg/L	1,700	1,100	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Chloroform	µg/L	80	350	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Chloromethane	µg/L	1,100	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
cis-1,2-Dichloroethene	µg/L	70	620	17	5,200	3,100	37	20	18
cis-1,3-Dichloropropene	µg/L	NA	NA	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Cyclohexane	µg/L	NA	ID	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Dichloromethane	µg/L	5.0	1,500	< 50	1,200 J	< 2,500	< 20	4.4 J	< 20
Diethyl ether	µg/L	10	ID	< 20	< 1,300	< 1,000	< 8.0	< 8.0	< 8.0
Ethylbenzene	µg/L	74	18	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Isopropylbenzene	µg/L	2,300	28	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Methyl Acetate	µg/L	NA	NA	< 100	< 6,300	< 5,000	< 40	< 40	< 40
Methyl N-Butyl Ketone (2-Hexanone)	µg/L	94	ID	< 100	< 6,300	< 5,000	< 40	< 40	< 40
Methylcyclohexane	µg/L	NA	NA	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0

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	Non-residential Drinking Water Criteria	Groundwater Surface Water Interface Criteria	TW-16-01 12-17	TW-16-02 12-17		TW-16-03 9-19	TW-16-04 9-19	
				8/2/2017	4/25/2017	8/2/2017	8/3/2017	4/25/2017	8/3/2017
Methyl-tert-butylether	µg/L	40	7,100	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Styrene (Monomer)	µg/L	100	80	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Tetrachloroethene	µg/L	5.0	60	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Toluene	µg/L	790	270	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Total Xylenes	µg/L	280	41	< 20	< 1,300	< 1,000	< 8.0	< 8.0	< 8.0
trans-1,2-Dichloroethene	µg/L	100	1,500	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
trans-1,3-Dichloropropene	µg/L	NA	NA	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Trichloroethene	µg/L	5.0	200	< 10	< 630	< 500	< 4.0	< 4.0	< 4.0
Vinyl chloride	µg/L	2.0	13	210	15,000	12,000	100	150	120
Gases									
Ethane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA
Ethene	µg/L	NS	NS	NA	NA	NA	NA	NA	NA
Methane	µg/L	NS	NS	NA	NA	NA	NA	NA	NA
Other									
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	NA	NA
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	NA	NA
Metals									
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	NA	NA
Iron	µg/L	300	NS	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	NA	NA
Manganese	µg/L	50	NS	NA	NA	NA	NA	NA	NA

See Notes on Last Page.

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

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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)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-72	668.81	15-20	05/22/17	NP	6.98	NM	661.83
			07/24/17	NP	8.60	NM	660.21
MW-73S	666.89	7-12	05/22/17	NP	4.72	NM	662.17
			07/24/17	NP	6.38	NM	660.51
MW-73D	667.08	13.5-18.5	05/22/17	NP	4.98	NM	662.10
			07/24/17	NP	6.64	NM	660.44
MW-74	668.02	14-19	05/22/17	NP	5.94	NM	662.08
			07/24/17	NP	7.47	NM	660.55
MW-75S	666.86	5-10	05/22/17	NP	5.16	NM	661.70
			07/24/17	NP	6.15	NM	660.71
MW-75D	666.89	12-17	05/22/17	NP	5.20	NM	661.69
			07/24/17	NP	6.19	NM	660.70
MW-76	670.10	15-20	05/22/17	NP	9.43	NM	660.67
			07/24/17	NP	10.05	NM	660.05
MW-77	660.56	9-14	05/22/17	NP	4.59	NM	655.97
			07/24/17	NP	5.90	NM	654.66
MW-78	657.23	7-12	05/22/17	NP	1.78	NM	655.45
			07/24/17	NP	3.55	NM	653.68
MW-79S	663.10	5-10	05/22/17	NP	4.15	NM	658.95
			07/24/17	NP	6.37	NM	656.73
MW-79D	663.35	10-15	05/22/17	NP	4.20	NM	659.15
			07/24/17	NP	6.45	NM	656.90
MW-80S	656.08	7-12	05/22/17	NP	2.41	NM	653.67
			07/24/17	NP	4.19	NM	651.89
MW-81	657.27	8-13	05/22/17	NP	6.05	NM	651.22
			07/24/17	NP	7.24	NM	650.03
MW-82S	658.63	9-14	05/22/17	NP	6.93	NM	651.70
			07/24/17	NP	8.24	NM	650.39
MW-82D	658.45	18-23	05/22/17	NP	7.34	NM	651.11
			07/24/17	NP	8.50	NM	649.95

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)	LNAPL Thickness (ft.)	Corrected Groundwater Elevation (ft. amsl)
MW-83	660.11	8-13	05/22/17	NP	6.46	NM	653.65
			07/24/17	NP	7.61	NM	652.50
MW-84	662.50	8-13	05/22/17	NP	3.26	NM	659.24
			07/24/17	NP	5.19	NM	657.31
MW-85	658.85	8-13	05/22/17	NP	4.71	NM	654.14
			07/24/17	NP	6.12	NM	652.73
MW-86	666.11	12-17	05/22/17	NP	6.25	NM	659.86
			07/24/17	NP	8.07	NM	658.04
MW-87	668.89	14-19	05/22/17	NP	9.41	NM	659.48
			07/24/17	NP	10.65	NM	658.24

Notes:

Water level measurements collected from top of well casing.

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

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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-72		MW-73D		MW-73S		MW-74		MW-75D		MW-75S	
				15-20		13.5-18.5		7-12		14-19		12-17		5-10	
				5/22/2017	7/26/2017	5/22/2017	7/26/2017	5/22/2017	7/26/2017	5/23/2017	7/26/2017	5/23/2017	7/26/2017	5/23/2017	7/26/2017
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	7.2*	2,800	1.1 J	0.53 J	3.2	3.1	< 2.0	< 2.0	< 2.0	1.5 J	1.9 J	1.8 J	< 2.0	< 2.0
Volatile Organic Compounds (VOCs)															
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	NA	0.45 J	NA	1.9	NA	< 1.0	NA	< 1.0	NA	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0	0.40 J	0.48 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	3.9	2.9	1.1	0.85 J	1.6	1.3	< 1.0	2.7	6.4	3.7	0.45 J	< 1.0
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	3,900	NA	NA	NA	NA	NA	< 100	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	3,900	NA	NA	NA	NA	NA	210	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	1,200	NA	NA	NA	NA	NA	63	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	1,200	NA	NA	NA	NA	NA	70	NA
Anions															
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	< 1.0	NA	NA	NA	NA	NA	21	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	89	NA
Total Organic Carbon (TOC)															
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	6.1	NA	NA	NA	NA	NA	4.6	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	5.2	NA	NA	NA	NA	NA	3.6	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-76		MW-77		MW-78		MW-79D		MW-79S		MW-80S	
				15-20		9-14		7-12		10-15		5-10		7-12	
				5/23/2017	7/26/2017	5/25/2017	7/26/2017	5/25/2017	7/25/2017	5/24/2017	7/25/2017	5/24/2017	7/25/2017	5/24/2017	7/25/2017
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	7.2*	2,800	< 2.0	< 2.0	NA	0.32 J	NA	< 2.0	NA	< 2.0	NA	< 2.0	NA	0.52 J
Volatile Organic Compounds (VOCs)															
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	3.9	NA	0.67 J	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	0.54 J	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	0.87 J	< 1.0	< 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	0.51 J	0.45 J	< 1.0	< 1.0	3.2	4.1	< 1.0	< 1.0	4.6	7.1
Metals															
Iron, Dissolved	µg/L	300	NS	340	NA	NA	NA	NA	NA	NA	NA	990	NA	600	NA
Iron, Total	µg/L	300	NS	480	NA	NA	NA	NA	NA	NA	NA	1,100	NA	530	NA
Manganese, Dissolved	µg/L	50	NS	760	NA	NA	NA	NA	NA	NA	NA	110	NA	200	NA
Manganese, Total	µg/L	50	NS	800	NA	NA	NA	NA	NA	NA	NA	120	NA	190	NA
Anions															
Nitrate-N	mg/L	10	NS	1.2 J	NA	NA	NA	NA	NA	NA	NA	0.063 J	NA	< 0.10	NA
Sulfate	mg/L	250	NS	120	NA	NA	NA	NA	NA	NA	NA	41	NA	97	NA
Total Organic Carbon (TOC)															
Carbon, Dissolved	mg/L	NS	NS	1.1	NA	NA	NA	NA	NA	NA	NA	4.1	NA	5.6	NA
Total Organic Carbon	mg/L	NS	NS	0.90 J	NA	NA	NA	NA	NA	NA	NA	3.1	NA	4.5	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		MW-82D		MW-82S		MW-83		MW-84		MW-85	
				8-13		18-23		9-14		8-13		8-13		8-13	
				5/26/2017	7/25/2017	5/24/2017	7/25/2017	5/24/2017	7/25/2017	5/26/2017	7/25/2017	5/25/2017	7/25/2017	5/25/2017	7/25/2017
Semi-volatile Organic Compounds (SVOCs)															
1,4-Dioxane	µg/L	7.2*	2,800	NA	< 2.0	NA	< 2.0	NA	< 2.0	NA	< 2.0	NA	< 2.0	NA	0.29 J
Volatile Organic Compounds (VOCs)															
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0	NA	< 1.0
Trichloroethene	µg/L	1.0**	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	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.6	7.3
Metals															
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA	180	NA	NA	NA	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA	510	NA	NA	NA	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA	550	NA	NA	NA	NA	NA	NA	NA
Anions															
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA	< 0.10	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA	470	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)															
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA	2.7	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA	2.1	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		MW-87	
				12-17		14-19	
				5/25/2017	7/26/2017	5/23/2017	7/26/2017
Semi-volatile Organic Compounds (SVOCs)							
1,4-Dioxane	µg/L	7.2*	2,800	NA	0.99 J	NA	< 2.0
Volatile Organic Compounds (VOCs)							
1,1-Dichloroethene	µg/L	7.0	130	NA	< 1.0	NA	< 1.0
cis-1,2-Dichloroethene	µg/L	70	620	NA	< 1.0	NA	< 1.0
Tetrachloroethene	µg/L	5.0	60	NA	< 1.0	NA	< 1.0
trans-1,2-Dichloroethene	µg/L	100	1,500	NA	< 1.0	NA	< 1.0
Trichloroethene	µg/L	1.0**	200	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	µg/L	1.0**	13	< 1.0	< 1.0	< 1.0	< 1.0
Metals							
Iron, Dissolved	µg/L	300	NS	NA	NA	NA	NA
Iron, Total	µg/L	300	NS	NA	NA	NA	NA
Manganese, Dissolved	µg/L	50	NS	NA	NA	NA	NA
Manganese, Total	µg/L	50	NS	NA	NA	NA	NA
Anions							
Nitrate-N	mg/L	10	NS	NA	NA	NA	NA
Sulfate	mg/L	250	NS	NA	NA	NA	NA
Total Organic Carbon (TOC)							
Carbon, Dissolved	mg/L	NS	NS	NA	NA	NA	NA
Total Organic Carbon	mg/L	NS	NS	NA	NA	NA	NA

See Notes on Last Page.

Notes:

All results are compared to the Michigan Department of Environmental Quality (MDEQ) Proposed Part 201 Generic Cleanup Criteria (September 2016).
1,1-dichloroethene, cis-1,2-dichloroethene, tetrachloroethene, and trans-1,2-dichloroethene were added to the sample list per July 28 Consent Decree.

Bold Result denotes exceedance of Residential Drinking Water Criteria.
< Denotes result was not detected above reporting detection 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 ug/L.

Abbreviations:

ft. bgs Feet below ground surface
J Estimated Result
NA Not Analyzed
NS No Standard
mg/L Milligrams per liter
µg/L Micrograms per liter

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Table 5
Storm Sewer/Process Waste/Sanitary Water Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Sample Location: Sewer Type: Sample Date:	MDEQ Groundwater Surface Water Interface Criteria	MH-75	MH-124	MH-170	MH-263	MH-264	MH-266	MH-372	MH-373	MH-374	MH-375	MH-380	MH-407	MH-417	MH-419	MH-470	MH-514	MH-521	MH-523	MH-550	MH-596	MH-597	MH-625	MH-642	MH-704	MH-709	
		Storm																									
		8/16/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/18/2017	7/18/2017	7/18/2017	7/18/2017	7/20/2017	7/18/2017	7/18/2017	8/16/2017	7/19/2017	7/18/2017	7/18/2017	7/21/2017	7/21/2017	8/16/2017	7/19/2017	7/18/2017	7/26/2017	7/19/2017	7/19/2017	7/20/2017	
Consent Decree SVOCs																											
1,4-Dioxane	2,800	NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	NS	< 2.0	< 2.0	0.42 J	< 2.0	< 2.0	NS	< 2.0	< 2.0	< 2.0	0.33 J	< 2.0	NS	0.39 J	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	
Consent Decree VOCs																											
1,1-Dichloroethene	130	NS	< 1.0	< 9.1	< 2.0	< 1.0	< 1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NS	< 1.0	< 1.0	< 1.0	< 14	< 6.7	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	
cis-1,2-Dichloroethene	620	NS	< 1.0	230	8.6	< 1.0	5.5	< 1.0	< 1.0	< 1.0	2.6	< 1.0	< 1.0	NS	1	< 1.0	< 1.0	60	27	NS	0.90 J	4.7	< 1.0	2.8	< 1.0	< 5.0	
Tetrachloroethene	60	NS	< 1.0	< 9.1	< 2.0	< 1.0	< 1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NS	< 1.0	< 1.0	< 1.0	< 14	< 6.7	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0		
trans-1,2-Dichloroethene	1,500	NS	< 1.0	< 9.1	3.1	< 1.0	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NS	0.35 J	< 1.0	< 1.0	30	10	NS	< 1.0	1.7	< 1.0	0.98 J	< 1.0	< 5.0	
Trichloroethene	200	NS	< 1.0	160	54	< 1.0	39	0.34 J	< 1.0	0.47 J	0.39 J	< 1.0	< 1.0	NS	6.6	< 1.0	< 1.0	440	180	NS	3.4	35	< 1.0	18	< 1.0	< 5.0	
Vinyl chloride	13	NS	< 1.0	47	< 2.0	< 1.0	< 1.4	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0	NS	< 1.0	< 1.0	< 1.0	6.4 J	< 6.7	NS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	
PCBs																											
Aroclor 1016	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1221	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1232	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1242	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1248	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1254	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1260	NA	< 0.096	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	< 0.095	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	< 0.095	< 0.096	< 0.096	< 0.095	< 0.097	0.092 J	< 0.096	
Aroclor 1262	NA	NS	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	NS	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	NS	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	
Aroclor 1268	NA	NS	< 0.095	< 0.099	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	< 0.098	< 0.098	< 0.096	< 0.099	NS	< 0.096	< 0.096	< 0.098	< 0.095	< 0.48	NS	< 0.096	< 0.096	< 0.095	< 0.097	< 0.096	< 0.096	

Sample Location: Sewer Type: Sample Date:	MDEQ Groundwater Surface Water Interface Criteria	MH-711	MH-711B	MH-719	MH-730	MH-730B	MH-738	MH-754	MH-756	MH-764A	PW-01	PW-02	PW-03	PW-04	PW-05	WW-01	Sanitary #1	Sanitary #2		Sanitary #3	Sanitary #4	Sanitary #5	Plymouth Rd. Sanitary Line		SL#2		
		Storm									Process Waste						Sanitary										
		7/19/2017	7/18/2017	7/19/2017	8/16/2017	7/20/2017	8/16/2017	8/16/2017	8/16/2017	8/16/2017	7/20/2017	7/21/2017	7/21/2017	7/24/2017	7/24/2017	7/25/2017	7/26/2017	7/26/2017	7/26/2017	8/30/2017	8/30/2017	7/25/2017	7/25/2017	7/20/2017	8/30/2017	8/31/2017	9/7/2017
Consent Decree SVOCs																											
1,4-Dioxane	2,800	< 2.0	< 2.0	< 2.0	NS	< 2.0	NS	NS	NS	< 2.0	< 2.0	0.34 J	2.6	0.76 J	0.40 J	2.0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Consent Decree VOCs																											
1,1-Dichloroethene	130	< 1.0	< 1.0	< 1.0	NS	< 1.0	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	< 20.0	< 5.0	NS	NS	NS	
cis-1,2-Dichloroethene	620	4.4	5	3.5	NS	6.7	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	2,000	511	NS	NS	NS	
Tetrachloroethene	60	< 1.0	< 1.0	< 1.0	NS	< 1.0	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	< 20.0	< 5.0	NS	NS	NS	
trans-1,2-Dichloroethene	1,500	1.6	1.9	1.2	NS	< 1.0	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	< 20.0	< 5.0	NS	NS	NS	
Trichloroethene	200	29	37	25	NS	13	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	699	226	NS	NS	NS	
Vinyl chloride	13	< 1.0	< 1.0	< 1.0	NS	0.57 J	NS	NS	NS	< 1.0	< 1.7	< 2.0	< 10	< 10	< 10	< 13	< 1.0	< 1.0	NS	NS	< 1.0	465	94.2	NS	NS	NS	
PCBs																											
Aroclor 1016	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	< 0.095	< 0.095	< 0.19	< 0.095	< 0.096	< 0.095	< 0.095	< 0.20	
Aroclor 1221	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	< 0.095	< 0.095	< 0.19	< 0.095	< 0.096	NS	< 0.095	< 0.20	
Aroclor 1232	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	< 0.095	< 0.095	< 0.19	< 0.095	< 0.096	< 0.095	< 0.095	< 0.20	
Aroclor 1242	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	0.11	< 0.095	< 0.19	< 0.095	0.27	0.016	< 0.095	< 0.20	
Aroclor 1248	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	< 0.095	< 0.095	< 0.19	< 0.095	< 0.096	< 0.095	< 0.095	< 0.20	
Aroclor 1254	NA	< 0.098	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	< 0.097	< 0.095	< 0.095	< 0.19	< 0.095	< 0.096	< 0.095	< 0.095	< 0.20	
Aroclor 1260	NA	0.060 J	< 0.096	< 0.096	< 0.096	< 0.097	< 0.096	< 0.096	< 0.095	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	0.26	0.097	< 0.095	< 0.19	0.11	0.63	0.30	< 0.095	< 0.20	
Aroclor 1262	NA	< 0.098	< 0.096	< 0.096	< 0.096	NS	NS	NS	NS	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1268	NA	< 0.098	< 0.096	< 0.096	< 0.096	NS	NS	NS	NS	< 0.095	< 1.9	< 0.96	< 9.7	< 13	< 300	<200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

Notes:

All results are in units of micrograms per liter (µg/L).

All results are compared to the Michigan Department of Environmental Quality (MDEQ) Part 201 Groundwater Surface Water Interface Criteria, December 31, 2013.

Bold Result denotes exceedance of Groundwater Surface Water Interface Criteria.

< Denotes result is less than laboratory minimum detection level.

J Denotes result is less than the laboratory reporting level but greater than or equal to the minimum detection level and the concentration is an approximate value.

Abbreviations:

MH Manhole sample

NA Not Available

NS Not sampled

PCB Polychlorinated biphenyl

PW Process Waste sample

SL Compliance Sample Location

SVOC Semi-Volatile organic compound

VOC Volatile organic compound

WW Wet Well sample

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Table 6
Storm Sewer Sediment Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Sample Location:	MDEQ Groundwater Surface Water Interface Criteria	MH-263	MH-266	MH-470	MH-523	MH-550	MH-625	MH-704	MH-709	MH-754	MH-764A	Sanitary #2
Sewer Type:		Storm										Sanitary
Sample Date:		7/20/2017	7/18/2017	7/18/2017	7/21/2017	8/16/2017	7/26/2017	7/19/2017	7/20/2017	8/16/2017	7/20/2017	7/26/2017
SVOCs												
1,4-Dioxane	56	< 20	< 22	< 19	< 19	NS	< 18	< 20	< 20	NS	< 20	NS
VOCs												
1,1-Dichloroethene	2.6	< 0.065	< 0.069	< 0.061	< 0.062	NS	< 0.059	< 0.064	< 0.064	NS	< 0.063	< 0.049
cis-1,2-Dichloroethene	12	0.083	< 0.069	< 0.061	< 0.062	NS	< 0.059	< 0.064	< 0.064	NS	< 0.063	< 0.049
Tetrachloroethene	1.2	< 0.065	< 0.069	< 0.061	< 0.062	NS	< 0.059	< 0.064	< 0.064	NS	< 0.063	< 0.049
trans-1,2-Dichloroethene	30	< 0.065	< 0.069	< 0.061	< 0.062	NS	< 0.059	< 0.064	< 0.064	NS	< 0.063	< 0.049
Trichloroethene	4.0	0.19	0.068 J	< 0.061	0.24	NS	< 0.059	< 0.064	< 0.064	NS	< 0.063	< 0.049
Vinyl chloride	0.26	< 0.052	< 0.056	< 0.049	< 0.05	NS	< 0.047	< 0.051	< 0.051	NS	< 0.050	< 0.049
PCBs												
Aroclor 1016	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	< 0.033
Aroclor 1221	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	< 0.033
Aroclor 1232	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	< 0.033
Aroclor 1242	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	0.059
Aroclor 1248	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	< 0.033
Aroclor 1254	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	0.068
Aroclor 1260	NA	< 0.320	< 0.340	< 0.063	< 0.320	< 0.042	< 0.062	< 0.064	< 0.066	< 0.040	< 0.063	< 0.033
Aroclor 1262	NA	< 0.320	< 0.340	< 0.063	< 0.320	NS	< 0.062	< 0.064	< 0.066	NS	< 0.063	NS
Aroclor 1268	NA	< 0.320	< 0.340	< 0.063	< 0.320	NS	< 0.062	< 0.064	< 0.066	NS	< 0.063	NS
PCB, Total (Aroclor)	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.15

Notes:

All results are in units of milligrams per kilogram (mg/kg).

All results are compared to the Michigan Department of Environmental Quality (MDEQ) Part 201 Groundwater Surface Water Interface Criteria, December 31, 2013.

<	Result is less than laboratory minimum detection level
J	Result is less than the laboratory reporting level but greater than or equal to the minimum detection level and the concentration is an approximate value.
MH	Manhole
NA	Not Available
NS	Not sampled
PCB	Polychlorinated biphenyl
SVOC	Semi-Volatile organic compound
VOC	Volatile organic compound

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

Location: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-01				SVMP-02				SVMP-03				SVMP-04	
		6/8/2017	9/20/2017	6/8/2017	9/20/2017	6/9/2017	9/20/2017	6/9/2017	9/20/2017	6/12/2017	9/21/2017	6/12/2017	9/21/2017	6/12/2017	9/20/2017
		3.5	3.5	7	7	4.5	4.5	8.5	8.5	3.5	3.5	7	7	3.5	3.5
VOCs (Method TO-15) µg/m ³															
1,1-Dichloroethene	7, 000 nc	NA	< 5.0	NA	< 4.8	NA	< 5.2	NA	< 5.2	NA	< 4.9	NA	< 4.7	NA	< 4.9
1,4-Dioxane	170 ca	NA	< 18	NA	< 17	NA	< 19	NA	< 19	NA	< 18	NA	< 17	NA	< 18
cis-1,2-Dichloroethene	280 nc	NA	< 5.0	NA	< 4.8	NA	< 5.2	NA	< 5.2	NA	< 4.9	NA	< 4.7	NA	< 4.9
Tetrachloroethene	1,400 (SE) st	NA	< 8.5	NA	< 8.2	NA	< 9.0	NA	< 9.0	NA	< 8.3	NA	< 8.1	NA	8.3 J
trans-1,2-Dichloroethene	9,000 nc	NA	< 5.0	NA	< 4.8	NA	< 5.2	NA	< 5.2	NA	< 4.9	NA	< 4.7	NA	< 4.9
Trichloroethene	67 (SE) dev	< 6.2	< 6.8	< 6.2	< 6.5	< 6.0	< 7.1	< 6.1	< 7.1	< 6.3	< 6.6	< 6.8	< 6.4	< 6.0	< 6.6
Vinyl chloride	54 mut	< 3.0	< 3.2	< 3.0	< 3.1	< 2.8	< 3.4	< 2.9	< 3.4	< 3.0	< 3.1	< 3.2	< 3.0	< 2.9	< 3.2

See Notes on last page.

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

Location: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-05		SVMP-06		SVMP-07		SVMP-08		SVMP-09		SVMP-10		SVMP-11
		6/12/2017	9/20/2017	6/13/2017	9/20/2017	6/13/2017	9/20/2017	6/15/2017	9/20/2017	6/14/2017	9/20/2017	6/13/2017	9/20/2017	6/13/2017
		4.5	4.5	4.5	4.5	3.5	3.5	3.5	3.5	4	4	3	3	3.5
VOCs (Method TO-15) µg/m ³														
1,1-Dichloroethene	7, 000 nc	NA	< 4.8	NA	< 4.6	NA	< 4.8	NA	< 4.7	NA	< 4.9	NA	< 4.8	NA
1,4-Dioxane	170 ca	NA	< 17	NA	< 17	NA	< 17	NA	< 17	NA	< 18	NA	< 17	NA
cis-1,2-Dichloroethene	280 nc	NA	< 4.8	NA	8.0	NA	< 4.8	NA	< 4.7	NA	< 4.9	NA	< 4.8	NA
Tetrachloroethene	1,400 (SE) st	NA	< 8.2	NA	24	NA	< 8.2	NA	< 8.1	NA	< 8.4	NA	< 8.2	NA
trans-1,2-Dichloroethene	9,000 nc	NA	< 4.8	NA	< 4.6	NA	< 4.8	NA	< 4.7	NA	< 4.9	NA	< 4.8	NA
Trichloroethene	67 (SE) dev	< 6.7	< 6.5	< 6.0	< 6.3	< 6.3	< 6.5	< 6.5	< 6.4	6.9	< 6.6	< 6.7	< 6.5	< 6.3
Vinyl chloride	54 mut	< 3.2	< 3.1	< 2.9	< 3.0	< 3.0	< 3.1	< 3.1	< 3.0	< 3.0	< 3.2	< 3.2	< 3.1	< 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: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-12		SVMP-13		SVMP-14		SVMP-15		SVMP-16		SVMP-17		SVMP-18	
		6/13/2017	9/19/2017	6/16/2017	9/19/2017	6/16/2017	9/19/2017	6/16/2017	9/19/2017	6/16/2017	9/19/2017	6/16/2017	9/19/2017	6/16/2017	9/18/2017
		3.5	3.5	2	2	2	2	2	2	2	2	2	2	3	3
VOCs (Method TO-15) µg/m³															
1,1-Dichloroethene	7, 000 nc	NA	< 4.8	NA	< 4.6	NA	< 4.5	NA	< 4.7	NA	< 4.5	NA	< 4.8	NA	< 4.6
1,4-Dioxane	170 ca	NA	< 17	NA	< 17	NA	< 16	NA	< 17	NA	< 16	NA	< 17	NA	< 17
cis-1,2-Dichloroethene	280 nc	NA	< 4.8	NA	< 4.6	NA	< 4.5	NA	< 4.7	NA	< 4.5	NA	< 4.8	NA	< 4.6
Tetrachloroethene	1,400 (SE) st	NA	< 8.2	NA	< 7.9	NA	< 7.8	NA	< 8.1	NA	< 7.8	NA	< 8.2	NA	< 7.9
trans-1,2-Dichloroethene	9,000 nc	NA	< 4.8	NA	< 4.6	NA	< 4.5	NA	< 4.7	NA	< 4.5	NA	< 4.8	NA	< 4.6
Trichloroethene	67 (SE) dev	< 6.4	< 6.5	< 6.6	< 6.3	< 6.4	< 6.2	< 6.3	< 6.4	< 6.4	< 6.2	18	22	< 6.6	< 6.3
Vinyl chloride	54 mut	< 3.0	< 3.1	< 3.2	< 3.0	< 3.0	< 2.9	< 3.0	< 3.0	< 3.0	< 2.9	< 3.0	< 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: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-19		SVMP-20		SVMP-21		SVMP-22		SVMP-23		SVMP-24		SVMP-25	
		6/16/2017	9/18/2017	6/19/2017	9/19/2017	6/19/2017	9/19/2017	6/19/2017	9/18/2017	6/19/2017	9/18/2017	6/19/2017	9/18/2017	6/19/2017	9/21/2017
		3	3	3	3	2	2	3	3	3	3	4	4	3	3
VOCs (Method TO-15) µg/m³															
1,1-Dichloroethene	7, 000 nc	NA	< 5.1	NA	< 4.8	NA	< 4.6	NA	< 4.8	NA	< 4.6	NA	< 4.6	NA	< 4.7
1,4-Dioxane	170 ca	NA	< 18	NA	< 17	NA	< 17	NA	< 17	NA	< 17	NA	< 17	NA	< 17
cis-1,2-Dichloroethene	280 nc	NA	< 5.1	NA	< 4.8	NA	< 4.6	NA	< 4.8	NA	< 4.6	NA	< 4.6	NA	< 4.7
Tetrachloroethene	1,400 (SE) st	NA	< 8.8	NA	< 8.2	NA	< 7.9	NA	< 8.2	NA	< 7.9	NA	< 7.9	NA	< 8.1
trans-1,2-Dichloroethene	9,000 nc	NA	< 5.1	NA	< 4.8	NA	< 4.6	NA	< 4.8	NA	< 4.6	NA	< 4.6	NA	< 4.7
Trichloroethene	67 (SE) dev	< 6.4	< 6.9	< 5.8	< 6.5	< 6.2	< 6.3	< 6.4	< 6.5	< 6.4	< 6.3	< 6.2	< 6.3	< 6.2	< 6.4
Vinyl chloride	54 mut	< 3.0	< 3.3	< 2.7	< 3.1	< 3.0	< 3.0	< 3.1	< 3.1	< 3.1	< 3.0	< 3.0	< 3.0	< 3.0	< 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: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-25		SVMP-26		SVMP-27		SVMP-28		SVMP-29		SVMP-30	SVMP-31	SVMP-32	
		6/19/2017	9/21/2017	6/19/2017	9/21/2017	6/19/2017	9/21/2017	6/19/2017	9/21/2017	6/14/2017	6/14/2017	6/14/2017	6/14/2017	6/15/2017	6/15/2017
		6	6	4	4	4.5	4.5	3	3	3.5	7.5	4	5.5	3	6
VOCs (Method TO-15) µg/m³															
1,1-Dichloroethene	7, 000 nc	NA	< 4.4	NA	< 4.9	NA	< 4.4	NA	< 4.8	NA	NA	NA	NA	NA	NA
1,4-Dioxane	170 ca	NA	< 16	NA	< 18	NA	< 16	NA	< 17	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	280 nc	NA	< 4.4	NA	< 4.9	NA	11	NA	< 4.8	NA	NA	NA	NA	NA	NA
Tetrachloroethene	1,400 (SE) st	NA	12	NA	< 8.4	NA	< 7.6	NA	25	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	9,000 nc	NA	< 4.4	NA	< 4.9	NA	< 4.4	NA	< 4.8	NA	NA	NA	NA	NA	NA
Trichloroethene	67 (SE) dev	< 6.4	< 6.0	< 6.2	< 6.6	< 6.2	7.2	< 6.1	< 6.5	< 6.3	< 6.0	31	< 6.1	< 6.4	< 6.5
Vinyl chloride	54 mut	< 3.0	< 2.9	< 3.0	< 3.2	< 3.0	< 2.9	< 2.9	< 3.1	< 3.0	< 2.8	< 2.9	< 2.9	< 3.0	< 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: Sample Date: Sample Depth (ft. bgs):	Residential RIASL	SVMP-33	SVMP-34	SVMP-35	SVMP-36	SVMP-37
		6/15/2017	6/15/2017	6/15/2017	6/16/2017	6/16/2017
		4	4	4	4	2.5
VOCs (Method TO-15) µg/m ³						
1,1-Dichloroethene	7, 000 nc	NA	NA	NA	NA	NA
1,4-Dioxane	170 ca	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	280 nc	NA	NA	NA	NA	NA
Tetrachloroethene	1,400 (SE) st	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	9,000 nc	NA	NA	NA	NA	NA
Trichloroethene	67 (SE) dev	< 6.5	< 6.3	< 6.9	< 6.2	< 6.2
Vinyl chloride	54 mut	< 3.1	< 3.0	< 3.3	< 2.9	< 3.0

See Notes on last page.

Notes:

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

< Denotes not detected above reporting limit.

Bold Denotes concentration was detected above reporting limit.

Abbreviations:

(SE)	Screening Level based on single event exposure; therefore, sampling methods should reflect shorter exposure scenarios.
µg/m ³	Micrograms per cubic meter
ca	Carcinogenetic
dev	Developmental
ft. bgs	Feet below ground surface
J	Reported value is estimated
mut	Mutagenic cancer
NA	Not analyzed
nc	Non-Carcinogenetic
RIASL	Residential Indoor Air Screening Level
SVMP	Soil vapor monitoring point
VOC	Volatile organic compound

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Table 8
Hydraulic Control System Air Stripper Effluent Analytical Results
Ford Livonia Transmission Plant
36200 Plymouth Road
Livonia, Michigan

Location: Date:	Air Stripper Effluent 7/26/2017	Air Stripper Effluent 8/21/2017	Air Stripper Effluent 8/30/2017	Air Stripper Effluent 9/21/2017
Method TO-15 (Full Scan)				
1,1,1-Trichloroethane	< 5.6	< 5.6	< 16	< 11
1,1,2,2-Tetrachloroethane	< 7.0	< 7.0	< 20	< 14
1,1,2-Trichloroethane	< 5.6	< 5.6	< 16	< 11
1,1-Dichloroethane	13	10	13	11
1,1-Dichloroethene	< 4.1	< 4.1	< 11	< 8.2
1,2,4-Trichlorobenzene	< 30	< 30	< 85	< 62
1,2,4-Trimethylbenzene	5.8	< 5.0	< 14	< 10
1,2-Dibromoethane (EDB)	< 7.9	< 7.9	< 22	< 16
1,2-Dichlorobenzene	< 6.2	< 6.2	< 17	< 12
1,2-Dichloroethane	< 4.1	< 4.1	< 12	< 8.4
1,2-Dichloropropane	< 4.7	< 4.7	< 13	< 9.6
1,3,5-Trimethylbenzene	< 5.0	< 5.0	< 14	< 10
1,3-Butadiene	< 2.3	< 2.3	< 6.4	< 4.6
1,3-Dichlorobenzene	< 6.2	< 6.2	< 17	< 12
1,4-Dichlorobenzene	< 6.2	< 6.2	< 17	< 12
1,4-Dioxane	< 15	< 15	< 41	< 30
2,2,4-Trimethylpentane	< 4.8	< 4.8	< 13	< 9.7
2-Butanone (Methyl Ethyl Ketone)	28	17	< 34	< 24
2-Hexanone	< 17	< 17	< 47	< 34
2-Propanol	11	< 10	< 28	< 20
3-Chloropropene	< 13	< 13	< 36	< 26
4-Ethyltoluene	< 5.0	< 5.0	< 14	< 10
4-Methyl-2-pentanone	< 4.2	< 4.2	< 12	< 8.5
Acetone	65	34	< 68	< 49
alpha-Chlorotoluene	< 5.3	< 5.3	< 15	< 11
Benzene	< 3.3	< 3.3	< 9.2	< 6.6
Bromodichloromethane	< 6.9	< 6.9	< 19	< 14
Bromoform	< 10	< 10	< 30	< 22
Bromomethane	< 40	< 40	< 110	< 81
Carbon Disulfide	< 13	< 13	< 36	< 26
Carbon Tetrachloride	< 6.4	< 6.4	< 18	< 13
Chlorobenzene	< 4.7	< 4.7	< 13	< 9.6
Chloroethane	< 11	< 11	< 30	< 22
Chloroform	< 5.0	< 5.0	< 14	< 10
Chloromethane	< 21	< 21	< 59	< 43
cis-1,2-Dichloroethene	300	250	320	280
cis-1,3-Dichloropropene	< 4.6	< 4.6	< 13	< 9.4
Cumene	< 5.0	< 5.0	< 14	< 10
Cyclohexane	< 3.5	< 3.5	< 9.9	< 7.2
Dibromochloromethane	< 8.7	< 8.7	< 24	< 18
Ethanol	7.9	< 7.7	< 22	< 16
Ethyl Benzene	140	72	42	13
Freon 11	< 5.8	< 5.8	< 16	< 12
Freon 113	< 7.8	< 7.8	< 22	< 16
Freon 114	< 7.2	< 7.2	< 20	< 14
Freon 12	< 5.1	< 5.1	< 14	< 10
Heptane	< 4.2	< 4.2	< 12	< 8.5
Hexachlorobutadiene	< 44	< 44	< 120	< 89
Hexane	< 3.6	< 3.6	< 10	< 7.3
m,p-Xylene	5.3	< 4.4	< 12	< 9.0
Methyl tert-butyl ether	< 15	< 15	< 41	< 30
Methylene Chloride	< 36	< 36	< 100	< 72
o-Xylene	5.2	< 4.4	< 12	< 9.0
Propylbenzene	< 5.0	< 5.0	< 14	< 10
Styrene	490	250	84	120
Tetrachloroethene	< 7.0	< 7.0	< 20	< 14
Tetrahydrofuran	88	52	12	< 6.1
Toluene	8.1	< 3.9	< 11	<7.8
trans-1,2-Dichloroethene	14	8.2	< 11	11
trans-1,3-Dichloropropene	< 4.6	< 4.6	< 13	< 9.4
Trichloroethene	49	47	42	110
Vinyl Chloride	530	1,000	1,600	1,200

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 (µg/m³).
< denotes not detected above reporting limit.

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Table 9
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)
7/1/2017	42,449	8/1/2017	37,081	9/1/2017 ^{NS}	22,306
7/2/2017	40,587	8/2/2017 [*]	36,446	9/2/2017	39,564
7/3/2017 ^Ω	25,941	8/3/2017	35,801	9/3/2017	37,183
7/4/2017 ¹	0	8/4/2017 ^Ω	33,624	9/4/2017	33,202
7/5/2017 ^Ω	55,911	8/5/2017	32,242	9/5/2017 ^Ω	30,687
7/6/2017	50,380	8/6/2017	31,031	9/6/2017	29,066
7/7/2017 ^Ω	47,722	8/7/2017 ^Ω	29,644	9/7/2017	27,224
7/8/2017	53,677	8/8/2017	28,815	9/8/2017 ^Ω	26,177
7/9/2017	52,318	8/9/2017 ^Ω	28,134	9/9/2017	25,609
7/10/2017 ^{NS}	83,124	8/10/2017	27,275	9/10/2017	24,686
7/11/2017	99,106	8/11/2017 ^Ω	26,127	9/11/2017 ^{NS}	11,009
7/12/2017 ^Ω	42,981	8/12/2017	25,533	9/12/2017 ^Ω	22,948
7/13/2017	45,779	8/13/2017	24,741	9/13/2017	29,928
7/14/2017 ^Ω	44,671	8/14/2017 ^Ω	23,932	9/14/2017	36,196
7/15/2017	45,360	8/15/2017	23,207	9/15/2017 ^Ω	34,124
7/16/2017	44,522	8/16/2017 ^Ω	14,535	9/16/2017	31,239
7/17/2017 ^Ω	43,924	8/17/2017 ^Ω	34,876	9/17/2017	28,971
7/18/2017	43,739	8/18/2017 ^Ω	35,246	9/18/2017 ^Ω	27,138
7/19/2017 ^Ω	41,252	8/19/2017	35,574	9/19/2017 ^Ω	28,328
7/20/2017	43,843	8/20/2017	29,371	9/20/2017 ^{NS}	36,303
7/21/2017 ^Ω	42,619	8/21/2017 ^Ω	26,173	9/21/2017 ^Ω	39,987
7/22/2017	40,618	8/22/2017	21,906	9/22/2017	36,391
7/23/2017	39,001	8/23/2017 ^Ω	25,290	9/23/2017	33,262
7/24/2017 ^Ω	37,879	8/24/2017	25,961	9/24/2017	28,104
7/25/2017	34,668	8/25/2017 ^Ω	18,552	9/25/2017 ^Ω	26,370
7/26/2017 ^Ω	42,581	8/26/2017	14,762	9/26/2017	26,894
7/27/2017	41,512	8/27/2017	22,920	9/27/2017	25,541
7/28/2017 ^Ω	40,017	8/28/2017 ^Ω	5,269	9/28/2017	24,577
7/29/2017	39,652	8/29/2017 ^Ω	14,289	9/29/2017 ^Ω	23,558
7/30/2017	38,476	8/30/2017 ^Ω	27,387	9/30/2017	23,362
7/31/2017 ^Ω	37,438	8/31/2017	40,039	--	--
Total volume discharged during July 2017	1,381,747	Total volume discharged during August 2017	835,783	Total volume discharged during September 2017	869,934

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.
- ¹ System shut down due to holiday.
- ^S System shut down (Less than 1 day).

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FIGURES



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SITE LOCATION

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: M001322.0001 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GIS\Projects\ENVI\Novi\Brighton MI\FordLivonia\GIS\Docs\2017-11\Report\Figure 1 - Site Location Map.mxd PLOTTED: 11/15/2017 2:56:54 PM BY: mgross

Copyright: © 2013 National Geographic Society, i-cubed



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

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ON-SITE AREA

OFF-SITE AREA

LIVONIA
TRANSMISSION
PLANT

TEST
TRACK

ATNPC
BUILDING



LEGEND

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

NOTES:

ATNPC - AUTOMATIC TRANSMISSION NEW PRODUCT CENTER

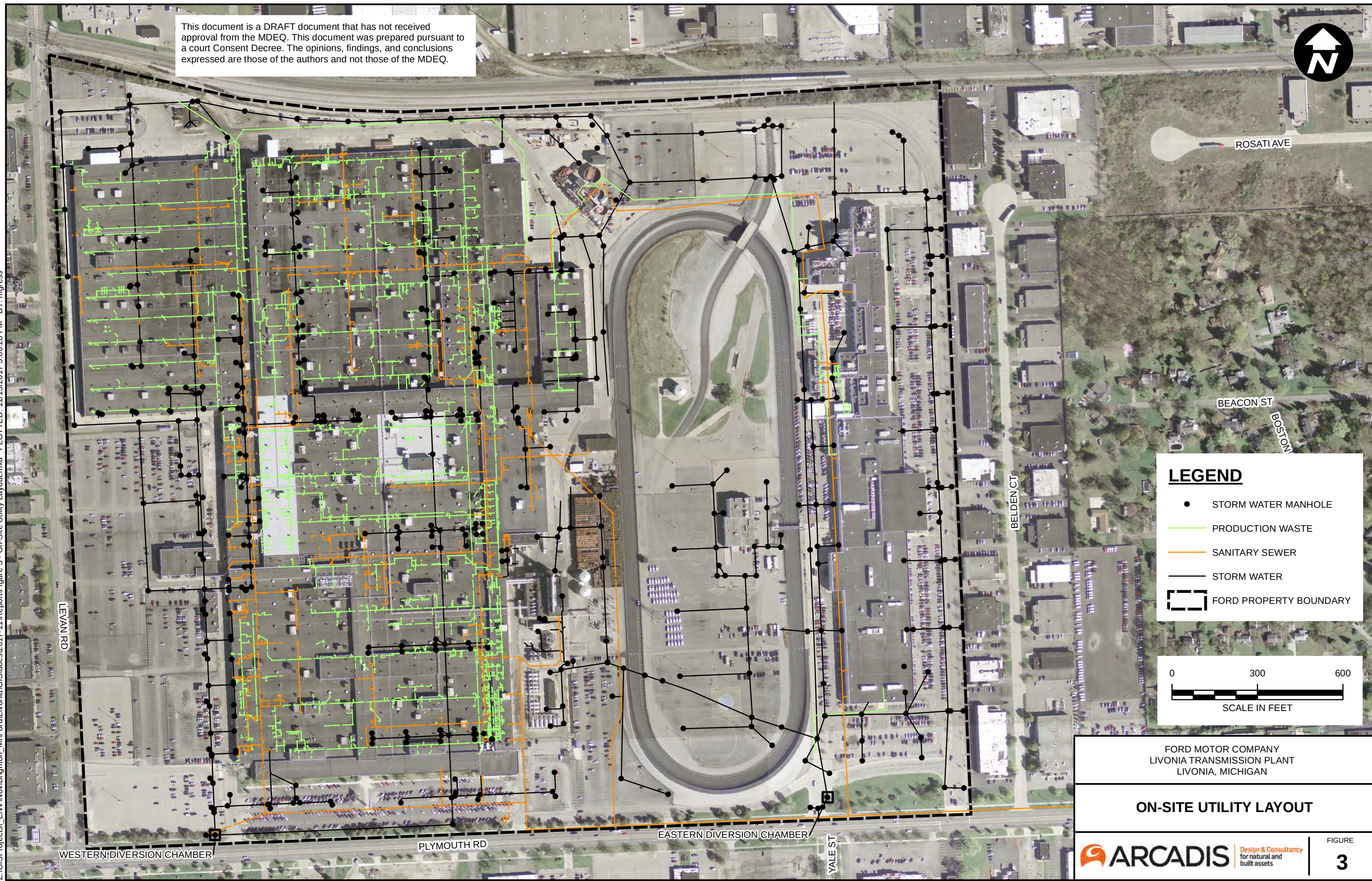
SITE LAYOUT

FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN



CITY: Novi DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: M001322.0001 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet
Z:\GIS\Projects\ENV\Novi\Brighton_MtFord\Livonia\GIS\docs\2017-11\Report\Figure 3 - On-Site Utility Layout.mxd PLOTTED: 11/15/2017 3:00:28 PM BY: mgr

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LEGEND

- STORM WATER MANHOLE
- PRODUCTION WASTE
- SANITARY SEWER
- STORM WATER
- ▭ FORD PROPERTY BOUNDARY



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE UTILITY LAYOUT



Design & Consultancy
for natural and
built assets

FIGURE

3

CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TR: P. CURRY PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GISProjects\ENV\Novi\Brighton_MtFord\Livonia\GISdocs\2017-11\Report\Figure 4 - Site Wide GWE Contour July 2017 v2.mxd PLOTTED: 11/15/2017 3:03:24 PM BY: mgress

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LEGEND

- | | | | |
|--|--|--|--|
| | MONITORING WELL | | (650.39) GROUNDWATER ELEVATION |
| | LNAPL MONITORING WELL | | GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED; CONTOUR INTERVAL = 1.0 FT) |
| | VAULT (2 FT x 2 FT) | | APPARENT GROUNDWATER FLOW DIRECTION |
| | VAULT (4 FT x 6 FT) | | PROPERTY BOUNDARIES |
| | WELL SCREEN (4-INCH SDR-11 HDPE, CUSTOM SLOTTED) | | FORD PROPERTY BOUNDARY |
| | WELL BLANK CASING (4-INCH SDR-11 HDPE) | | |
| | WELL BLANK CASING (6-INCH SDR-11 HDPE) | | |

NOTES:

1. ALL ELEVATIONS COLLECTED ON JULY 24, 2017 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. LNAPL = LIGHT NON-AQUEOUS PHASE LIQUID.
5. GROUNDWATER ELEVATION AT HYDRAULIC CONTROL SYSTEM HORIZONTAL WELLS ARE DETERMINED BY ESTIMATING AN APPARENT AMBIENT GROUNDWATER ELEVATION AND SUBTRACTING THE PUMPING WATER LEVEL.
6. HYDRAULIC CONTROL SYSTEM PERFORMANCE MONITORING WELLS RE-SURVEYED IN OCTOBER 2017. CONTOUR MAP ONLY INCLUDES DATA FROM RE-SURVEYED WELLS, OR WELLS INSTALLED AFTER 2016. ADDITIONAL SURVEYING WILL BE COMPLETED IN 4Q 2017.



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

**SITE-WIDE GROUNDWATER ELEVATION
CONTOUR MAP UNDER PUMPING CONDITIONS
JULY 24, 2017**

ARCADIS Design & Consultancy
for natural and built assets

FIGURE

4

CITY: Novi DIV: ENV DB: MG PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GISProjects\ENV\Novi\Brighton_Mi\Ford\LVonia\GISdocs\2017-11\Report\Figure 5 - Onsite Monitoring Wells cis-DCE in Groundwater.mxd PLOTTED: 11/15/2017 3:06:24 PM BY: mgress

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LEGEND

ON-SITE MONITORING WELL
CIS-1,2-DICHLOROETHENE ≤ 70 µg/L

ON-SITE MONITORING WELL
CIS-1,2-DICHLOROETHENE > 70 µg/L

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)

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

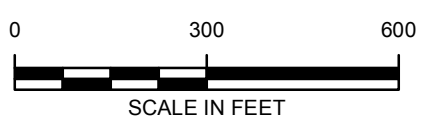
J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID
MONITORING WELL

RESULTS COLLECTED DURING THE SECOND AND THIRD
QUARTER 2017 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF
NONRESIDENTIAL DRINKING WATER CRITERIA

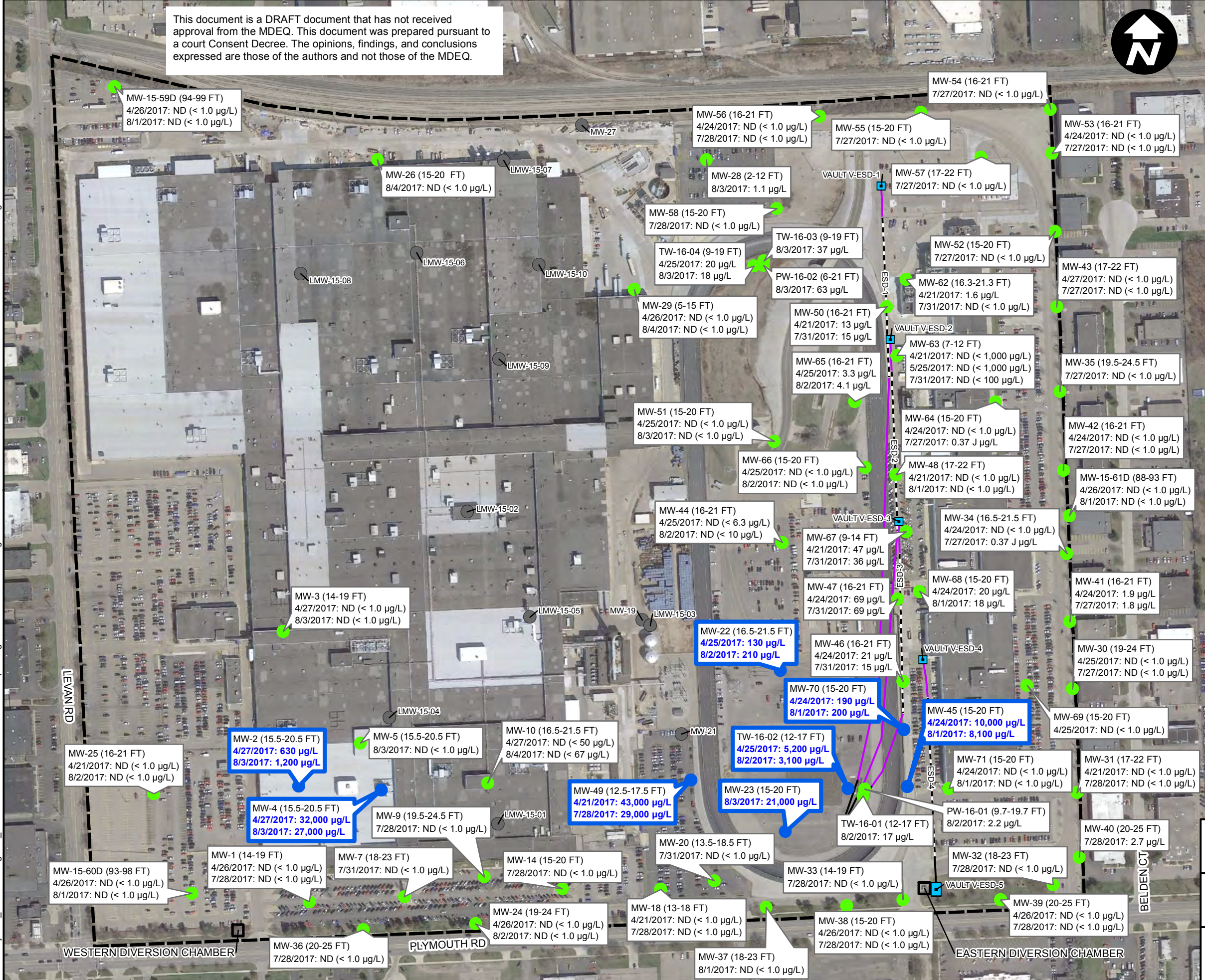


FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

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

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FIGURE
5



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LEGEND

- ON-SITE MONITORING WELL
TRANS-1,2-DICHLOROETHENE ≤ 100 $\mu\text{g/L}$
- ON-SITE MONITORING WELL
TRANS-1,2-DICHLOROETHENE > 100 $\mu\text{g/L}$
- 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:

$\mu\text{g/L}$ - MICROGRAMS PER LITER
(PARTS PER BILLION)

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR TRANS-1,2-DICHLOROETHENE IS 100 $\mu\text{g/L}$.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR TRANS-1,2-DICHLOROETHENE IS 1,500 $\mu\text{g/L}$.

FT = FEET BELOW GROUND SURFACE

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 $\mu\text{g/L}$ FOR TRANS-1,2-DICHLOROETHENE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE SECOND AND THIRD QUARTER 2017 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA

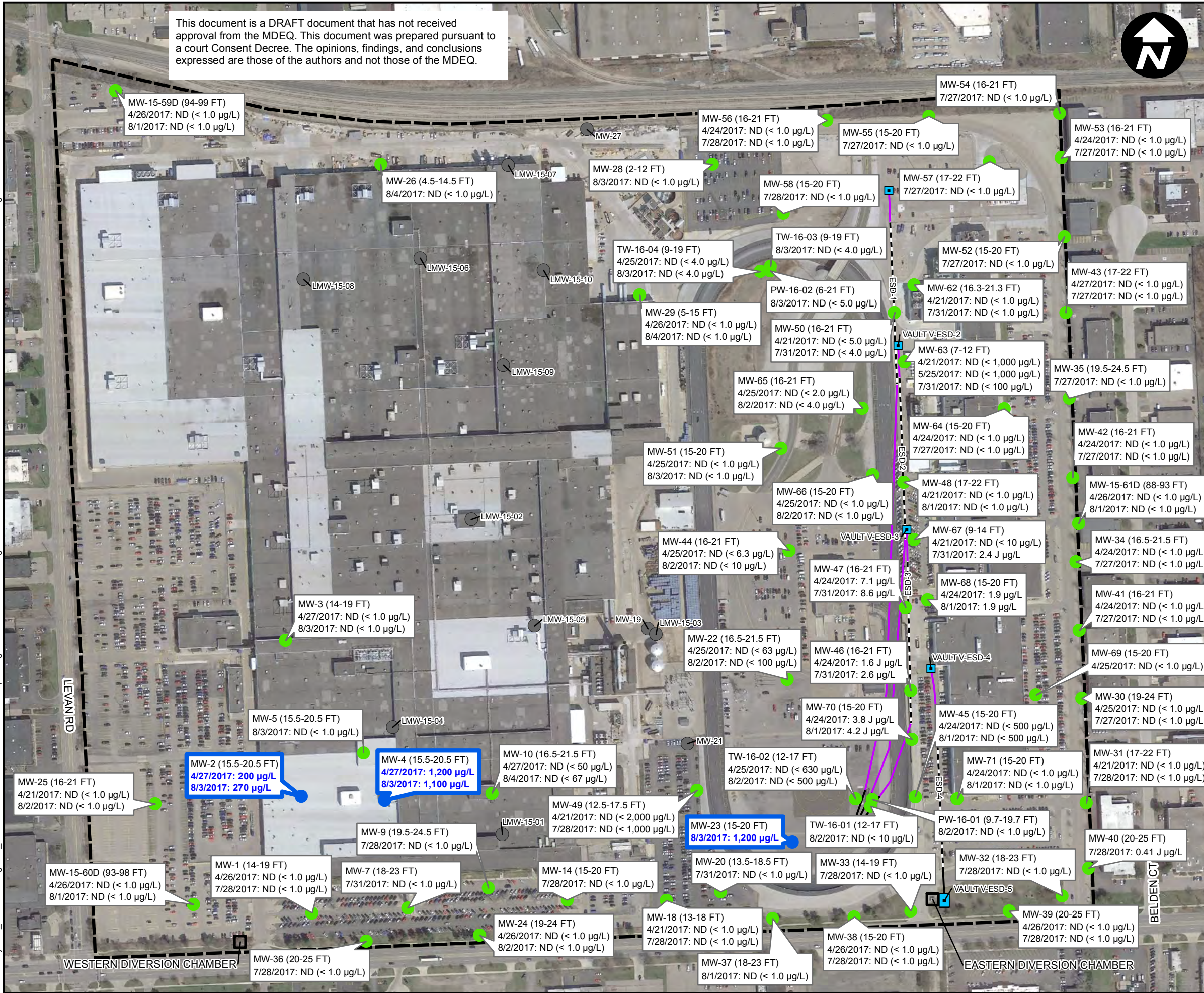


FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

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

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FIGURE
6



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LEGEND

- ON-SITE MONITORING WELL TRICHLOROETHENE $\leq 5 \mu\text{g/L}$
- ON-SITE MONITORING WELL TRICHLOROETHENE $> 5 \mu\text{g/L}$
- 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:

$\mu\text{g/L}$ - MICROGRAMS PER LITER
(PARTS PER BILLION)

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR TRICHLOROETHENE IS $5.0 \mu\text{g/L}$.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR TRICHLOROETHENE IS $200 \mu\text{g/L}$.

FT = FEET BELOW GROUND SURFACE

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF $1.0 \mu\text{g/L}$ FOR TRICHLOROETHENE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

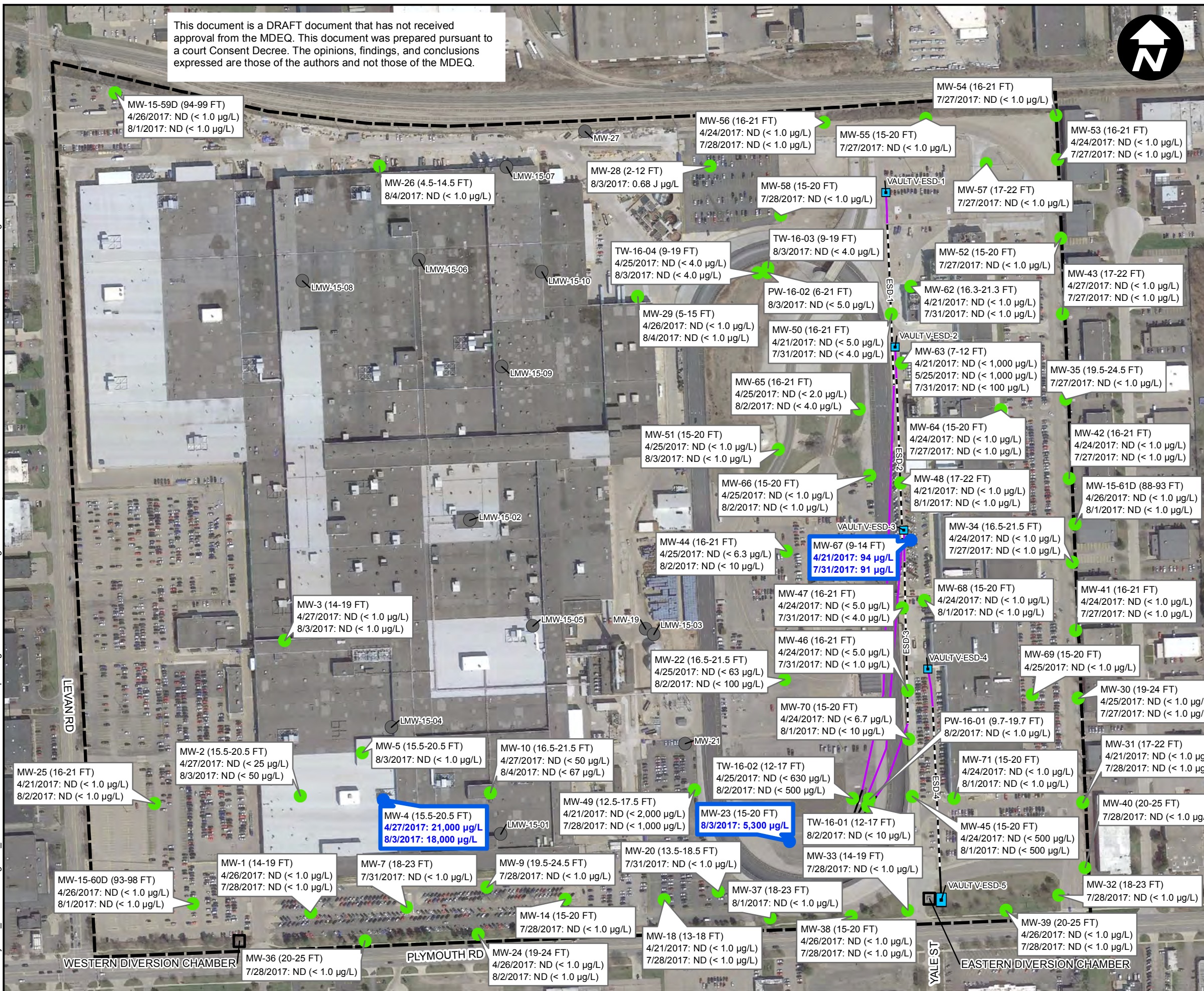
RESULTS COLLECTED DURING THE SECOND AND THIRD QUARTER 2017 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS TRICHLOROETHENE IN GROUNDWATER



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LEGEND

- ON-SITE MONITORING WELL
VINYL CHLORIDE ≤ 2.0 $\mu\text{g/L}$
- ON-SITE MONITORING WELL
VINYL CHLORIDE > 2.0 $\mu\text{g/L}$
- 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:

$\mu\text{g/L}$ - MICROGRAMS PER LITER
(PARTS PER BILLION)

THE NONRESIDENTIAL DRINKING WATER CRITERIA FOR VINYL CHLORIDE IS 2.0 $\mu\text{g/L}$.

THE GROUNDWATER-SURFACE WATER INTERFACE CRITERIA FOR VINYL CHLORIDE IS 13 $\mu\text{g/L}$.

FT = FEET BELOW GROUND SURFACE

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT OF 1.0 $\mu\text{g/L}$ FOR VINYL CHLORIDE

J = ESTIMATED RESULT

MW = MONITORING WELL

LMW = LIGHT NON-AQUEOUS PHASE LIQUID MONITORING WELL

RESULTS COLLECTED DURING THE SECOND AND THIRD QUARTER 2017 SAMPLING EVENTS.

BLUE BOX INDICATES EXCEEDANCE OF NONRESIDENTIAL DRINKING WATER CRITERIA



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

ON-SITE MONITORING WELLS VINYL CHLORIDE IN GROUNDWATER

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LEGEND

- PROPERTY BOUNDARY
- FORD PROPERTY BOUNDARY
- OFF-SITE MONITORING WELL
TRICHLOROETHENE < OR EQUAL TO 1.0 µg/L

NOTES:

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

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 AND JULY 2017 SAMPLING EVENTS



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE MONITORING WELLS
TRICHLOROETHENE IN GROUNDWATER



CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: A. DEGRANDIS TR: P. CURRY PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GISProjects\ENV\Novi\Brighton_MnFord\LVonia\GIS\docs\2017-11\Report\Figure 10 - Off-Site GWA VC.mxd PLOTTED: 11/15/2017 3:13:25 PM BY: mgress

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LEGEND

- PROPERTY BOUNDARY
- FORD PROPERTY BOUNDARY
- OFF-SITE MONITORING WELL
VINYL CHLORIDE < OR EQUAL TO 1.0 µg/L
- OFF-SITE MONITORING WELL
VINYL CHLORIDE > 1.0 µg/L

NOTES:

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

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 AND JULY 2017 SAMPLING EVENTS

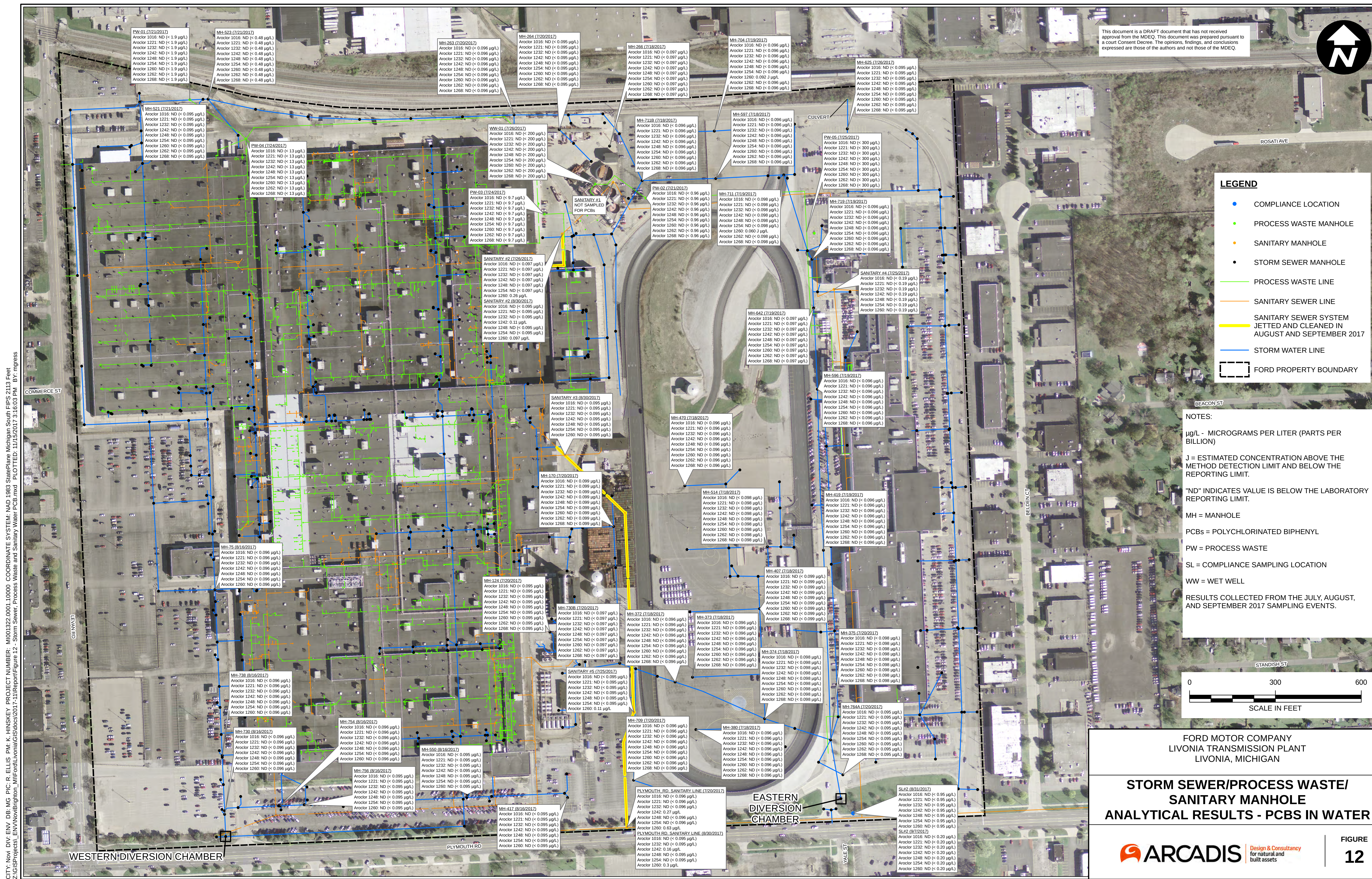
BLUE BOX INDICATES EXCEEDANCE OF RESIDENTIAL DRINKING WATER CRITERIA



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE MONITORING WELLS
VINYL CHLORIDE IN GROUNDWATER





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LEGEND

- COMPLIANCE LOCATION
- PROCESS WASTE MANHOLE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- PROCESS WASTE LINE
- SANITARY SEWER LINE
- SANITARY SEWER SYSTEM JETTED AND CLEANED IN AUGUST AND SEPTEMBER 2017
- STORM WATER LINE
- ▭ FORD PROPERTY BOUNDARY

NOTES:

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

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

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT.

MH = MANHOLE

PCBs = POLYCHLORINATED BIPHENYL

PW = PROCESS WASTE

SL = COMPLIANCE SAMPLING LOCATION

WW = WET WELL

RESULTS COLLECTED FROM THE JULY, AUGUST, AND SEPTEMBER 2017 SAMPLING EVENTS.



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

**STORM SEWER/PROCESS WASTE/
SANITARY MANHOLE
ANALYTICAL RESULTS - PCBs IN WATER**

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FIGURE
12

CITY: Novi, DIV: ENV, DE: MG, PIC: R. ELLIS, PM: K. HINSKEY, PROJECT NUMBER: M001322.0001.10000, COORDINATE SYSTEM: NAD 1983 StatePlane, Michigan South FIPS 2113 Feet, ZIGSProject: ENMNoviBrighton_MILivoniaGIdocs2017-11ReportFigure12 - Storm Sewer, Process Waste and Sanitary Water PCB.mxd, PLOTTED: 11/15/2017 3:16:03 PM, BY: ingress

CITY: Novi DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GIS\Projects\ENV\Novi\Brighton_MH\FordLivoniaGIS\docs\2017-11\Report\Figure 13 - Storm Sewer, Process Waste and Sanitary Water PCB.mxd PLOTTED: 11/15/2017 3:17:52 PM BY: mgres

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LEGEND

- PROCESS WASTE MANHOLE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- PROCESS WASTE LINE
- SANITARY SEWER LINE
- STORM WATER LINE
- ▭ FORD PROPERTY BOUNDARY

NOTES:

mg/kg = MILLIGRAMS PER KILOGRAM (PARTS PER MILLION)

COCs = CONSTITUENTS OF CONCERN

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

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT.

MH = MANHOLE

RESULTS COLLECTED DURING THE JULY 2017 EVENT

*1,4-DIOXANE WAS NOT INCLUDED IN THIS ASSESSMENT

COCs:
1,1-Dichloroethene (1,1-DCE)
1,4-Dioxane
cis-1,2-Dichloroethene (cis-1,2-DCE)
Tetrachloroethene (PCE)
Trichloroethene (TCE)
trans-1,2-Dichloroethene (trans-1,2-DCE)
Vinyl Chloride (VC)

THE GROUNDWATER SURFACE WATER INTERFACE (GSI)
CRITERIA FOR 1,1-DCE IS 2,800 µg/L, FOR 1,4-DIOXANE IS 2,800 µg/L, FOR CIS-1,2-DCE IS 620 µg/L, FOR PCE IS 60 µg/L, FOR TRANS-1,2-DCE IS 1,500 µg/L, FOR TCE IS 200 µg/L, AND FOR VC IS 13 µg/L.



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

**STORM SEWER/PROCESS WASTE/
SANITARY MANHOLE
ANALYTICAL RESULTS - COCS IN SEDIMENT**



MH-523 (7/21/2017)
1,1-DCE: ND (< 0.062 mg/kg)
1,4-Dioxane: ND (< 19 mg/kg)
cis-1,2-DCE: ND (< 0.062 mg/kg)
PCE: ND (< 0.062 mg/kg)
trans-1,2-DCE: ND (< 0.062 mg/kg)
TCE: 0.24 mg/kg
VC: ND (< 0.05 mg/kg)

MH-263 (7/20/2017)
1,1-DCE: ND (< 0.065 mg/kg)
1,4-Dioxane: ND (< 20 mg/kg)
cis-1,2-DCE: 0.083 mg/kg
PCE: ND (< 0.065 mg/kg)
trans-1,2-DCE: ND (< 0.065 mg/kg)
TCE: 0.19 mg/kg
VC: ND (< 0.052 mg/kg)

MH-266 (7/18/2017)
1,1-DCE: ND (< 0.069 mg/kg)
1,4-Dioxane: ND (< 22 mg/kg)
cis-1,2-DCE: ND (< 0.069 mg/kg)
PCE: ND (< 0.069 mg/kg)
trans-1,2-DCE: ND (< 0.069 mg/kg)
TCE: 0.068 J mg/kg
VC: ND (< 0.056 mg/kg)

MH-704 (7/19/2017)
1,1-DCE: ND (< 0.064 mg/kg)
1,4-Dioxane: ND (< 20 mg/kg)
cis-1,2-DCE: ND (< 0.064 mg/kg)
PCE: ND (< 0.064 mg/kg)
trans-1,2-DCE: ND (< 0.064 mg/kg)
TCE: ND (< 0.064 mg/kg)
VC: ND (< 0.051 mg/kg)

MH-625 (7/26/2017)
1,1-DCE: ND (< 0.059 mg/kg)
1,4-Dioxane: ND (< 18 mg/kg)
cis-1,2-DCE: ND (< 0.059 mg/kg)
PCE: ND (< 0.059 mg/kg)
trans-1,2-DCE: ND (< 0.059 mg/kg)
TCE: ND (< 0.059 mg/kg)
VC: ND (< 0.047 mg/kg)

*SANITARY #2 (7/26/2017)
1,1-DCE: ND (< 0.049 mg/kg)
cis-1,2-DCE: ND (< 0.049 mg/kg)
PCE: ND (< 0.049 mg/kg)
trans-1,2-DCE: ND (< 0.049 mg/kg)
TCE: ND (< 0.049 mg/kg)
VC: ND (< 0.049 mg/kg)

MH-470 (7/18/2017)
1,1-DCE: ND (< 0.061 mg/kg)
1,4-Dioxane: ND (< 19 mg/kg)
cis-1,2-DCE: ND (< 0.061 mg/kg)
PCE: ND (< 0.061 mg/kg)
trans-1,2-DCE: ND (< 0.061 mg/kg)
TCE: ND (< 0.061 mg/kg)
VC: ND (< 0.049 mg/kg)

MH-550
NOT SAMPLED
FOR LISTED COCs

MH-754
NOT SAMPLED
FOR LISTED COCs

MH-709 (7/20/2017)
1,1-DCE: ND (< 0.064 mg/kg)
1,4-Dioxane: ND (< 20 mg/kg)
cis-1,2-DCE: ND (< 0.064 mg/kg)
PCE: ND (< 0.064 mg/kg)
trans-1,2-DCE: ND (< 0.064 mg/kg)
TCE: ND (< 0.064 mg/kg)
VC: ND (< 0.051 mg/kg)

MH-764A (7/20/2017)
1,1-DCE: ND (< 0.063 mg/kg)
1,4-Dioxane: ND (< 20 mg/kg)
cis-1,2-DCE: ND (< 0.063 mg/kg)
PCE: ND (< 0.063 mg/kg)
trans-1,2-DCE: ND (< 0.063 mg/kg)
TCE: ND (< 0.063 mg/kg)
VC: ND (< 0.050 mg/kg)

CITY: Novi DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GISProjects\ENV\Novi\Brighton_MH-Ford\Livonia\GIS\docs\2017-11\Report\Figure 14 - Storm Sewer, Process Waste and Sanitary Water PCB.mxd PLOTTED: 11/15/2017 3:19:36 PM BY: mngres

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LEGEND

- PROCESS WASTE MANHOLE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- PROCESS WASTE LINE
- SANITARY SEWER LINE
- STORM WATER LINE
- FORD PROPERTY BOUNDARY

NOTES:

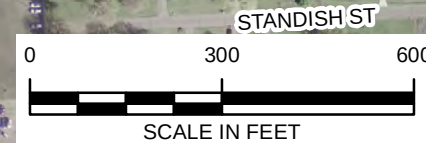
mg/kg = MILLIGRAMS PER KILOGRAM (PARTS PER MILLION)

PCBs = POLYCHLORINATED BIPHENYLS

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT.

MH = MANHOLE

RESULTS COLLECTED DURING THE JULY AND AUGUST 2017 SAMPLING EVENTS



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

STORM SEWER/PROCESS WASTE/ SANITARY MANHOLE ANALYTICAL RESULTS - PCBs IN SEDIMENT



FIGURE

14

MH-523 (7/21/2017)
Aroclor 1016: ND (< 0.320 mg/kg)
Aroclor 1221: ND (< 0.320 mg/kg)
Aroclor 1232: ND (< 0.320 mg/kg)
Aroclor 1242: ND (< 0.320 mg/kg)
Aroclor 1248: ND (< 0.320 mg/kg)
Aroclor 1254: ND (< 0.320 mg/kg)
Aroclor 1260: ND (< 0.320 mg/kg)
Aroclor 1262: ND (< 0.320 mg/kg)
Aroclor 1268: ND (< 0.320 mg/kg)

MH-263 (7/20/2017)
Aroclor 1016: ND (< 0.320 mg/kg)
Aroclor 1221: ND (< 0.320 mg/kg)
Aroclor 1232: ND (< 0.320 mg/kg)
Aroclor 1242: ND (< 0.320 mg/kg)
Aroclor 1248: ND (< 0.320 mg/kg)
Aroclor 1254: ND (< 0.320 mg/kg)
Aroclor 1260: ND (< 0.320 mg/kg)
Aroclor 1262: ND (< 0.320 mg/kg)
Aroclor 1268: ND (< 0.320 mg/kg)

MH-266 (7/18/2017)
Aroclor 1016: ND (< 0.340 mg/kg)
Aroclor 1221: ND (< 0.340 mg/kg)
Aroclor 1232: ND (< 0.340 mg/kg)
Aroclor 1242: ND (< 0.340 mg/kg)
Aroclor 1248: ND (< 0.340 mg/kg)
Aroclor 1254: ND (< 0.340 mg/kg)
Aroclor 1260: ND (< 0.340 mg/kg)
Aroclor 1262: ND (< 0.340 mg/kg)
Aroclor 1268: ND (< 0.340 mg/kg)

MH-704 (7/19/2017)
Aroclor 1016: ND (< 0.064 mg/kg)
Aroclor 1221: ND (< 0.064 mg/kg)
Aroclor 1232: ND (< 0.064 mg/kg)
Aroclor 1242: ND (< 0.064 mg/kg)
Aroclor 1248: ND (< 0.064 mg/kg)
Aroclor 1254: ND (< 0.064 mg/kg)
Aroclor 1260: ND (< 0.064 mg/kg)
Aroclor 1262: ND (< 0.064 mg/kg)
Aroclor 1268: ND (< 0.064 mg/kg)

MH-625 (7/26/2017)
Aroclor 1016: ND (< 0.062 mg/kg)
Aroclor 1221: ND (< 0.062 mg/kg)
Aroclor 1232: ND (< 0.062 mg/kg)
Aroclor 1242: ND (< 0.062 mg/kg)
Aroclor 1248: ND (< 0.062 mg/kg)
Aroclor 1254: ND (< 0.062 mg/kg)
Aroclor 1260: ND (< 0.062 mg/kg)
Aroclor 1262: ND (< 0.062 mg/kg)
Aroclor 1268: ND (< 0.062 mg/kg)

SANITARY #2 (7/26/2017)
Aroclor 1016: ND (< 0.033 mg/kg)
Aroclor 1221: ND (< 0.033 mg/kg)
Aroclor 1232: ND (< 0.033 mg/kg)
Aroclor 1242: 0.059 mg/kg
Aroclor 1248: ND (< 0.033 mg/kg)
Aroclor 1254: 0.068 mg/kg
Aroclor 1260: ND (< 0.033 mg/kg)
PCB, Total: 0.15 mg/kg

MH-470 (7/18/2017)
Aroclor 1016: ND (< 0.063 mg/kg)
Aroclor 1221: ND (< 0.063 mg/kg)
Aroclor 1232: ND (< 0.063 mg/kg)
Aroclor 1242: ND (< 0.063 mg/kg)
Aroclor 1248: ND (< 0.063 mg/kg)
Aroclor 1254: ND (< 0.063 mg/kg)
Aroclor 1260: ND (< 0.063 mg/kg)
Aroclor 1262: ND (< 0.063 mg/kg)
Aroclor 1268: ND (< 0.063 mg/kg)

MH-709 (7/20/2017)
Aroclor 1016: ND (< 0.066 mg/kg)
Aroclor 1221: ND (< 0.066 mg/kg)
Aroclor 1232: ND (< 0.066 mg/kg)
Aroclor 1242: ND (< 0.066 mg/kg)
Aroclor 1248: ND (< 0.066 mg/kg)
Aroclor 1254: ND (< 0.066 mg/kg)
Aroclor 1260: ND (< 0.066 mg/kg)
Aroclor 1262: ND (< 0.066 mg/kg)
Aroclor 1268: ND (< 0.066 mg/kg)

MH-764A (7/20/2017)
Aroclor 1016: ND (< 0.063 mg/kg)
Aroclor 1221: ND (< 0.063 mg/kg)
Aroclor 1232: ND (< 0.063 mg/kg)
Aroclor 1242: ND (< 0.063 mg/kg)
Aroclor 1248: ND (< 0.063 mg/kg)
Aroclor 1254: ND (< 0.063 mg/kg)
Aroclor 1260: ND (< 0.063 mg/kg)
Aroclor 1262: ND (< 0.063 mg/kg)
Aroclor 1268: ND (< 0.063 mg/kg)

MH-754 (8/16/2017)
Aroclor 1016: ND (< 0.040 mg/kg)
Aroclor 1221: ND (< 0.040 mg/kg)
Aroclor 1232: ND (< 0.040 mg/kg)
Aroclor 1242: ND (< 0.040 mg/kg)
Aroclor 1248: ND (< 0.040 mg/kg)
Aroclor 1254: ND (< 0.040 mg/kg)
Aroclor 1260: ND (< 0.040 mg/kg)

MH-550 (8/16/2017)
Aroclor 1016: ND (< 0.042 mg/kg)
Aroclor 1221: ND (< 0.042 mg/kg)
Aroclor 1232: ND (< 0.042 mg/kg)
Aroclor 1242: ND (< 0.042 mg/kg)
Aroclor 1248: ND (< 0.042 mg/kg)
Aroclor 1254: ND (< 0.042 mg/kg)
Aroclor 1260: ND (< 0.042 mg/kg)

LEVAN RD

CULVERT

BELDEN CT

WADSWORTH ST

STANDISH ST

EASTERN DIVERSION CHAMBER

PLYMOUTH RD

WESTERN DIVERSION CHAMBER

YALE ST

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.



CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY TM: T. STEVENS TR: P. CURRY PROJECT NUMBER: M001322.0001.10000 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Z:\GISProjects\ENV\Novi\Brighton_Mi\FordLivoniaGISdocs\2017-11\Report\Figure 16 - Off-site Vapor Intrusion Assessment POE in Soil Vapor.mxd PLOTTED: 11/22/2017 8:11:17 AM BY: mgress

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LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP
TETRACHLOROETHENE < 1,400 µg/m³
- OFF-SITE SVMP NOT SAMPLED
FOR TETRACHLOROETHENE

NOTES:

µg/m³ - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL (RESIDENTIAL AND COMMERCIAL) FOR TETRACHLOROETHENE IS 1,400 µg/m³

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

MDHHS = MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES

FT = FEET BELOW GROUND SURFACE

J = REPORTED VALUE IS ESTIMATED

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 7.6 TO 9.0 µg/m³, FOR TETRACHLOROETHENE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING JUNE AND SEPTEMBER 2017 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017 EVENT.

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



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

OFF-SITE VAPOR INTRUSION ASSESSMENT
TETRACHLOROETHENE IN SOIL VAPOR



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SVMP-25 (3.0 FT)
6/19/2017: ND (< 6.2 µg/m³)
9/21/2017: ND (< 6.4 µg/m³)

SVMP-25 (6.0 FT)
6/19/2017: ND (< 6.4 µg/m³)
9/21/2017: ND (< 6.0 µg/m³)

SVMP-26 (4.0 FT)
6/19/2017: ND (< 6.2 µg/m³)
9/21/2017: ND (< 6.6 µg/m³)

SVMP-27 (4.5 FT)
6/19/2017: ND (< 6.2 µg/m³)
9/21/2017: 7.2 µg/m³

SVMP-28 (3.0 FT)
6/19/2017: ND (< 6.1 µg/m³)
9/21/2017: ND (< 6.5 µg/m³)

SVMP-35 (4.0 FT)
6/15/2017: ND (< 6.9 µg/m³)

SVMP-29 (3.5 FT)
6/14/2017: ND (< 6.3 µg/m³)

SVMP-29 (7.5 FT)
6/14/2017: ND (< 6.0 µg/m³)

SVMP-01 (3.5 FT)
6/8/2017: ND (< 6.2 µg/m³)
9/20/2017: ND (< 6.8 µg/m³)

SVMP-01 (7.0 FT)
6/8/2017: ND (< 6.2 µg/m³)
9/20/2017: ND (< 6.5 µg/m³)

SVMP-11 (3.5 FT)
6/13/2017: ND (< 6.3 µg/m³)

SVMP-34 (4.0 FT)
6/15/2017: ND (< 6.3 µg/m³)

SVMP-33 (4.0 FT)
6/15/2017: ND (< 6.5 µg/m³)

SVMP-32 (3.0 FT)
6/15/2017: ND (< 6.4 µg/m³)

SVMP-32 (6.0 FT)
6/15/2017: ND (< 6.5 µg/m³)

SVMP-08 (3.5 FT)
6/15/2017: ND (< 6.5 µg/m³)
9/20/2017: ND (< 6.4 µg/m³)

SVMP-09 (4.0 FT)
6/14/2017: 6.9 µg/m³
9/20/2017: ND (< 6.6 µg/m³)

SVMP-06 (4.5 FT)
6/13/2017: ND (< 6.0 µg/m³)
9/20/2017: ND (< 6.3 µg/m³)

SVMP-07 (3.5 FT)
6/13/2017: ND (< 6.3 µg/m³)
9/20/2017: ND (< 6.5 µg/m³)

SVMP-31 (5.5 FT)
6/14/2017: ND (< 6.1 µg/m³)

SVMP-30 (4.0 FT)
6/14/2017: 31 µg/m³

SVMP-03 (3.5 FT)
6/12/2017: ND (< 6.3 µg/m³)
9/21/2017: ND (< 6.6 µg/m³)

SVMP-03 (7.0 FT)
6/12/2017: ND (< 6.8 µg/m³)
9/21/2017: ND (< 6.4 µg/m³)

SVMP-02 (4.5 FT)
6/9/2017: ND (< 6.0 µg/m³)
9/20/2017: ND (< 7.1 µg/m³)

SVMP-02 (8.5 FT)
6/9/2017: ND (< 6.1 µg/m³)
9/20/2017: ND (< 7.1 µg/m³)

SVMP-12 (3.5 FT)
6/13/2017: ND (< 6.4 µg/m³)
9/19/2017: ND (< 6.5 µg/m³)

SVMP-13 (2.0 FT)
6/16/2017: ND (< 6.6 µg/m³)
9/19/2017: ND (< 6.3 µg/m³)

SVMP-10 (3.0 FT)
6/13/2017: ND (< 6.7 µg/m³)
9/20/2017: ND (< 6.5 µg/m³)

SVMP-05 (4.5 FT)
6/12/2017: ND (< 6.7 µg/m³)
9/20/2017: ND (< 6.5 µg/m³)

SVMP-23 (3.0 FT)
6/19/2017: ND (< 6.4 µg/m³)
9/18/2017: ND (< 6.3 µg/m³)

SVMP-22 (3.0 FT)
6/19/2017: ND (< 6.4 µg/m³)
9/18/2017: ND (< 6.5 µg/m³)

SVMP-19 (3.0 FT)
6/16/2017: ND (< 6.4 µg/m³)
9/18/2017: ND (< 6.9 µg/m³)

SVMP-20 (3.0 FT)
6/19/2017: ND (< 5.8 µg/m³)
9/19/2017: ND (< 6.5 µg/m³)

SVMP-16 (2.0 FT)
6/16/2017: ND (< 6.4 µg/m³)
9/19/2017: ND (< 6.2 µg/m³)

SVMP-15 (2.0 FT)
6/16/2017: ND (< 6.3 µg/m³)
9/19/2017: ND (< 6.4 µg/m³)

SVMP-14 (2.0 FT)
6/16/2017: ND (< 6.4 µg/m³)
9/19/2017: ND (< 6.2 µg/m³)

SVMP-04 (3.5 FT)
6/12/2017: ND (< 6.0 µg/m³)
9/20/2017: ND (< 6.6 µg/m³)

SVMP-24 (4.0 FT)
6/19/2017: ND (< 6.2 µg/m³)
9/18/2017: ND (< 6.3 µg/m³)

SVMP-36 (4.0 FT)
6/16/2017: ND (< 6.2 µg/m³)

SVMP-18 (3.0 FT)
6/16/2017: ND (< 6.6 µg/m³)
9/18/2017: ND (< 6.3 µg/m³)

SVMP-21 (2.0 FT)
6/19/2017: ND (< 6.2 µg/m³)
9/19/2017: ND (< 6.3 µg/m³)

SVMP-37 (2.5 FT)
6/16/2017: ND (< 6.2 µg/m³)

SVMP-17 (2.0 FT)
6/16/2017: 18 µg/m³
9/19/2017: 22 µg/m³

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LEGEND

- PROPERTY BOUNDARIES
- FORD PROPERTY BOUNDARY
- OFF-SITE SVMP VINYL CHLORIDE < 54 µg/m³

NOTES:

µg/m³ - MICROGRAMS PER CUBIC METER

THE MDEQ PROVIDED RESIDENTIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR VINYL CHLORIDE IS 54 µg/m³

THE MDEQ PROVIDED COMMERCIAL VOLATILIZATION TO INDOOR AIR SOIL VAPOR SCREENING LEVEL FOR VINYL CHLORIDE IS 450 µg/m³

MDEQ = MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

MDHHS = MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES

FT = FEET BELOW GROUND SURFACE

"ND" INDICATES VALUE IS BELOW THE LABORATORY REPORTING LIMIT, RANGING FROM 2.7 TO 3.4 µg/m³, FOR VINYL CHLORIDE

SVMP = SOIL VAPOR MONITORING POINT

RESULTS COLLECTED DURING JUNE AND SEPTEMBER 2017 SAMPLING EVENTS.

SVMP-29 THROUGH 37 WERE NOT SAMPLED DURING THE SEPTEMBER 2017 EVENT.

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



FORD MOTOR COMPANY
LIVONIA TRANSMISSION PLANT
LIVONIA, MICHIGAN

**OFF-SITE VAPOR INTRUSION ASSESSMENT
VINYL CHLORIDE IN SOIL VAPOR**

APPENDIX A

On-Site Groundwater Field Sampling Logs



ARCADIS

Water-Level Measurement Form

Project No.: MI001380.0001.00002
 Site Location: LIVONIA, MI
 Instrument Model: _____

Field Personnel: Angela
 Date: _____
 Instrument Serial No.: _____

Well Number	Time	W.L. Measurements			Comments		
		DTP (feet)	DTW (feet)	TD (feet)	Well Locked	Lock Condition	Other Comments
MW-1	1040	—	3.57	18.44	—	—	—
MW-2	1517	—	6.99	19.44	—	—	—
MW-3	1525	—	7.29	18.43	—	—	—
MW-4	1508	—	7.61	19.93	N	—	—
MW-5	1508						
MW-7	1054	—	14.79	22.39	—	—	one broken bolt
MW-9	1020	5.88	24.29	✓	—	—	one bolt missing
MW-10	1535	—	8.58	20.76	—	—	—
MW-14	1030	—	6.63	19.53	—	—	one bolt missing
MW-18	1005	—	6.92	17.70	—	—	One broken bolt
MW-19	—	—	LNAPL	Present	—	—	—
* MW-20	1800	—	6.29	16.98	—	—	Broken + sunk
MW-21	0945	—	NM	NM	—	—	Broken bolt - unable to open
MW-22	D						
MW-23	D						
MW-24	1141	—	10.01	23.90	—	—	—
MW-25	1220	—	6.34	20.52	—	—	—
MW-26	1415	—	5.96	14.09	—	—	—
MW-27	—	—	CNL	CNL	—	—	—
MW-28	D						
MW-29	1430	—	5.41	14.90	—	—	—
MW-30	A						
MW-31	A						
MW-32	A						
MW-33	A						
MW-34	A						
MW-35	A						
MW-36	1115	—	9.49	24.35	—	—	—
MW-37	A						
MW-38	N						

W.L.
 TD
 DTW
 DTP

Water Level
 Total Depth
 Depth To Water
 Depth To Product
 Wells to be sampled

ARCADIS

Water-Level Measurement Form

Project No.: MI001380.0001.00002

Site Location: LIVONIA, MI

Instrument Model

Field Personnel: Angela

Date:

Instrument Serial No.:

Well Number	Time	W.L. Measurements			Comments		
		TD (feet)	DTW (feet)	DTP (feet)	Well Locked	Lock Condition	Other Comments
MW-39 A							
MW-40 A							
MW-41 A							
MW-42 A							
MW-43 A							
MW-44 D							
MW-45 D							
MW-46 D							
MW-47 D							
MW-48 D							
MW-49	0940	17.37	10.94	—	—	—	—
MW-50 D							
MW-51 D							
MW-52 A							
MW-53 A							
MW-54 A							
MW-55 A							
MW-56 A							
MW-57 A							
MW-58 D							
MW-15-59D	1355	100.80	28.71	—	—	—	—
MW-15-60D	1157	99.92	24.09	—	—	—	—
MW-15-61D A							
MW-62 D							
MW-63 D							
MW-64 A							
MW-65 D							
MW-66 D							
MW-67 D							
MW-68 D							

W.L. Water Level
 TD Total Depth
 DTW Depth To Water
 DTP Depth To Product
 Wells to be sampled

ARCADIS

Water-Level Measurement Form

Project No.: MI001380.0001.00002
Site Location: LIVONIA, MI
Instrument Model

Field Personnel:
Date:
Instrument Serial No.:

Angelica

[illegible]

W.L.	Water Level
TD	Total Depth
DTW	Depth To Water
DTP	Depth To Product
	Wells to be sampled

ARCADIS
Water-Level Measurement Form

 Project No.: MI001380.0001.00002
 Site Location: LIVONIA, MI
 Instrument Model: _____

 Field Personnel: Ashley
 Date: _____
 Instrument Serial No.: _____

Well Number	Time	W.L. Measurements			Comments		
		DTP (feet)	DTW (feet)	TD (feet)	Well Locked	Lock Condition	Other Comments
MW-1							
MW-2							
MW-3							
MW-4							
MW-5							
MW-7							
MW-9							
MW-10							
MW-14							
MW-18							
MW-19							
MW-20							
MW-21							
MW-22							
MW-23							
MW-24							
MW-25							
MW-26							
MW-27							
MW-28							
MW-29							
MW-30	1310	—	9.93	24.73	N	—	tubing in well
MW-31	1305	—	10.19	21.69	N	—	—
MW-32	1245	—	9.71	22.71	N	—	—
MW-33	0953	—	8.84	19.72	N	—	—
MW-34	1330	—	9.45	21.23	N	—	Tubing
MW-35	1405	—	8.55	24.49	N	—	—
MW-36							
MW-37	0925	—	8.14	23.69	N	—	Tubing in well
MW-38	0935	—	8.69	19.54	N	—	Tubing in well

W.L. Water Level
 TD Total Depth
 DTW Depth To Water
 DTP Depth To Product
 _____ Wells to be sampled

ARCADIS
Water-Level Measurement Form

 Project No.: MI001380.0001.00002
 Site Location: LIVONIA, MI
 Instrument Model: _____

 Field Personnel: Ashley
 Date: 7/24/17
 Instrument Serial No.: _____

Well Number	Time	W.L. Measurements			Comments		
		TD (feet)	DTW (feet)	DTP (feet)	Well Locked	Lock Condition	Other Comments
MW-39	1010	23.72	11.41	—	N	—	—
MW-40	1443	19.66	10.10	—	N	—	—
MW-41	1320	20.78	9.39	—	N	—	Tubing in well
MW-42	1400	20.43	9.13	—	N	—	Tubing
MW-43	1412	21.79	8.34	—	N	—	Tubing
MW-44							
MW-45							
MW-46							
MW-47							
MW-48							
MW-49							
MW-50							
MW-51							
MW-52	1425	19.75	8.33	—	N	—	—
MW-53	1130	20.63	7.92	—	N	—	Tubing in well
MW-54	1115	20.20	8.08	20.52	N	—	Tubing in well
MW-55	1045	19.56	8.95	—	N	—	Tubing in well
MW-56	1030	20.58	8.18	—	N	—	Tubing in well
MW-57	1100	21.63	7.83	—	N	—	Tubing in well
MW-58							
MW-15-59D							
MW-15-60D							
MW-15-61D	1348	94.09	24.74	—	N	—	—
MW-62							
MW-63							
MW-64	1205	20.05	9.83	—	N	—	—
MW-65							
MW-66							
MW-67							
MW-68							

W.L. Water Level
 TD Total Depth
 DTW Depth To Water
 DTP Depth To Product
 Wells to be sampled

Field Personnel:
Date:
Instrument Serial No.:

Ashley

[illegible]

GRUBB WORK AREA

W.L.	Water Level
TD	Total Depth
DTW	Depth To Water
DTP	Depth To Product
	Wells to be sampled

ARCADIS

Water-Level Measurement Form

Project No.: MI001380.0001.00002

Site Location: LIVONIA, MI

Instrument Model: HERON H.OIL:OIL WATER
INTERFACE METERField Personnel: DwyerDate: 24 July 2017Instrument Serial No.: 800-301-9463 (13845)

Well Number	Time	W.L. Measurements			Comments		
		TD (feet)	DTW (feet)	DTP (feet)	Well Locked	Lock Condition	Other Comments
MW-39							
MW-40							
MW-41							
MW-42							
MW-43							
MW-44	13.57	20.93	8.38	-	N	-	
MW-45	12.10	19.76	11.07	-	N	-	
MW-46	11.50	19.78	10.33	-	N	-	
MW-47	11.25	19.96	10.11	-	N	-	Missing bolt
MW-48	10.08	20.42	9.70		N	-	
MW-49							
MW-50	9.50	18.42	8.16	-	N	-	
MW-51	12.33	18.92	7.82	-	N	-	
MW-52							
MW-53							
MW-54							
MW-55							
MW-56							
MW-57							
MW-58	10.35	18.70	5.68	-	N	-	Lid broken. Picture taken
MW-15-59D							
MW-15-60D							
MW-15-61D							
MW-62	9.30	21.01	10.11	-	No	-	
MW-63	9.40	11.78	8.45	-	N	-	
MW-64							
MW-65	13.30	21.11	9.87	-	N	-	
MW-66	13.45	19.35	7.81	-	N	-	
MW-67	10.00	13.84	9.84	-	N	-	
MW-68	11.33	19.86	9.55	-	N	-	

W.L.

TD

DTW

DTP

Water Level

Total Depth

Depth To Water

Depth To Product

Wells to be sampled

ARCADIS
Water-Level Measurement Form
Project No.: MI001380.0001.00002Site Location: LIVONIA, MIInstrument Model: HERON H-OIL: OIL WATER
INTERFACE METERField Personnel: DwyerDate: 24 July 2017Instrument Serial No.: 800-301-9663 (13845)

Well Number	Time	W.L. Measurements			Comments		
		DTP (feet)	DTW (feet)	TD (feet)	Well Locked	Lock Condition	Other Comments
MW-1							
MW-2							
MW-3							
MW-4							
MW-5							
MW-7							
MW-9							
MW-10							
MW-14							
MW-18							
MW-19							
MW-20							
MW-21							
MW-22	14.15	-	7.53	20.42	N	-	
MW-23	14.50	-	6.69	19.72	N	-	
MW-24							
MW-25							
MW-26							
MW-27							
MW-28	10.50	-	4.61	11.73	N	-	Lid broken. Picture taken
MW-29							
MW-30							
MW-31							
MW-32							
MW-33							
MW-34							
MW-35							
MW-36							
MW-37							
MW-38							

W.L.

TD

DTW

DTP

Water Level

Total Depth

Depth To Water

Depth To Product

Wells to be sampled

N = NO

ARCADIS

Water-Level Measurement Form

Project No.: MI001380.0001.00002

Site Location: LIVONIA, MI

Instrument Model HERON H-11L: OIL WATER

Field Personnel:

Date:

Instrument Serial No.: 800-301-9662 (13845)

INTERFACE METER

[illegible]

→ COULD NOT LOCATE
→ COULD NOT LOCATE

verify this is the well you are asked to do.	
	verified. No
	other well was
	visible anyway.

W.L.

Water Level

TD

Total Depth

DTW

Depth To Water

DTP

Depth To Product

Wells to be sampled

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-53 Replicate No. — Code No. —
 Weather m. Sunny, 80's Sampling Time: Begin — End —

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.63
 Depth to Water (ft bmp) 7.97
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.66
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.0256
 Gallons Pumped/Bailed Prior to Sampling ~3
 Sample Pump Intake Setting (ft bmp) ~18.5
 Purge Time begin 1215 end 1255
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.37
 SpC (mS/cm) 4.720
 CND (mS/cm) 3.941
 Dissolved Oxygen (%) 5.7
 Dissolved Oxygen (mg/L) 0.55
 pH (s.u.) 7.41
 ORP (mV) -56.4
 Turbidity (NTU) 6.19
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL: mw-53

PROJ #: MI001373.0001.00002

DATE: 7/27/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-43 Replicate No. — Code No. —
 Weather P. Cloudy, 80's Sampling Time: Begin 1452 End 1457

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.79
 Depth to Water (ft bmp) 8.37
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 13.42
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.1472
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~20.5'
 Purge Time begin 1415 end 1450
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 14.52
 SpC (mS/cm) 4.808
 CND (mS/cm) 4.306
 Dissolved Oxygen (%) 6.9
 Dissolved Oxygen (mg/L) 0.63
 pH (s.u.) 7.44
 ORP (mV) -110.4
 Turbidity (NTU) 8.61
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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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WELL : mw-43

PROJ #: MI001373.0001.00002

DATE: 7/27/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. mw-34 Replicate No. — Code No. —
 Weather m. cloudy, 80's Sampling Time: Begin 1617 End 1622

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.23
 Depth to Water (ft bmp) 9.55
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.68
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.8688
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~19
 Purge Time begin 1535 end 1615
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.24
 SpC (mS/cm) 7.078
 CND (mS/cm) 6.299
 Dissolved Oxygen (%) 5.0
 Dissolved Oxygen (mg/L) 0.45
 pH (s.u.) 7.22
 ORP (mV) -79.7
 Turbidity (NTU) 2.78
 Color non
 Odor non
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A DeGranchis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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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WELL: MW-34

PROJ #: MI001373.0001.00002

DATE: 7/27/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. mw-30 Replicate No. — Code No. —
 Weather P. cloudy, 80's Sampling Time: Begin 1707 End 1712

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 24.73
 Depth to Water (ft bmp) 9.95
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 14.78
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.3648
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~23'
 Purge Time begin 1635 end 1705
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.33
 SpC (mS/cm) 3.729
 CND (mS/cm) 3.328
 Dissolved Oxygen (%) 4.4
 Dissolved Oxygen (mg/L) 0.40
 pH (s.u.) 7.41
 ORP (mV) -112.9
 Turbidity (NTU) 6.28
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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-30

PROJ #: MI001373.0001.00002

DATE: 7/27/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-49 Replicate No. Code No.
 Weather m. cloudy, 70's Sampling Time: Begin End

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 17.37
 Depth to Water (ft bmp) 16.94
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.43
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.6698
 Gallons Pumped/Bailed Prior to Sampling ~3
 Sample Pump Intake Setting (ft bmp) ~15.5
 Purge Time begin 1020 end 1115
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.08
 SpC (mS/cm) 4.118
 CND (mS/cm) 3.572
 Dissolved Oxygen (%) 1.5
 Dissolved Oxygen (mg/L) 0.14
 pH (s.u.) 7.10
 ORP (mV) -103.7
 Turbidity (NTU) 8.60
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGruelis

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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WELL: MW-49

PROJ #: MI001373.0001.00002

DATE: 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. mw-18 Replicate No. — Code No. —
 Weather P. Cloudy, 70's Sampling Time: Begin 1222 End 1227

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 17.70
 Depth to Water (ft bmp) 16.92
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.78
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7248
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~16'
 Purge Time begin 1140 end 1220
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.01
 SpC (mS/cm) 2.919
 CND (mS/cm) 2.586
 Dissolved Oxygen (%) 3.2
 Dissolved Oxygen (mg/L) 0.31
 pH (s.u.) 6.99
 ORP (mV) -77.9
 Turbidity (NTU) 25.6
 Color none
 Odor none
 Appearance very slightly turbid
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. DeGrandis

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-18

PROJ #: MI001373.0001.00002

DATE: 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-1 Replicate No. DUP-01 Code No. —
 Weather Clear, 70's Sampling Time: Begin 1422 End 1430

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) 3.57
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 14.87
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.3792
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~17'
 Purge Time begin 1345 end 1420
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.49
 SpC (mS/cm) 30.18
 CND (mS/cm) 26.43
 Dissolved Oxygen (%) 1.8
 Dissolved Oxygen (mg/L) 0.16
 pH (s.u.) 7.36
 ORP (mV) -141.7
 Turbidity (NTU) 4.85
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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-1

PROJ #: MI001373.0001.00002

DATE : 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-36 Replicate No. — Code No. —
 Weather overcast, 70's Sampling Time: Begin 1532 End 1537

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 24.75
 Depth to Water (ft bmp) 9.44
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 15.26
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.4416
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~23.5
 Purge Time begin 1455 end 1530
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.11
 SpC (mS/cm) 10.47
 CND (mS/cm) 8.695
 Dissolved Oxygen (%) 5.8
 Dissolved Oxygen (mg/L) 0.55
 pH (s.u.) 7.29
 ORP (mV) -1032
 Turbidity (NTU) 8.55
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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-36

PROJ #: MI001373.0001.00002

DATE: 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. mw-14 Replicate No. — Code No. —
 Weather Sunny, 70's Sampling Time: Begin 1642 End 1647

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.53
 Depth to Water (ft bmp) 6.63
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.90
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.064
 Gallons Pumped/Bailed Prior to Sampling ~3
 Sample Pump Intake Setting (ft bmp) ~18'
 Purge Time begin 1600 end 1640
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.89
 SpC (mS/cm) 4.384
 CND (mS/cm) 3.954
 Dissolved Oxygen (%) 57
 Dissolved Oxygen (mg/L) 0.51
 pH (s.u.) 7.09
 ORP (mV) -71.1
 Turbidity (NTU) 7.57
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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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WELL : mw-14

PROJ #: MI001373.0001.00002

DATE: 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-55 Replicate No. Code No.
 Weather 75°F p. cloudy Sampling Time: Begin 1107 End 1115

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) 9.03
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.52
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.68
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp)
 Purge Time begin 1015 end 1115
 Pumping Rate (ml/min) 150.0
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.69
 SpC (mS/cm) 4.65
 CND (mS/cm) 4.09
 Dissolved Oxygen (%) 1.0
 Dissolved Oxygen (mg/L) 0.09
 pH (s.u.) 7.55
 ORP (mV) -111.6
 Turbidity (NTU) 5.49
 Color clear
 Odor None
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. Rubel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL : MN-55

PROJ #: MI001373.0001.00002

DATE: 5/2/11

LOC: Ford LTP, Livonia, MI

Document #ENFM005, Revision 03

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-57 Replicate No. _____ Code No. _____
 Weather 042017 75/sunny Sampling Time: Begin 1247 End 1250

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.69
 Depth to Water (ft bmp) 7.96
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 13.73
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.19
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) —
 Purge Time begin 1150 end 1250
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.2
 SpC (mS/cm) 4.43
 CND (mS/cm) 4.06
 Dissolved Oxygen (%) 1.1
 Dissolved Oxygen (mg/L) 0.10
 pH (s.u.) 7.52
 ORP (mV) -107.2
 Turbidity (NTU) 8.05
 Color —
 Odor —
 Appearance —
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. Ribel

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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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-35 Replicate No. _____ Code No. _____
 Weather 75°F / Sunny Sampling Time: Begin 1517 End 1523

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 24.44
 Depth to Water (ft bmp) 8.86
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 15.91
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.84
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1507 end 1523
 Pumping Rate (ml/min) 1401 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.71
 SpC (mS/cm) 2.98
 CND (mS/cm) 2.51
 Dissolved Oxygen (%) 1.0
 Dissolved Oxygen (mg/L) 0.09
 pH (s.u.) 7.74
 ORP (mV) -128.9
 Turbidity (NTU) 216
 Color Clear
 Odor None
 Appearance clear
 Sampling Method Low Flow

Remarks Draw down significant causing ↑ turbidity

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

YSI/LOW FLOW SAMPLING LOG

WELL: MN-35

PROJ #: MI001373.0001.00002

DATE : 7/2/11

LOC: Ford LTP, Livonia, MI

Document #ENFM005, Revision 03

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/27/17
 Site/Well No. MW-41 Replicate No. Code No.
 Weather 75F Sunny Sampling Time: Begin 1637 End 1642

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.77
 Depth to Water (ft bmp) 9.43
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.54
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.85
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp)
 Purge Time begin 1555 end 1642
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.31
 SpC (mS/cm) 9.34
 CND (mS/cm) 8.39
 Dissolved Oxygen (%) 1.1
 Dissolved Oxygen (mg/L) 0.10
 pH (s.u.) 7.33
 ORP (mV) -97.7
 Turbidity (NTU) 3.04
 Color 883 clear
 Odor
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. Reibel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-40 Replicate No. _____ Code No. _____
 Weather Cloudy 70S Sampling Time: Begin 1027 End 1030

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.66
 Depth to Water (ft bmp) 10.15
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.51
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.52
 Gallons Pumped/Bailed Prior to Sampling 20
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 0933 end 1030
 Pumping Rate (ml/min) 150.0
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.40
 SpC (mS/cm) 16.07
 CND (mS/cm) 14.04
 Dissolved Oxygen (%) 2.5
 Dissolved Oxygen (mg/L) 0.22
 pH (s.u.) 7.12
 ORP (mV) -85.2
 Turbidity (NTU) 3.43
 Color —
 Odor —
 Appearance —
 Sampling Method Low Flow
 Remarks ✓

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. Reibel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL: MW-40

PROJ #: MI001373.0001.00002

DATE: 7/28/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-32 Replicate No. _____ Code No. _____
 Weather 70s p. cloudy Sampling Time: Begin 1147 End 1149

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 22.85
 Depth to Water (ft bmp) 9.78
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 13.07
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.09
 Gallons Pumped/Bailed Prior to Sampling 2.5
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1040 end 1149
 Pumping Rate (ml/min) 150.0
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 14.69
 SpC (mS/cm) 3.54
 CND (mS/cm) 2.84
 Dissolved Oxygen (%) 1.3
 Dissolved Oxygen (mg/L) 0.13
 pH (s.u.) 7.22
 ORP (mV) -79.4
 Turbidity (NTU) ~~1.50~~ 2.46
 Color _____
 Odor _____
 Appearance _____
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel A. Rubel

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-3/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL :

MW-32

PROJ #:

MI001373.0001.00002

DATE :

7/28/17

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
1115	15.18	3.44	2.79	4.3	0.43	7.27	-118.7	150.0	14.7	10.26
1120	14.73	3.45	2.77	1.4	0.14	7.24	-114.7	150.0	11.2	10.31
1125	14.48	3.44	2.75	1.1	0.12	7.23	-106.5	150.0	8.48	10.33
1130	14.50	3.44	2.75	1.7	0.17	7.22	-110.2	150.0	5.55	10.33
1135	14.75	3.47	2.79	1.8	0.18	7.22	-110.4	150.0	3.37	10.33
1140	14.50	3.51	2.81	1.5	0.15	7.22	-107.8	150.0	3.50	10.33
1145	14.69	3.54	2.84	1.3	0.13	7.22	-99.9	150.0	2.46	10.33
								</		

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-56 Replicate No. Code No.
 Weather P. Cloudy 70s Sampling Time: Begin 1422 End 1425

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) 8.38
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) NA
 Casing Diameter/Type 2" PVC
 Gallons in Well
 Gallons Pumped/Bailed Prior to Sampling
 Sample Pump Intake Setting (ft bmp)
 Purge Time begin 1340 end 1425
 Pumping Rate (ml/min)
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.75
 SpC (mS/cm) 7.60
 CND (mS/cm) 6.47
 Dissolved Oxygen (%) 59.0
 Dissolved Oxygen (mg/L) 5.58
 pH (s.u.) 7.80
 ORP (mV) -120.3
 Turbidity (NTU) 9.80
 Color
 Odor
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. Rubel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-56

DATE : 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date _____
 Site/Well No. MW-58 Replicate No. _____ Code No. _____
 Weather 7/20/17 Sampling Time: Begin 1542 End 1545

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.41
 Depth to Water (ft bmp) 6.76
 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 1500 end 1545
 Pumping Rate (ml/min) _____
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.32
 SpC (mS/cm) 9.19
 CND (mS/cm) 7.97
 Dissolved Oxygen (%) 1.5
 Dissolved Oxygen (mg/L) 0.16
 pH (s.u.) 7.10
 ORP (mV) -89.4
 Turbidity (NTU) 2.48
 Color _____
 Odor _____
 Appearance _____
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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-58

PROJ #: MI001373.0001.00002

DATE : 7/28/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-9 Replicate No. Code No.
 Weather Sunny 170S Sampling Time: Begin 1652 End 1655

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 24.25
 Depth to Water (ft bmp) 4.69
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) NA
 Casing Diameter/Type 2" PVC
 Gallons in Well
 Gallons Pumped/Bailed Prior to Sampling
 Sample Pump Intake Setting (ft bmp)
 Purge Time begin 1655 end 1658
 Pumping Rate (ml/min)
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.70
 SpC (mS/cm) 5.09
 CND (mS/cm) 4.57
 Dissolved Oxygen (%) 0.7
 Dissolved Oxygen (mg/L) 0.07
 pH (s.u.) 7.34
 ORP (mV) -119.2
 Turbidity (NTU) 4.67
 Color
 Odor
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. Ribel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

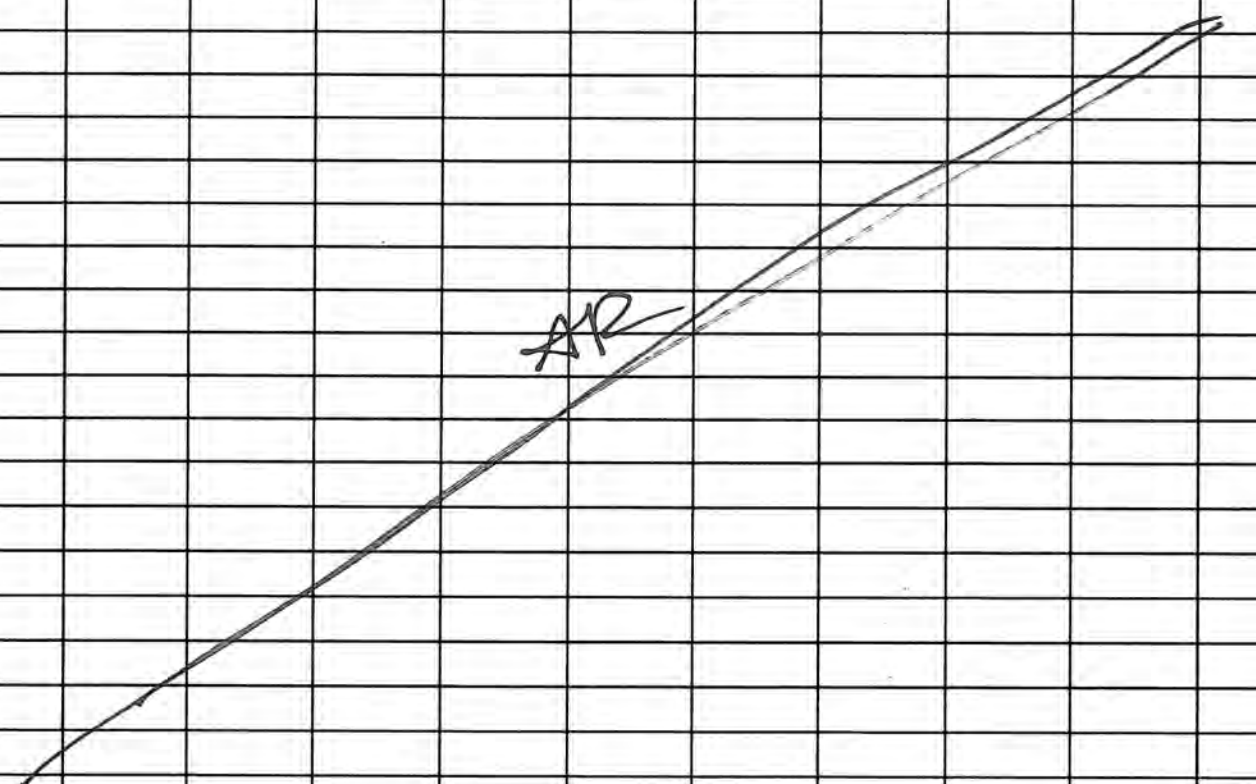
PAGE 2 OF 2

WELL: MW-9

PROJ #: MI001373.0001.00002

DATE : 1/10/11

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
1620	19.86	0.94	0.85	20.7	1.86	8.07	9.3	150.0	32.2	6.69
1625	19.87	0.78	0.71	1.7	0.15	7.92	-15.3	150.0	13.5	6.83
1630	19.88	0.81	0.73	1.5	0.14	7.90	-16.1	150.0	9.01	6.83
1635	19.75	4.28	3.88	1.5	0.13	7.29	-82.5	150.0	10.5	6.71
1640	19.81	4.2	4.43	0.8	0.07	7.34	-113.4	150.0	4.65	6.71
1645	19.75	5.02	4.52	0.7	0.06	7.36	-119.0	150.0	4.95	6.71
1650	19.70	5.09	4.57	0.7	0.07	7.36	-119.2	150.0	4.67	6.71
										
Total Depth of Well:		24.25								
Depth To Water Before Purging:		6.69								
Depth To Water After Purging:		6.01								

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 07272017
 Site/Well No. MW-54 Replicate No. - Code No. -
 Weather SUNNY, HIGH 80s Sampling Time: Begin 1122 End 1125

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) 8.12
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.40
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.984
 Gallons Pumped/Bailed Prior to Sampling 1.19
 Sample Pump Intake Setting (ft bmp) 18.52
 Purge Time begin 1041 end 1120
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 15.88
 SpC (mS/cm) 6.459
 CND (mS/cm) 5.336
 Dissolved Oxygen (%) 2.8
 Dissolved Oxygen (mg/L) 0.27
 pH (s.u.) 7.71
 ORP (mV) -121.5
 Turbidity (NTU) DK450 8.44
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL: MW-54

PROJ #: MI001373.0001.00002

DATE: 07/27/2017

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 072717
 Site/Well No. MW-64 Replicate No. - Code No. -
 Weather _____ 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) 20.05
 Depth to Water (ft bmp) 9.86
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.19
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.6304
 Gallons Pumped/Bailed Prior to Sampling 1.19
 Sample Pump Intake Setting (ft bmp) 18.05
 Purge Time begin 1625 end _____
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.23
 SpC (mS/cm) 5.423
 CND (mS/cm) 4.722
 Dissolved Oxygen (%) 5.1
 Dissolved Oxygen (mg/L) 0.48
 pH (s.u.) 7.46
 ORP (mV) -56.4
 Turbidity (NTU) 9.90
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 07272017
 Site/Well No. MW-42 Replicate No. — Code No. —
 Weather SUNNY, HIGH 80s Sampling Time: Begin 1530 End 1535

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.43
 Depth to Water (ft bmp) 9.15
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.28
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.804
 Gallons Pumped/Bailed Prior to Sampling 1.587
 Sample Pump Intake Setting (ft bmp) 18.43
 Purge Time begin 1434 end 1530
 Pumping Rate (ml/min) 100
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.45
 SpC (mS/cm) 3.890
 CND (mS/cm) 3.403
 Dissolved Oxygen (%) 3.6
 Dissolved Oxygen (mg/L) 0.33
 pH (s.u.) 7.49
 ORP (mV) -103.6
 Turbidity (NTU) 8.48
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

22 Erhard

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 07/27/2017
 Site/Well No. MW-52 Replicate No. - Code No. -
 Weather SUNNY, HIGH 80s Sampling Time: Begin 1300 End 1303

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.75
 Depth to Water (ft bmp) 8.36
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.39
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.8224
 Gallons Pumped/Bailed Prior to Sampling 1
 Sample Pump Intake Setting (ft bmp) 17.75
 Purge Time begin 1216 end 1255
 Pumping Rate (ml/min) 100
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.17
 SpC (mS/cm) 4.179
 CND (mS/cm) 3.633
 Dissolved Oxygen (%) 3.2
 Dissolved Oxygen (mg/L) 0.29
 pH (s.u.) 7.65
 ORP (mV) -121.4
 Turbidity (NTU) 8.46
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

→ crazy nos
b/c forgot
take cover
→ nos off
pk now

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 072817
 Site/Well No. MW-33 Replicate No. - Code No. -
 Weather 072817 CLOUDY, 70s Sampling Time: Begin 1422 End 1430

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) 8.88
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.84
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7344
 Gallons Pumped/Bailed Prior to Sampling 3.43
 Sample Pump Intake Setting (ft bmp) 17.72
 Purge Time begin 1315 end 1420
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.33
 SpC (mS/cm) 5.016
 CND (mS/cm) 4.378
 Dissolved Oxygen (%) 6.6
 Dissolved Oxygen (mg/L) 0.62
 pH (s.u.) 7.25
 ORP (mV) -51.6
 Turbidity (NTU) 13.3
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL: MW-33

PROJ #: MI001373.0001.00002

DATE: 072817

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 072817
 Site/Well No. MW-39 Replicate No. - Code No. -
 Weather PARTLY CLOUDY, 70s Sampling Time: Begin 1219 End 1225

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 23.92
 Depth to Water (ft bmp) ~~10.45~~ 11.45
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.47
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.9952
 Gallons Pumped/Bailed Prior to Sampling 2.57
 Sample Pump Intake Setting (ft bmp) 20.92
 Purge Time begin 1105 end 1210
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.86
 SpC (mS/cm) 6.016
 CND (mS/cm) 5.539
 Dissolved Oxygen (%) 4.6
 Dissolved Oxygen (mg/L) 0.41
 pH (s.u.) 7.14
 ORP (mV) -55.6
 Turbidity (NTU) 8.96
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL: MW-39

PROJ #: MI001373.0001.00002

DATE: 072817

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 072817
 Site/Well No. MW -31 Replicate No. — Code No. —
 Weather OVERCAST, ~65°F Sampling Time: Begin 1018-1020 End 1025

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.69
 Depth to Water (ft bmp) 10.26
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.43
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.8288
 Gallons Pumped/Bailed Prior to Sampling 1.38
 Sample Pump Intake Setting (ft bmp) 19.69
 Purge Time begin 0940 end 1015
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.45
 SpC (mS/cm) 5.830
 CND (mS/cm) 4.874
 Dissolved Oxygen (%) 2.7
 Dissolved Oxygen (mg/L) 0.26
 pH (s.u.) 7.42
 ORP (mV) -86.0
 Turbidity (NTU) 1.54
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow

Remarks ORP values slightly lower
numbers than previous wells measured on
07/27/2017 (could
be a function of calibration)

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL: MW-31

PROJ #: MI001373.0001.00002

DATE: 072817

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 072817
 Site/Well No. MW-38 Replicate No. - Code No. -
 Weather CLOUDY, HIGH 70s Sampling Time: Begin 1632 End 1640

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) 8.76
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.78
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7248
 Gallons Pumped/Bailed Prior to Sampling 4.761*
 Sample Pump Intake Setting (ft bmp) ~~300~~ 17.54
 Purge Time begin 1530 end 1630
 Pumping Rate (ml/min) 300
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.75
 SpC (mS/cm) 2.496
 CND (mS/cm) 2.102
 Dissolved Oxygen (%) 6.6
 Dissolved Oxygen (mg/L) 0.63
 pH (s.u.) 7.47
 ORP (mV) -113.1
 Turbidity (NTU) ± 15.3
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

* Flow was being varied to decrease turbidity. This is an approximate number.

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

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WELL: MW-38

PROJ #: MI001373.0001.00002

DATE: 072817

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/31/17
 Site/Well No. #0 MW-7 Replicate No. — Code No. —
 Weather Sunny, 80's Sampling Time: Begin 1052 End 1057

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 22-39
 Depth to Water (ft bmp) 4.79
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 17.60
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.816
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~21'
 Purge Time begin 1005 end 1050
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.61
 SpC (mS/cm) 7.122
 CND (mS/cm) 6.253
 Dissolved Oxygen (%) 32
 Dissolved Oxygen (mg/L) 0.30
 pH (s.u.) 7.39
 ORP (mV) -126.7
 Turbidity (NTU) 8.666
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. DeGrandis

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

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/31/17
 Site/Well No. MW-20 Replicate No. — Code No. —
 Weather Sunny, 80's Sampling Time: Begin 1157 End 1202

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 116.98
 Depth to Water (ft bmp) 6.29
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.69
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7104
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~15.5'
 Purge Time begin 1115 end 1155
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.32
 SpC (mS/cm) 5.119
 CND (mS/cm) 4.662
 Dissolved Oxygen (%) 31
 Dissolved Oxygen (mg/L) 6.28
 pH (s.u.) 7.02
 ORP (mV) -84.0
 Turbidity (NTU) 22.9
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel

A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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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PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

Total Depth of Well:	16.98
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Depth To Water Before Purging: 6.29

Depth To Water After Purging: 6.107

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 8/1/17
 Site/Well No. mw-37 Replicate No. — Code No. —
 Weather Sunny, 70's Sampling Time: Begin 1115 End 1120

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 22.83
 Depth to Water (ft bmp) 8.25
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 14.58
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.3328
 Gallons Pumped/Bailed Prior to Sampling ~4
 Sample Pump Intake Setting (ft bmp) ~21'
 Purge Time begin 100 end 1110
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.100
 SpC (mS/cm) 2.449
 CND (mS/cm) 2.150
 Dissolved Oxygen (%) 5.3
 Dissolved Oxygen (mg/L) 0.49
 pH (s.u.) 7.40
 ORP (mV) -113.6
 Turbidity (NTU) 42.6
 Color none
 Odor none
 Appearance slightly turbid
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. Wismen

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 8/1/17
 Site/Well No. MW-15-600 Replicate No. — Code No. —
 Weather Sunny, 80's Sampling Time: Begin 1330 End 1335

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 99.63
 Depth to Water (ft bmp) 22.48 / 22.59 w/ pump in well
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 77.15'
 Casing Diameter/Type 2" PVC
 Gallons in Well 12.344
 Gallons Pumped/Bailed Prior to Sampling 100 ~9 GALLONS
 Sample Pump Intake Setting (ft bmp) ~97'
 Purge Time begin 1225 end 1330
 Pumping Rate (ml/min) 600
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.33°
 SpC (mS/cm) 0.523
 CND (mS/cm) 0.446
 Dissolved Oxygen (%) 3.2
 Dissolved Oxygen (mg/L) 0.30
 pH (s.u.) 7.88 ERW
 ORP (mV) -153.5
 Turbidity (NTU) 9.01
 Color NONE AFTER PURGE / GRAY'S TURBID AT FIRST
 Odor NONE
 Appearance APPEARS CLEAR AFTER PURGE
 Sampling Method Low Flow
 Remarks AS LOW OF FLOW AS POSSIBLE TO KEEP PUMP RUNNING

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/01/17
 Site/Well No. MW-15-59D Replicate No. — Code No. —
 Weather SUNNY, 80s Sampling Time: Begin 1730 End 1740

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 100.37
 Depth to Water (ft bmp) 25.38 / 25.57 AFTER INSTALLING GEO PUMP
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 74.79
 Casing Diameter/Type 2" PVC
 Gallons in Well 11.9664
 Gallons Pumped/Bailed Prior to Sampling ~9 GALLONS
 Sample Pump Intake Setting (ft bmp) ~98'
 Purge Time begin 1605 end 1725
 Pumping Rate (ml/min) 600
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.05
 SpC (mS/cm) 0.418
 CND (mS/cm) 0.347
 Dissolved Oxygen (%) 1.8
 Dissolved Oxygen (mg/L) 0.18
 pH (s.u.) 7.85
 ORP (mV) -138.6
 Turbidity (NTU) 91.1
 Color NONE
 Odor NONE
 Appearance APPEARS SLIGHTLY TURBID
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

← TURNED
GEO PUMP
UP A LITTLE

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date _____
 Site/Well No. MW-15-61D Replicate No. — Code No. —
 Weather SUNNY, 80's Sampling Time: Begin 1930 End 1940

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 96.67'
 Depth to Water (ft bmp) 24.69'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 71.98'
 Casing Diameter/Type 2" PVC
 Gallons in Well 11.5168
 Gallons Pumped/Bailed Prior to Sampling 
 Sample Pump Intake Setting (ft bmp) ~94
 Purge Time begin 1820 end 1925
 Pumping Rate (ml/min) 600
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.13
 SpC (mS/cm) 1.076
 CND (mS/cm) 0.894
 Dissolved Oxygen (%) 5.9
 Dissolved Oxygen (mg/L) 0.58
 pH (s.u.) 7.47
 ORP (mV) -111.1
 Turbidity (NTU) 11.9
 Color NONE
 Odor NONE
 Appearance SLIGHTLY TURBID
 Sampling Method Low Flow

Remarks —NOT PUMPING FROM 1905-1920
DUE TO TRUCK BATTERY DYING.

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/02/17
 Site/Well No. MW-24 Replicate No. — Code No. —
 Weather SUNNY, 80's Sampling Time: Begin 1400 End 1410

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 23.92'
 Depth to Water (ft bmp) 10.06'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 13.86'
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.2176
 Gallons Pumped/Bailed Prior to Sampling ~ 3 GALLONS
 Sample Pump Intake Setting (ft bmp) ~ 21'
 Purge Time begin 1310 end 1400
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.72
 SpC (mS/cm) 2.626
 CND (mS/cm) 2.325
 Dissolved Oxygen (%) 11.5
 Dissolved Oxygen (mg/L) 1.10
 pH (s.u.) 7.13
 ORP (mV) -70.2
 Turbidity (NTU) 10.0
 Color NONE
 Odor NONE
 Appearance SLIGHTLY TURBID
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
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Sampling Personnel R. WISMAN

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/02/17
 Site/Well No. MW-25 Replicate No. — Code No. —
 Weather SUNNY, 70's Sampling Time: Begin 1200 End 1210

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.53'
 Depth to Water (ft bmp) 6.42'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 14.11'
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.2576
 Gallons Pumped/Bailed Prior to Sampling ~3 GALLONS
 Sample Pump Intake Setting (ft bmp) ~18'
 Purge Time begin 1100 end 1155
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.93
 SpC (mS/cm) 4.267
 CND (mS/cm) 3.853
 Dissolved Oxygen (%) 12.8
 Dissolved Oxygen (mg/L) 1.15
 pH (s.u.) 7.36
 ORP (mV) -99.2
 Turbidity (NTU) 13.0
 Color NONE
 Odor NONE
 Appearance SLIGHTLY TURBID / FINE PARTICLES
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/02/17
 Site/Well No. TW-16-02 Replicate No. — Code No. —
 Weather SUNNY, 80's Sampling Time: Begin 1545 End 1555

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 17.17'
 Depth to Water (ft bmp) 8.10'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.07'
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.4512 GAL
 Gallons Pumped/Bailed Prior to Sampling ~3 GALLONS
 Sample Pump Intake Setting (ft bmp) ~15'
 Purge Time begin 1450 end 1540
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.51
 SpC (mS/cm) 2.249
 CND (mS/cm) 2.014
 Dissolved Oxygen (%) 2.3
 Dissolved Oxygen (mg/L) 0.21
 pH (s.u.) 7.34
 ORP (mV) -118.4
 Turbidity (NTU) 2.41
 Color NONE
 Odor NONE
 Appearance APPEARS CLEAR
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel R. WISMAN

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/02/17
 Site/Well No. ① TW-16-01 Replicate No. — Code No. —
 Weather OVERCAST, 70's Sampling Time: Begin 1715 End 1725

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 16.81'
 Depth to Water (ft bmp) 8.39'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.42'
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.3472 GALLONS
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~14
 Purge Time begin 1610 end —
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.65
 SpC (mS/cm) 3.728
 CND (mS/cm) ~~3.215~~ (sw) 3.275
 Dissolved Oxygen (%) 4.9
 Dissolved Oxygen (mg/L) 0.45
 pH (s.u.) 7.17
 ORP (mV) -80.8
 Turbidity (NTU) 7.26
 Color NONE
 Odor NONE
 Appearance APPEARS CLEAR
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
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<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sampling Personnel R. WISMAN

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

RAIN

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-23 Replicate No. — Code No. —
 Weather SUNNY, 70°S Sampling Time: Begin 1235 End 1245

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.74'
 Depth to Water (ft bmp) 6.89'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.85
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.056
 Gallons Pumped/Bailed Prior to Sampling ~3
 Sample Pump Intake Setting (ft bmp) ~17'
 Purge Time begin 1135 end 1230
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.04
 SpC (mS/cm) 6.438
 CND (mS/cm) 5.705
 Dissolved Oxygen (%) 3.5
 Dissolved Oxygen (mg/L) 0.32
 pH (s.u.) 7.00
 ORP (mV) -59.6
 Turbidity (NTU) 4.79
 Color NONE
 Odor NONE
 Appearance APPEARS CLEAR
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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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WELL: MW-23

PROJ #: MI001373.0001.00002

DATE: 08/03/17

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. PW-16-02 Replicate No. — Code No. —
 Weather SUNNY, 80°S Sampling Time: Begin — End —

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 24.26'
 Depth to Water (ft bmp) 6.85'
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 17.41'
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.7856
 Gallons Pumped/Bailed Prior to Sampling ~2 GALLONS
 Sample Pump Intake Setting (ft bmp) ~20' DUE TO SUMP
 Purge Time begin 1330 end 1405
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.23
 SpC (mS/cm) 0.866
 CND (mS/cm) 0.739
 Dissolved Oxygen (%) 1.7
 Dissolved Oxygen (mg/L) 0.16
 pH (s.u.) 6.72
 ORP (mV) -45.1
 Turbidity (NTU) 2.59
 Color NONE
 Odor NONE
 Appearance APPEARS CLEAR
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
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<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sampling Personnel R. WISMAN

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-2 Replicate No. — Code No. —
 Weather Inside 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) 19.44
 Depth to Water (ft bmp) 6.98
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.55
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.008
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) 17.5 ft
 Purge Time begin 1040 end 1135
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.45
 SpC (mS/cm) 13.64
 CND (mS/cm) 12.71
 Dissolved Oxygen (%) 2.0
 Dissolved Oxygen (mg/L) 0.17
 pH (s.u.) 7.23
 ORP (mV) -146.7
 Turbidity (NTU) 1.48
 Color clear
 Odor mild
 Appearance clear - slight gray turbidity at first but cleared up.
 Sampling Method Low Flow

Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel S. Dunne

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

Document #ENFM005, Revision 03

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-3 Replicate No. — Code No. —
 Weather Inside Sampling Time: Begin 1000 End 1005

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.43
 Depth to Water (ft bmp) 7.29
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.14
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.78 gal
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~16.5 ft
 Purge Time begin 0915 end 1005
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.14
 SpC (mS/cm) 13.73
 CND (mS/cm) 12.72
 Dissolved Oxygen (%) 2.3
 Dissolved Oxygen (mg/L) 0.20
 pH (s.u.) 7.33
 ORP (mV) -125.4
 Turbidity (NTU) 1.13
 Color Clear
 Odor None
 Appearance Clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel

S. Dunne

Well Casing Volumes

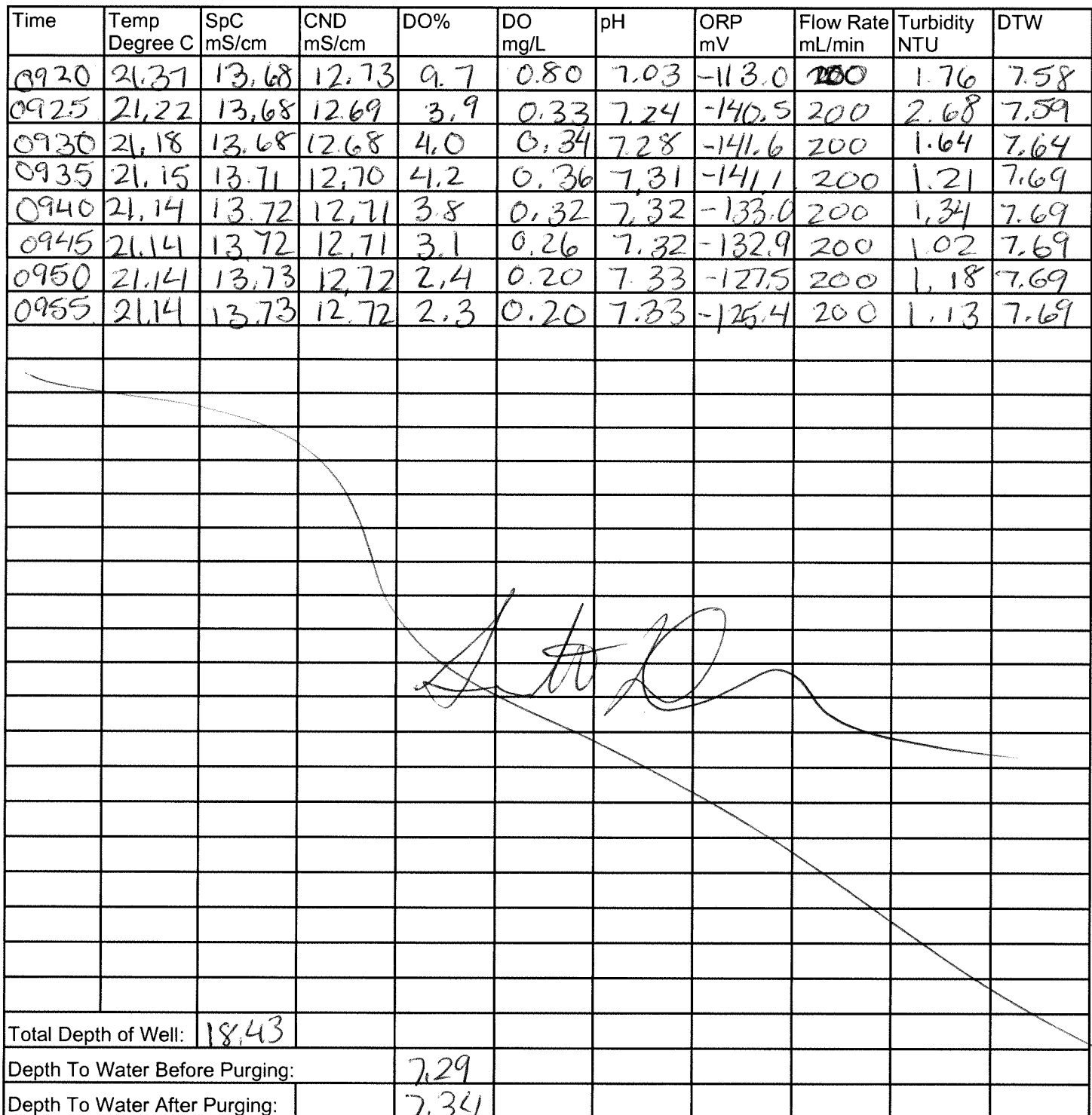
Gal./Ft. 0.5" = 0.01 1-¼" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-½" = 0.09 2-½" = 0.26 3-½" = 0.50 6" = 1.47

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI



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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-4 Replicate No. — Code No. —
 Weather Inside Sampling Time: Begin 1340 End 1345

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.93
 Depth to Water (ft bmp) 7.75
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) NA
 Casing Diameter/Type 2" PVC
 Gallons in Well —
 Gallons Pumped/Bailed Prior to Sampling - 2
 Sample Pump Intake Setting (ft bmp) 180
 Purge Time begin 1255 end 1345
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.71
 SpC (mS/cm) 10.46
 CND (mS/cm) 9.801
 Dissolved Oxygen (%) 3.6
 Dissolved Oxygen (mg/L) 0.30
 pH (s.u.) 7.13
 ORP (mV) -97.0
 Turbidity (NTU) 2.41
 Color Clear
 Odor Mild - strong
 Appearance Clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sampling Personnel S. Dunne

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

Document #ENFM005, Revision 03

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-5 Replicate No. — Code No. —
 Weather Inside / Clean Room Sampling Time: Begin 1520 End 1525

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.63
 Depth to Water (ft bmp) 7.27
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.36
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.971
 Gallons Pumped/Bailed Prior to Sampling ~2.3
 Sample Pump Intake Setting (ft bmp) 17.5
 Purge Time begin 1430 end 1525
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) _____
 SpC (mS/cm) _____
 CND (mS/cm) _____
 Dissolved Oxygen (%) _____
 Dissolved Oxygen (mg/L) _____
 pH (s.u.) _____
 ORP (mV) _____
 Turbidity (NTU) _____
 Color Slight orange hue but overall clear
 Odor mild -> strong
 Appearance Clear low turbidity closed up after purging
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel S. Dunne

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL : mw-5

DATE: 08/03/17

LOC: Ford LTP, Livonia, MI

Document #ENFM005, Revision 03

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/04/17
 Site/Well No. MW-10 Replicate No. — Code No. —
 Weather Inside Sampling Time: Begin 0905 End 0910

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.67
 Depth to Water (ft bmp) 8.62
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.05
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.928
 Gallons Pumped/Bailed Prior to Sampling 18.5
 Sample Pump Intake Setting (ft bmp) 18.5
 Purge Time begin 0815 end 0910
 Pumping Rate (ml/min) 200 → 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.217
 SpC (mS/cm) 8.709
 CND (mS/cm) 8.112
 Dissolved Oxygen (%) 2.9
 Dissolved Oxygen (mg/L) 0.25
 pH (s.u.) 6.94
 ORP (mV) -137.4
 Turbidity (NTU) 2.13
 Color clear w/ orangish turbidity
 Odor mild → strong
 Appearance clear
 Sampling Method Low Flow

Remarks lowered purge rate after drawdown approached 1st

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel S. Dunne

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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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/03/17
 Site/Well No. MW-10 Replicate No. Code No.
 Weather Inside Sampling Time: Begin End

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.67
 Depth to Water (ft bmp) 8.61
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.06
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.929
 Gallons Pumped/Bailed
 • Prior to Sampling
 Sample Pump Intake
 Setting (ft bmp) 18.5
 Purge Time begin 1530 end
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C)
 SpC (mS/cm)
 CND (mS/cm)
 Dissolved Oxygen (%)
 Dissolved Oxygen (mg/L)
 pH (s.u.)
 ORP (mV)
 Turbidity (NTU)
 Color
 Odor
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

Sampling Personnel S. Dunne

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

YSI/LOW FLOW SAMPLING LOG

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WELL: MW-10

PROJ #: MI001373.0001.00002

DATE: 08/03/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 073117
 Site/Well No. MW-62 Replicate No. - Code No. -
 Weather SUNNY, 70S Sampling Time: Begin 1102 End 1110

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.01
 Depth to Water (ft bmp) 9.40
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.61
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.857
 Gallons Pumped/Bailed Prior to Sampling 2
 Sample Pump Intake Setting (ft bmp) 19.01
 Purge Time begin 1030 end 1100
 Pumping Rate (ml/min) 200-220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.17
 SpC (mS/cm) 4.590
 CND (mS/cm) 4.166
 Dissolved Oxygen (%) 2.9
 Dissolved Oxygen (mg/L) 0.26
 pH (s.u.) 7.39
 ORP (mV) -107.1
 Turbidity (NTU) 5.87
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 073117
 Site/Well No. MW-50 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1232 End 1240

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.42
 Depth to Water (ft bmp) 8.31
 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 2.5
 Sample Pump Intake Setting (ft bmp) 16.42
 Purge Time begin 1135 end 1230
 Pumping Rate (ml/min)
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.54
 SpC (mS/cm) 2.437
 CND (mS/cm) 2.138
 Dissolved Oxygen (%) 4.4
 Dissolved Oxygen (mg/L) 0.41
 pH (s.u.) 7.29
 ORP (mV) -47.9
 Turbidity (NTU) 8.57
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>

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

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YSI/LOW FLOW SAMPLING LOG

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

Total Depth of Well:	18.42
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Depth To Water Before Purging: 8.31

Depth To Water After Purging: 8.48

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 073117
 Site/Well No. MW-63 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1442 End 1450

Evacuation Data

Field Parameters

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.75
 Depth to Water (ft bmp) 8.62
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 3.13
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.5008
 Gallons Pumped/Bailed Prior to Sampling 1.58
 Sample Pump Intake Setting (ft bmp) 9.75
 Purge Time begin 1410 end 1440
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Temperature (°C) 19.91
 SpC (mS/cm) 1.955
 CND (mS/cm) 1.764
 Dissolved Oxygen (%) 5.0
 Dissolved Oxygen (mg/L) 0.46
 pH (s.u.) 7.52
 ORP (mV) -26.4
 Turbidity (NTU) 1.04
 Color CLEAR ~~NONE~~
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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
m	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 #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 073117
 Site/Well No. MW-67 Replicate No. 5 Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1612 End 1618

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 13.84
 Depth to Water (ft bmp) 9.82
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 4.02
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.6432
 Gallons Pumped/Bailed Prior to Sampling 2.116
 Sample Pump Intake Setting (ft bmp) 11.84
 Purge Time begin 1530 end 1610
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.05
 SpC (mS/cm) 4.730
 CND (mS/cm) 4.371
 Dissolved Oxygen (%) 2.7
 Dissolved Oxygen (mg/L) 0.24
 pH (s.u.) 7.15
 ORP (mV) 70.4
 Turbidity (NTU) 4.35
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow

Remarks POSITIVE ORP VALUES (DIFFERENT FROM PREV. WELLS WHERE VALVES WERE -VE). CHECKED WITH ADEGRANDIS TO BE OK.

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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* was making adjustments to setup, so did not take readings.

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 073117
 Site/Well No. MW-48 MW-47 DK Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1714 End 1720

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.96
 Depth to Water (ft bmp) 10.13
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.83
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.572
 Gallons Pumped/Bailed Prior to Sampling 1.587
 Sample Pump Intake Setting (ft bmp) 17.96
 Purge Time begin 1640 end 1710
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.78
 SpC (mS/cm) 5.062
 CND (mS/cm) 4.460
 Dissolved Oxygen (%) 1.9
 Dissolved Oxygen (mg/L) 0.17
 pH (s.u.) 7.45
 ORP (mV) -40.8
 Turbidity (NTU) 3.50
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 07/31/17
 Site/Well No. MW-46 Replicate No. - Code No. -
 Weather SUNNY, HIGH 70s Sampling Time: Begin 1825 End 1830

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.78
 Depth to Water (ft bmp) 10.36
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.42
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.5072
 Gallons Pumped/Bailed Prior to Sampling 1.85
 Sample Pump Intake Setting (ft bmp) 17.28
 Purge Time begin 1750 end 1825
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.18
 SpC (mS/cm) 6.786
 CND (mS/cm) 5.902
 Dissolved Oxygen (%) 5.7
 Dissolved Oxygen (mg/L) 0.53
 pH (s.u.) 7.34
 ORP (mV) 72.7
 Turbidity (NTU) 6.24
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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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PAGE 2 OF 2

WELL: MW-46

PROJ #: MI001373.0001.00002

DATE : _____

LOC: Ford LTP, Livonia, MI

[illegible]

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/01/17
 Site/Well No. MW-68 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1715 End 1725

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) 9.60
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.26
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.641
 Gallons Pumped/Bailed Prior to Sampling 2.38
 Sample Pump Intake Setting (ft bmp) 17.86
 Purge Time begin 1640 end 1710
 Pumping Rate (ml/min) 300
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.72
 SpC (mS/cm) 13.96
 CND (mS/cm) 12.57
 Dissolved Oxygen (%) 5.3
 Dissolved Oxygen (mg/L) 0.46
 pH (s.u.) 7.15
 ORP (mV) -38.8
 Turbidity (NTU) 2.01
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-68

PROJ #: MI001373.0001.00002

DATE: 080117

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 08/01/17
 Site/Well No. MW-71 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1600 End 1610

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.22
 Depth to Water (ft bmp) 12.33
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 7.89
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.262
 Gallons Pumped/Bailed Prior to Sampling 3.17
 Sample Pump Intake Setting (ft bmp) 18.22
 Purge Time begin 1520 end 1555
 Pumping Rate (ml/min) 300
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.10
 SpC (mS/cm) 10.48
 CND (mS/cm) 9.495
 Dissolved Oxygen (%) 2.2
 Dissolved Oxygen (mg/L) 0.19
 pH (s.u.) 7.16
 ORP (mV) -87.7
 Turbidity (NTU) 2.83
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

YSI/LOW FLOW SAMPLING LOG

WELL: MW 71

DATE: 080117

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080117
 Site/Well No. MW-70 Replicate No. - Code No. -
 Weather SUNNY, 70s Sampling Time: Begin 1450 End 1455

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.18
 Depth to Water (ft bmp) 11.07
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.11
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.4576
 Gallons Pumped/Bailed Prior to Sampling 2
 Sample Pump Intake Setting (ft bmp) 18.18
 Purge Time begin 1415 end 1445
 Pumping Rate (ml/min) 220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.25
 SpC (mS/cm) 5.409
 CND (mS/cm) 4.816
 Dissolved Oxygen (%) 4.0
 Dissolved Oxygen (mg/L) 0.36
 pH (s.u.) 7.39
 ORP (mV) -67.2
 Turbidity (NTU) 3.33
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080117
 Site/Well No. MW-45 Replicate No. - Code No. -
 Weather SUNNY, 82°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) 19.76
 Depth to Water (ft bmp) 11.15
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.61
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.3776
 Gallons Pumped/Bailed Prior to Sampling 2
 Sample Pump Intake Setting (ft bmp) 17.76
 Purge Time begin 1220 end 1250
 Pumping Rate (ml/min) 240
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.37
 SpC (mS/cm) 1.646
 CND (mS/cm) 1.436
 Dissolved Oxygen (%) 3.2
 Dissolved Oxygen (mg/L) 0.30
 pH (s.u.) 7.59
 ORP (mV) -121.1
 Turbidity (NTU) 1.83
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080117
 Site/Well No. MW-48 Replicate No. - Code No. -
 Weather SUNNY, 70s Sampling Time: Begin 1102 End 1108

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.42
 Depth to Water (ft bmp) 9.76
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.66
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7056
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) 18.42
 Purge Time begin 0955 end 1100
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 21.21
 SpC (mS/cm) 4.091
 CND (mS/cm) 3.794
 Dissolved Oxygen (%) 1.9
 Dissolved Oxygen (mg/L) 0.16
 pH (s.u.) 7.68
 ORP (mV) -89.1
 Turbidity (NTU) 20.6
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

RCADIS YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL: MW-48

PROJ #: MI001373.0001.00002

DATE: 0801/7

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080217
 Site/Well No. MW-44 Replicate No. — Code No. —
 Weather SUNNY, 70s Sampling Time: Begin 0940 End 091000

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.93
 Depth to Water (ft bmp) 8.51
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.42
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.9872
 Gallons Pumped/Bailed Prior to Sampling 2
 Sample Pump Intake Setting (ft bmp) 18.93
 Purge Time begin 0905 end 0935
 Pumping Rate (ml/min) 250
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.60
 SpC (mS/cm) 5.700
 CND (mS/cm) 5.006
 Dissolved Oxygen (%) 3.3
 Dissolved Oxygen (mg/L) 0.31
 pH (s.u.) 7.50
 ORP (mV) -112.3
 Turbidity (NTU) 3.81
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks DUP-02

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-44

PROJ #: MI001373.0001.00002

DATE : 080217

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080217
 Site/Well No. MW-22 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1105 End 1115

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 20.42
 Depth to Water (ft bmp) 7.80
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.62
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.0192
 Gallons Pumped/Bailed Prior to Sampling 2.037
 Sample Pump Intake Setting (ft bmp) 17.92
 Purge Time begin 1025 end 1105
 Pumping Rate (ml/min) 220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.53
 SpC (mS/cm) 8.743
 CND (mS/cm) 7.831
 Dissolved Oxygen (%) 5.8
 Dissolved Oxygen (mg/L) 0.52
 pH (s.u.) 7.19
 ORP (mV) -76.4
 Turbidity (NTU) 5.08
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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 #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

Total Depth of Well:	20.42
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Depth To Water Before Purging: 7.80

Depth To Water After Purging: 8.74

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080217
 Site/Well No. MW-65 Replicate No. - Code No. -
 Weather OVERCAST/SUNNY 70s Sampling Time: Begin 1300 End 1310

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.11
 Depth to Water (ft bmp) 10.02
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.09
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7744
 Gallons Pumped/Bailed Prior to Sampling 2.32
 Sample Pump Intake Setting (ft bmp) 19.11
 Purge Time begin 1215 end 1255
 Pumping Rate (ml/min) 220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.50
 SpC (mS/cm) 3.010
 CND (mS/cm) 2.692
 Dissolved Oxygen (%) 3.3
 Dissolved Oxygen (mg/L) 0.30
 pH (s.u.) 7.38
 ORP (mV) -93.4
 Turbidity (NTU) 10.2
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL: MW-65

PROJ #: MI001373.0001.00002

DATE : 080217

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080217
 Site/Well No. MW-66 Replicate No. - Code No. -
 Weather OVERCAST, 70s Sampling Time: Begin 1522 End 1530

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.35
 Depth to Water (ft bmp) 7.93
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.42
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.8272
 Gallons Pumped/Bailed Prior to Sampling 3.5
 Sample Pump Intake Setting (ft bmp) 17.35
 Purge Time begin 1420 end 1520
 Pumping Rate (ml/min) 220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.57
 SpC (mS/cm) 3.081
 CND (mS/cm) 2.820
 Dissolved Oxygen (%) 8.0
 Dissolved Oxygen (mg/L) 0.71
 pH (s.u.) 7.53
 ORP (mV) -111.6
 Turbidity (NTU) 220
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel DK R. WISNIAKI D. KAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080217
 Site/Well No. PW-16-01 Replicate No. - Code No. -
 Weather OVERCAST, 70s Sampling Time: Begin 1717 End 1725

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 21.58
 Depth to Water (ft bmp) 9.13
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.45
 Casing Diameter/Type 2" DR PVC 6" PVC
 Gallons in Well 18.3015
 Gallons Pumped/Bailed Prior to Sampling 4.62
 Sample Pump Intake Setting (ft bmp) 16.58
 Purge Time begin 1605 end 1715
 Pumping Rate (ml/min) 250
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.84
 SpC (mS/cm) 1.461
 CND (mS/cm) 1.345
 Dissolved Oxygen (%) 1.9
 Dissolved Oxygen (mg/L) 0.17
 pH (s.u.) 6.79
 ORP (mV) 9.2
 Turbidity (NTU) 9.84
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel R. WISMAN D. KAMATH

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

* sampled
 5ft above total depth b/cof sump pump @ the bottom

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PROJ #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

DTWs
Not
measured
due to
rain

Document #ENFM005, Revision 03

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080317
 Site/Well No. TW-16-03 Replicate No. - Code No. -
 Weather OVERCAST, 70s Sampling Time: Begin 1530 End 1535

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.65
 Depth to Water (ft bmp) 6.26
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.39
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.982
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) 16.65
 Purge Time begin 1445 end 1525
 Pumping Rate (ml/min) 220
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.29
 SpC (mS/cm) 1.221
 CND (mS/cm) 1.018
 Dissolved Oxygen (%) 4.6
 Dissolved Oxygen (mg/L) 0.45
 pH (s.u.) 7.23
 ORP (mV) -62.4
 Turbidity (NTU) 6.74
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL: TW-16-03

PROJ #: MI001373.0001.00002

DATE: 0308 080317

LOC: Ford LTP, Livonia, MI

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⑧ 17.7 NTU (Turbidity @ 1455)

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080317
 Site/Well No. TW-16-04 Replicate No. - Code No. -
 Weather SUNNY, HIGH 70s Sampling Time: Begin 1420 End 1435

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.93
 Depth to Water (ft bmp) 6.62
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 12.31
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.9696
 Gallons Pumped/Bailed Prior to Sampling 2.31
 Sample Pump Intake Setting (ft bmp) 16.93
 Purge Time begin 1340 end 1415
 Pumping Rate (ml/min) 250
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.76
 SpC (mS/cm) 1.324
 CND (mS/cm) 1.116
 Dissolved Oxygen (%) 3.0
 Dissolved Oxygen (mg/L) 0.29
 pH (s.u.) 7.26
 ORP (mV) -84.4
 Turbidity (NTU) 7.00
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL : TW-16-04

PROJ #: MI001373.0001.00002

DATE: 080317

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080317
 Site/Well No. MW-51 Replicate No. - Code No. -
 Weather SUNNY, HIGH 70s Sampling Time: Begin 1235 End 1245

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.92
 Depth to Water (ft bmp) 7.97
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.95
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.752
 Gallons Pumped/Bailed Prior to Sampling 2.64
 Sample Pump Intake Setting (ft bmp) 16.92
 Purge Time begin 1145 end 1230
 Pumping Rate (ml/min) 250
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.40
 SpC (mS/cm) 0.903
 CND (mS/cm) 0.754
 Dissolved Oxygen (%) 2.2
 Dissolved Oxygen (mg/L) 0.21
 pH (s.u.) 7.91
 ORP (mV) -43.4
 Turbidity (NTU) 6.10
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL: mw-51

PROJ #: MI001373.0001.00002

DATE: 080317

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080317
 Site/Well No. MW-28 Replicate No. - Code No. -
 Weather SUNNY, 80s Sampling Time: Begin 1050 End 1055

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.73
 Depth to Water (ft bmp) 4.81
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 6.92
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.107
 Gallons Pumped/Bailed Prior to Sampling 4.76
 Sample Pump Intake Setting (ft bmp) 9.73
 Purge Time begin 0950 end 1045
 Pumping Rate (ml/min) 300
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 22.89
 SpC (mS/cm) 7.876
 CND (mS/cm) 7.560
 Dissolved Oxygen (%) 5.7
 Dissolved Oxygen (mg/L) 0.48
 pH (s.u.) 7.49
 ORP (mV) 84.4
 Turbidity (NTU) 10.1
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow

Remarks CANNOT CLOSE THE LID OF THE WELL, AS IT IS BROKEN. FOR, NOW LID SITS ON THE WELL NOT FULLY BOLTED

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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 #: MI001373.0001.00002

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080417
 Site/Well No. MW-26 Replicate No. - Code No. -
 Weather CLOUDY, 60s Sampling Time: Begin 1210 End 1215

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.73
 Depth to Water (ft bmp) 6.15
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) NA
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.892
 Gallons Pumped/Bailed Prior to Sampling 3.17
 Sample Pump Intake Setting (ft bmp) 9.73
 Purge Time begin 1110 end 1205
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.22
 SpC (mS/cm) 3.348
 CND (mS/cm) 2.915
 Dissolved Oxygen (%) 2.6
 Dissolved Oxygen (mg/L) 0.24
 pH (s.u.) 7.13
 ORP (mV) 40.5
 Turbidity (NTU) 27.4
 Color NONE
 Odor NONE
 Appearance TINY BLACK COLORED SUSPENDED PARTICLES IN WATER
 Sampling Method Low Flow
 Remarks 1) BLACKISH OILY WATER IN THE FIRST 10 MINS
2) AFTER 30 MINS OF PURGING, LOOKS MORE LIKE BLACK SUSPENDED PARTICLES IN WATER

Constituents Sampled	Container Description	Number	Preservative
Vinly Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL : MW-26

PROJ #: MI001373.0001.00002

DATE: 080417

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 080417
 Site/Well No. MW-29 Replicate No. - Code No. -
 Weather CLOUDY, 60s Sampling Time: Begin 0950 End 1005

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 14.90
 Depth to Water (ft bmp) 5.48
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.42
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.5072
 Gallons Pumped/Bailed Prior to Sampling 2
 Sample Pump Intake Setting (ft bmp) 12.90
 Purge Time begin 0905 end 0950
 Pumping Rate (ml/min) 240
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.00
 SpC (mS/cm) 6.729
 CND (mS/cm) 5.957
 Dissolved Oxygen (%) 4.4
 Dissolved Oxygen (mg/L) 0.40
 pH (s.u.) 7.39
 ORP (mV) -58.8
 Turbidity (NTU) 8.65
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks DUP-03

Constituents Sampled	Container Description	Number	Preservative
<u>Vinly Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel DKAMATH

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-29

PROJ #: MI001373.0001.00002

DATE: 080417

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

APPENDIX B

Off-Site Groundwater Field Sampling Logs



ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. MW-82D Replicate No. _____ Code No. _____
 Weather Sunny 75°F Sampling Time: Begin 1112 End 1115

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 22.70
 Depth to Water (ft bmp) 8.51
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 14.27
 Casing Diameter/Type 2" PVC
 Gallons in Well 2.7
 Gallons Pumped/Bailed Prior to Sampling 2.5
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1020 end 1115
 Pumping Rate (ml/min) 120 ml/min
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.86
 SpC (mS/cm) 2.26
 CND (mS/cm) 1.91
 Dissolved Oxygen (%) 1.8
 Dissolved Oxygen (mg/L) 0.18
 pH (s.u.) 7.75
 ORP (mV) -87.3
 Turbidity (NTU) 9.77
 Color —
 Odor —
 Appearance —
 Sampling Method Low Flow
 Remarks Sample collected @ 1112.

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel

A. Reibel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL: MW-82D

PROJ #: MI001373.0001.00002

DATE : 7/25/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/28/17
 Site/Well No. MW-82-S Replicate No. Code No.
 Weather 70s Sunny 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) 13.39
 Depth to Water (ft bmp) 8.23
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 5.16
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.83
 Gallons Pumped/Bailed Prior to Sampling ~2.0
 Sample Pump Intake Setting (ft bmp)
 Purge Time begin 1128 end 1215
 Pumping Rate (ml/min) 120
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.43
 SpC (mS/cm) 1.47
 CND (mS/cm) 1.23
 Dissolved Oxygen (%) 2.2
 Dissolved Oxygen (mg/L) 0.22
 pH (s.u.) 7.21
 ORP (mV) -8.6
 Turbidity (NTU) 2.71
 Color
 Odor
 Appearance
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. Rubel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: 14W-92S

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

Total Depth of Well:	13.3'
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Depth To Water Before Purging: 8.23

Depth To Water After Purging:	8.69
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ARCADIS

Water Sampling Log

Project Ford LTP Project No. M1001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. MW-85 Replicate No. _____ Code No. _____
 Weather Sunny 78°F 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) 12.72
 Depth to Water (ft bmp) 6.14
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 6.58
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.05
 Gallons Pumped/Bailed Prior to Sampling 2.5
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1250 end 1350
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 19.80
 SpC (mS/cm) 4.24
 CND (mS/cm) 3.81
 Dissolved Oxygen (%) 2.9
 Dissolved Oxygen (mg/L) 0.4
 pH (s.u.) 7.42
 ORP (mV) -80.3
 Turbidity (NTU) 2.97
 Color _____
 Odor _____
 Appearance _____
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. Ribel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-85

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

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Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. MW79D Replicate No. _____ Code No. _____
 Weather _____ Sampling Time: Begin 1517 End 1522

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 14.64
 Depth to Water (ft bmp) 6.49
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.15
 Casing Diameter/Type 2" PVC
 Gallons in Well _____
 Gallons Pumped/Bailed Prior to Sampling _____
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1425 end 1522
 Pumping Rate (ml/min) _____
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 15.28
 SpC (mS/cm) 3.93
 CND (mS/cm) 3.20
 Dissolved Oxygen (%) 1.0
 Dissolved Oxygen (mg/L) 0.10
 pH (s.u.) 7.39
 ORP (mV) -69.9
 Turbidity (NTU) 1.98
 Color _____
 Odor _____
 Appearance _____
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL

Sampling Personnel A. Rubel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-79D

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. MW-795 Replicate No. _____ Code No. _____
 Weather 64°F / Sunny Sampling Time: Begin 1622 End 1625

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 9.74
 Depth to Water (ft bmp) 6.42
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 3.32
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.53
 Gallons Pumped/Bailed Prior to Sampling 2.5
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1537 end 1625
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.23
 SpC (mS/cm) 1.84
 CND (mS/cm) 1.57
 Dissolved Oxygen (%) 4.5
 Dissolved Oxygen (mg/L) 0.44
 pH (s.u.) 7.39
 ORP (mV) -65.8
 Turbidity (NTU) 1.62
 Color —
 Odor —
 Appearance —
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel A. Ruibel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL : MW-195

PROJ #: MI001373.0001.00002

DATE : 7/25/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. MW-77 Replicate No. _____ Code No. _____
 Weather Cloudy 70F Sampling Time: Begin 0942 End 0945

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 13.72
 Depth to Water (ft bmp) 5.94
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 7.78
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.24
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 905 end 0945
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.13
 SpC (mS/cm) 0.788
 CND (mS/cm) 0.670
 Dissolved Oxygen (%) 2.8
 Dissolved Oxygen (mg/L) 0.28
 pH (s.u.) 7.85
 ORP (mV) -47.3
 Turbidity (NTU) 1.29
 Color NONE
 Odor NONE
 Appearance Clear
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel A. Rubel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL: MW-77

PROJ #: MI001373.0001.00002

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. MW-72 Replicate No. _____ Code No. _____
 Weather 105 p.cloudy Sampling Time: Begin 1112 End 1115

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.59
 Depth to Water (ft bmp) 8.66
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.93
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.75
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1035 end 1115
 Pumping Rate (ml/min) 150
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.78
 SpC (mS/cm) 6.484
 CND (mS/cm) 5.466
 Dissolved Oxygen (%) 1.4
 Dissolved Oxygen (mg/L) 0.13
 pH (s.u.) 7.96
 ORP (mV) -112.7
 Turbidity (NTU) 4.52
 Color NONE
 Odor NONE
 Appearance Clear
 Sampling Method Low Flow
 Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Sampling Personnel A. Ribel

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-72

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. MW-74 Replicate No. _____ Code No. _____
 Weather 75°F/cloudy Sampling Time: Begin 1257 End 1301

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 18.78
 Depth to Water (ft bmp) 7.54
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 11.24
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.80
 Gallons Pumped/Bailed Prior to Sampling 2.0
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1215 end 1301
 Pumping Rate (ml/min) _____
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.20
 SpC (mS/cm) 4.922
 CND (mS/cm) 4.189
 Dissolved Oxygen (%) 1.5
 Dissolved Oxygen (mg/L) 0.15
 pH (s.u.) 7.72
 ORP (mV) -104.8
 Turbidity (NTU) 3.30
 Color NaNB
 Odor NaNB
 Appearance — clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-74

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI

ENFM005-YSIlog.xls

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. MW-76 Replicate No. _____ Code No. _____
 Weather 70s Sunny Sampling Time: Begin 1442 End 1445

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 19.73
 Depth to Water (ft bmp) 10.05
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 9.68
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.55
 Gallons Pumped/Bailed Prior to Sampling _____
 Sample Pump Intake Setting (ft bmp) _____
 Purge Time begin 1358 end 1445
 Pumping Rate (ml/min) _____
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) _____
 SpC (mS/cm) _____
 CND (mS/cm) _____
 Dissolved Oxygen (%) _____
 Dissolved Oxygen (mg/L) _____
 pH (s.u.) _____
 ORP (mV) _____
 Turbidity (NTU) _____
 Color _____
 Odor _____
 Appearance _____
 Sampling Method Low Flow

Remarks _____

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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

YSI/LOW FLOW SAMPLING LOG

WELL: MW-76

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI



ARCADIS

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL : MW-738

PROJ #: MI001373.0001.00002

DATE : 7/26/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. mw-73S Replicate No. DP-AL072617 Code No. —
 Weather M. cloudy, 70's Sampling Time: Begin 1327 End 1332

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.48
 Depth to Water (ft bmp) 6.42
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 5.06
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.8096
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~9.5'
 Purge Time begin 1250 end 1325
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.67
 SpC (mS/cm) 4.257
 CND (mS/cm) 3.905
 Dissolved Oxygen (%) 3.7
 Dissolved Oxygen (mg/L) 0.33
 pH (s.u.) 6.77
 ORP (mV) -26.3
 Turbidity (NTU) 7.29
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
<u>1,1-DCE</u>			
<u>cis-1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>PCE/TCE</u>			

Sampling Personnel A. DeGrandis

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

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7-26-17
 Site/Well No. MW-75D Replicate No. Code No.
 Weather Overcast, 70's Sampling Time: Begin End

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) 6.19
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.68
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.7088
 Gallons Pumped/Bailed Prior to Sampling ~3.0
 Sample Pump Intake Setting (ft bmp) ~15.5'
 Purge Time begin 1535 end 1635
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.85
 SpC (mS/cm) 7.328
 CND (mS/cm) 6.468
 Dissolved Oxygen (%) 3.0
 Dissolved Oxygen (mg/L) 0.27
 pH (s.u.) 7.48
 ORP (mV) -107.0
 Turbidity (NTU) 110
 Color light gray from silt
 Odor none
 Appearance turbid
 Sampling Method Low Flow
 Remarks

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
1,1-DCE			
cis-1,2-DCE			
trans-1,2-DCE			
TCE/PCE			

Sampling Personnel A. DeGrandis

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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-750

PROJ #: MI001373.0001.00002

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 07/26/2017
 Site/Well No. MW-86 Replicate No. - Code No. -
 Weather OVERCAST, 70s Sampling Time: Begin 1142 End 1147

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 16.66
 Depth to Water (ft bmp) 8.13
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.53
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.3648
 Gallons Pumped/Bailed Prior to Sampling NA
 Sample Pump Intake Setting (ft bmp) 14.66
 Purge Time begin 1055 end 1140
 Pumping Rate (ml/min) 100
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.37
 SpC (mS/cm) 3.606
 CND (mS/cm) 3.012
 Dissolved Oxygen (%) 4.5
 Dissolved Oxygen (mg/L) 0.44
 pH (s.u.) 7.24
 ORP (mV) -49.2
 Turbidity (NTU) 4.58
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,1-DCE</u>			
<u>1,1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>TCE/PCE</u>			

Sampling Personnel A. DeGrandis

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL: MW-86

PROJ #: MI001373.0001.00002

DATE : 07/26/2017

LOC: Ford LTP, Livonia, MI

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* NEEDED TO REFILL CYLINDER

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. mw-78 Replicate No. — Code No. —
 Weather Sunny, 80's Sampling Time: Begin 1457 End 1502

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.79
 Depth to Water (ft bmp) 3.55
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.24
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.3184
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~11'
 Purge Time begin 1415 end 1455
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.97
 SpC (mS/cm) 3.891
 CND (mS/cm) 3.368
 Dissolved Oxygen (%) 4.4
 Dissolved Oxygen (mg/L) 0.41
 pH (s.u.) 7.36
 ORP (mV) -89.2
 Turbidity (NTU) 2.59
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
<u>1,1-DCE</u>			
<u>CIS-1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>TCE/PCE</u>			

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL : mw-78

PROJ #: MI001373.0001.00002

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. mw-84 Replicate No. — Code No. —
 Weather Sunny, 80's Sampling Time: Begin 1632 End 1637

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 12.59
 Depth to Water (ft bmp) 5.19
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 7.40
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.184
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~12'
 Purge Time begin 1545 end 1630
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 17.89
 SpC (mS/cm) 3.638
 CND (mS/cm) 3.137
 Dissolved Oxygen (%) 5.1
 Dissolved Oxygen (mg/L) 0.48
 pH (s.u.) 7.15
 ORP (mV) -57.7
 Turbidity (NTU) 4.22
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
1,1-DCE			
Cis-1,2-DCE			
Trans-1,2-DCE			
TCE/PCE			

Sampling Personnel A. DeGrandis

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

YSI/LOW FLOW SAMPLING LOG

PAGE 2 OF 2

WELL: mw-84

PROJ #: MI001373.0001.00002

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/26/17
 Site/Well No. mw-87 Replicate No. — Code No. —
 Weather M. cloudy, 60's Sampling Time: Begin 1012 End 1017

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) 10.65
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 8.20
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.312
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~18'
 Purge Time begin 0920 end 1010
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 15.92
 SpC (mS/cm) 3.171
 CND (mS/cm) 2.619
 Dissolved Oxygen (%) 37.5
 Dissolved Oxygen (mg/L) 3.67
 pH (s.u.) 7.71
 ORP (mV) -99.1
 Turbidity (NTU) 7.72
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,1-DCE</u>			
<u>cis-1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>TCE / PCE</u>			

Sampling Personnel A. DeGrand

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

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WELL: mw-87

PROJ #: MI001373.0001.00002

DATE: 7/26/17

LOC: Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. MW-80S Replicate No. — Code No. —
 Weather Sunny, 70's Sampling Time: Begin — End —

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 11.50
 Depth to Water (ft bmp) 4.19
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 7.31
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.1696
 Gallons Pumped/Bailed Prior to Sampling ~2
 Sample Pump Intake Setting (ft bmp) ~11
 Purge Time begin 1315 end 1350
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.30
 SpC (mS/cm) 2.705
 CND (mS/cm) 2.359
 Dissolved Oxygen (%) 7.7
 Dissolved Oxygen (mg/L) 0.72
 pH (s.u.) 7.12
 ORP (mV) -58.4
 Turbidity (NTU) 1.32
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,1-DCE</u>			
<u>Cis-1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>TCE/PCE</u>			

Sampling Personnel A. DeGrandis

Well Casing Volumes

Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL :

mw-805

PROJ #:

MI001373.0001.00002

DATE :

7/25/17

LOC:

Ford LTP, Livonia, MI

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ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. mw-81 Replicate No. — Code No. —
 Weather Sunny, 70's Sampling Time: Begin 1157 End 1202

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 12.70
 Depth to Water (ft bmp) 7.24
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 5.46
 Casing Diameter/Type 2" PVC
 Gallons in Well 12.8736
 Gallons Pumped/Bailed Prior to Sampling —
 Sample Pump Intake Setting (ft bmp) ~12
 Purge Time begin 1125 end 1155
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.56
 SpC (mS/cm) 1.149
 CND (mS/cm) 0.964
 Dissolved Oxygen (%) 12.8
 Dissolved Oxygen (mg/L) 1.25
 pH (s.u.) 7.26
 ORP (mV) 90.5
 Turbidity (NTU) 7.41
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
<u>1,1-DCE</u>			
<u>Cis-1,2-DCE</u>			
<u>trans-1,2 DCE</u>			
<u>TCE/PCE</u>			

Sampling Personnel A. DeGrandis

Well Casing Volumes					
Gal./Ft.	0.5" = 0.01	1-1/4" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-1/2" = 0.09	2-1/2" = 0.26	3-1/2" = 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

PAGE 2 OF 2

WELL: mw-81

PROJ #: MI001373.0001.00002

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 7/25/17
 Site/Well No. mw-83 Replicate No. — Code No. —
 Weather Sunny, 70's Sampling Time: Begin 1112 End 1117

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 12.44
 Depth to Water (ft bmp) 7.62
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 4.82
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.7712
 Gallons Pumped/Bailed Prior to Sampling ~2.5
 Sample Pump Intake Setting (ft bmp) ~11.5'
 Purge Time begin 1030 end 1110
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 16.62
 SpC (µS/cm) 3.457
 CND (µS/cm) 2.904
 Dissolved Oxygen (%) 16.4
 Dissolved Oxygen (mg/L) 1.57
 pH (s.u.) 7.15
 ORP (mV) 13.1
 Turbidity (NTU) 2.41
 Color none
 Odor none
 Appearance clear
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
Vinyl Chloride	40mL voa	3	HCL
1,4-dioxane	40mL voa	3	HCL
<u>1,1-DCE</u>			
<u>CS-1,2-DCE</u>			
<u>trans-1,2-DCE</u>			
<u>TCE / PCE</u>			

Sampling Personnel A. DeGrundis

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL: MW-93

PROJ #: MI001373.0001.00002

DATE: 7/25/17

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 06/27/2016
 Site/Well No. MW 73-D Replicate No. — Code No. —
 Weather OVERCAST. 70s Sampling Time: Begin 1435 End 1440

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 17.47
 Depth to Water (ft bmp) 6-67 6.80
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 10.80
 Casing Diameter/Type 2" PVC
 Gallons in Well 1.728
 Gallons Pumped/Bailed Prior to Sampling 2 ga
 Sample Pump Intake Setting (ft bmp) 15.47
 Purge Time begin 1340 end 1330
 Pumping Rate (ml/min) 240
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 18.47
 SpC (mS/cm) 3.890
 CND (mS/cm) 3.407
 Dissolved Oxygen (%) 2.7
 Dissolved Oxygen (mg/L) 0.25
 pH (s.u.) 7.40
 ORP (mV) -116.5
 Turbidity (NTU) 5.26
 Color DK-CLEAR NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks —

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

Sampling Personnel _____

Well Casing Volumes

Gal./Ft. 0.5" = 0.01 1-1/4" = 0.06 2" = 0.16 3" = 0.37 4" = 0.65
 1" = 0.04 1-1/2" = 0.09 2-1/2" = 0.26 3-1/2" = 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

PAGE 2 OF 2

WELL: mw 73-D

PROJ #: MI001373.0001.00002

DATE : 07/26/2017

LOC: Ford LTP, Livonia, MI

[illegible]

ARCADIS

Water Sampling Log

Project Ford LTP Project No. MI001373.0001.00002 Page 1 of 2
 Location Livonia, MI Date 06/26/2017
 Site/Well No. MW-75-S Replicate No. - Code No. -
 Weather SUNNY Sampling Time: Begin 1530 End 1615

Evacuation Data

Measuring Point TOC
 MP Elevation (ft) NA
 Land Surface Elevation (ft) NA
 Sounded Well Depth (ft bmp) 9.48
 Depth to Water (ft bmp) 6.22
 Water-Level Elevation (ft) NA
 Water Column in Well (ft) 3.26
 Casing Diameter/Type 2" PVC
 Gallons in Well 0.5216
 Gallons Pumped/Bailed Prior to Sampling 1.587
 Sample Pump Intake Setting (ft bmp) 7.48
 Purge Time begin 1530 end 1600
 Pumping Rate (ml/min) 200
 Evacuation Method Peristaltic Pump

Field Parameters

Temperature (°C) 20.04
 SpC (mS/cm) 4.472
 CND (mS/cm) 4.048
 Dissolved Oxygen (%) 1.7
 Dissolved Oxygen (mg/L) 0.16
 pH (s.u.) 7.71
 ORP (mV) -69.4
 Turbidity (NTU) 1.30
 Color NONE
 Odor NONE
 Appearance CLEAR
 Sampling Method Low Flow
 Remarks -

Constituents Sampled	Container Description	Number	Preservative
<u>Vinyl Chloride</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>
<u>1,4-dioxane</u>	<u>40mL voa</u>	<u>3</u>	<u>HCL</u>

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

PAGE 2 OF 2

WELL: MW-75-S

PROJ #: MI001373.0001.00002

DATE: DK 06 07/26/2017

LOC: Ford LTP, Livonia, MI

[illegible]

APPENDIX C

Sewer and Process Waste Field Sampling Logs



STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

09:25 —

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

10:10

Sampling Location: MH 372

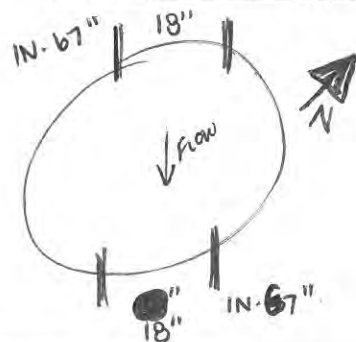
STORMWATER FIELD PARAMETERS

Depth to Water	5' 1.5" (RIM)
Depth to Bottom	~ 7' RIM
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NONE
Any lateral pipes?	2 PIPE PEN.
Condition of pipe penetrations?	GOOD
Condition of Chimney?	CHIMNEY SEAL INSTALLED
Turbidity	3.83

(CIRCLE TOP)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-372 -W-07182017</u>			
Sample Time: <u>10:05</u>		Duplicate: ☐ Yes ☒ No	
Total Bottles: <u>5</u>		Duplicate <u>—</u>	

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SOME FILM ON SURFACE OF WATER.
- DOES NOT COME BACK TOGETHER WHEN DISTURBED.
 - NOT IRIDESCENT COLOR
 - APPEARS TO BE BIOFILM.
 - CHIMNEY SEAL

PHOTOS (7)

- MANHOLE
- MH LOCATION REF.
- CHIMNEY SEAL
- CATCH BASIN
- UPSTREAM PP
- DOWNSTREAM PP
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

pic 1820-1828

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

1015 - 1035

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-373

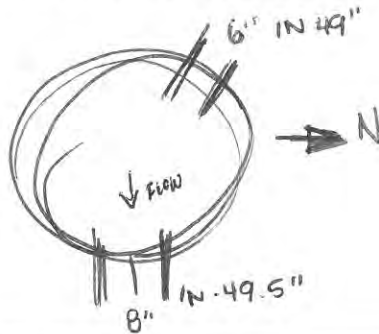
STORMWATER FIELD PARAMETERS

Depth to Water	46.5"
Depth to Bottom	61.5"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NONE
Any lateral pipes?	2 PIPE PENETRATIONS
Condition of pipe penetrations?	GOOD - (MH EPOXIED)
Condition of Chimney?	GOOD - (CHIMNEY SEAL)
Turbidity	4.32

(SQ. TOP)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved
Sample ID: <u>MH-373-W-07182017</u>			
Sample Time: <u>10:25</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SOME DISCOLORATION TO EPOXY AND CHIMNEY SEAL.

PHOTOS (6)

- PAPERWORK
- MH LOCATION REF.
- MH (CHIMNEY SEAL/EPOXY)
- CHIMNEY SEAL
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1829 - 1834

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1040-1100

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-380

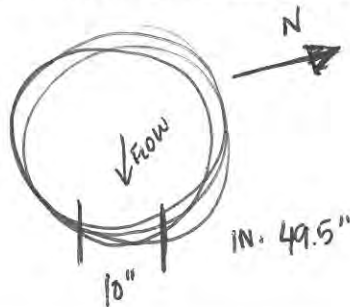
STORMWATER FIELD PARAMETERS

Depth to Water	<u>48.5"</u>
Depth to Bottom	<u>65"</u>
Flow or Stagnant?	<u>STAG.</u>
Sediment Present? How much?	<u>SOME - WILL ATTEMPT TO SAMPLE</u>
Any lateral pipes?	<u>1 PIPE PEN.</u>
Condition of pipe penetrations?	<u>GOOD.</u>
Condition of Chimney?	<u>GOOD.</u>
Turbidity	<u>4.18</u>

(SQ TOP)

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1 ✓
Sample ID: <u>MH-380-W-07182017</u>				
Sample Time: <u>10:50</u>			Duplicate: ☐ Yes ☐ No	
Total Bottles: <u>5</u>			Duplicate _____	

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CHIMNEY SEAL DISCOLORATION
- SOME SEDIMENT IN SUMP (MAYBE 1/2")
- EPOXY LINED

PHOTOS (7)

- PAPERWORK
- ~~◦ CHIMNEY SEAL~~
- MH
- CHIMNEY SEAL
- MH
- PIPE PEN.
- MH LOC.
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

PIC 1835-1841

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

115 — 1145

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-407

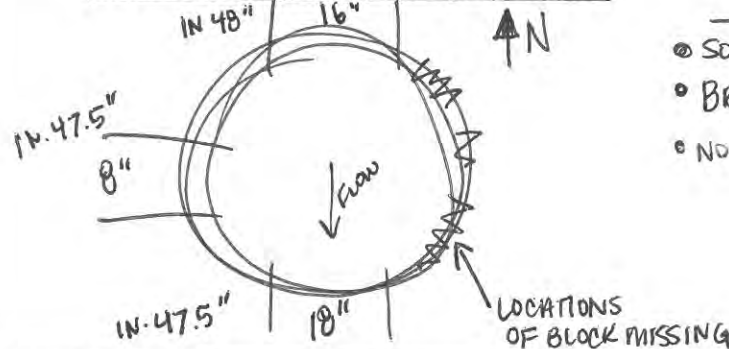
STORMWATER FIELD PARAMETERS

Depth to Water	<u>46.5"</u>
Depth to Bottom	<u>61" - 65"</u>
Flow or Stagnant?	<u>STAGNANT</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>3 PIPE PEN.</u>
Condition of pipe penetrations?	<u>OK, BUT POSSIBLE SEEPS</u>
Condition of Chimney?	<u>NOT OKAY</u>
Turbidity	<u>20.4</u>

(SQ TOP.)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-407-W-01182017</u>			
Sample Time: <u>11:30</u>			Duplicate: ☐ Yes ☐ No
Total Bottles: <u>5</u>			Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SOME POSSIBLE SEEPS @ PP & BRICK SEAMS
- BRICK MISSING FROM EAST SIDE OF STRUCTURE
- NO REHAB

PHOTOS (11)

- PAPERWORK
- MH LOCATION
- MH
- MH
- PIPE PENS.
- MISSING BRICK
- MISSING BRICK
- MISSING BRICK
- PIPE PENS.
- POTENTIAL SEEP LOC.
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

PIC 1843-1856

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1105 — FORD PERSONNEL
ON FIG. 8. WILL COME
BACK.

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-374

STORMWATER FIELD PARAMETERS

Depth to Water	<u>61.5"</u>
Depth to Bottom	<u>84"</u>
Flow or Stagnant?	<u>SLOW FLOW / LOOKS STAG / CAN HEAR WATER FLOW</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>3 PIPE PEN.</u>
Condition of pipe penetrations?	<u>GOOD</u>
Condition of Chimney?	<u>GOOD</u>
Turbidity	<u>2.28</u>

1150-1205
(CIRCLE TOP)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

Sample ID: MH-374 - 07182017

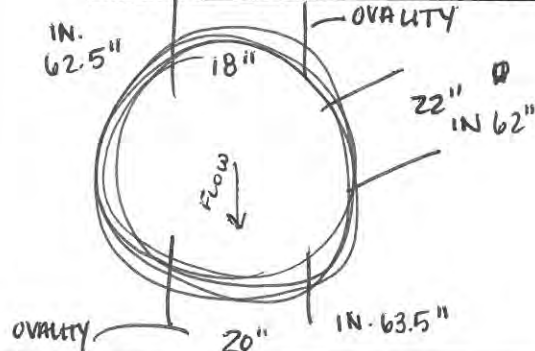
Sample Time: 1155

Total Bottles: 5

Duplicate: ☐ Yes ☐ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- EPOXY LINED / CHIMNEY SEAL
- LOOKS GOOD

PHOTOS(9)

- PAPERWORK
- MH LOC.
- MH LOC.
- MH
- MH / PP
- PP
- PP
- CS
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

PIC 1857-1866

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

13:30 — 14:15

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-514

STORMWATER FIELD PARAMETERS

Depth to Water	6' 8"
Depth to Bottom	8' 3"
Flow or Stagnant?	STAG
Sediment Present? How much?	NOT ENOUGH TO PULL SAMPLE
Any lateral pipes?	5 PIPE PEN.
Condition of pipe penetrations?	POOR AROUND WEST PEN.
Condition of Chimney?	GOOD
Turbidity	12.4

(CIRCLE TOP)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

Sample ID: MH-514-07182017

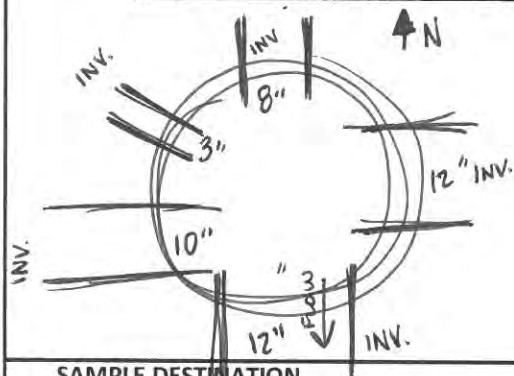
Sample Time: 14:20

Total Bottles: 5

Duplicate: ☐ Yes ☐ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CHIMNEY SEAL
- PIPE PEN. @ WEST SIDE (9 O'CLOCK) ERRODING.
- 2x4" LUMBER STICKING OUT FROM EAST 12" PIPE

PHOTOS (7)

- PAPERWORK
- MH LOC.
- MH
- CHIMNEY SEAL
- MH
- MH/PP
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1867-1873

Sampling Personnel: R. WISMAN / A. DEGRANDIS

1430-1500

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-470

STORMWATER FIELD PARAMETERS

Depth to Water	43"
Depth to Bottom	57.5"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	YES, COLLECTED SAMPLE (1" DEEP)
Any lateral pipes?	1 PIPE PENETRATION
Condition of pipe penetrations?	GOOD; EPOXY
Condition of Chimney?	GOOD; CHIMNEY SEAL
Turbidity	39.3

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1 ✓

Sample ID: MH-470-W-07182017 (14:50)

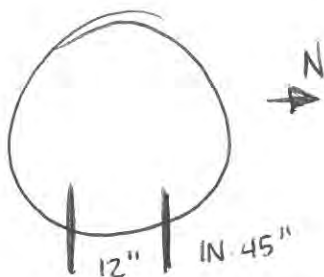
Sample Time: MH-470-S-07182017 (14:40)

Total Bottles: 7

Duplicate: ☐ Yes ☐ No

Duplicate

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CHIMNEY SEAL DISCOLORATION
- EPOXY
- SEDIMENT

PHOTOS

- PAPERWORK
- MANHOLE
- CS
- MH
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By:

Shipped Via: ☐ Fedex ☐ Other:

☐ sent on: _____

PIC 1874 - 1879

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

(510-1545)

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-266

STORMWATER FIELD PARAMETERS

(SQ TOP)

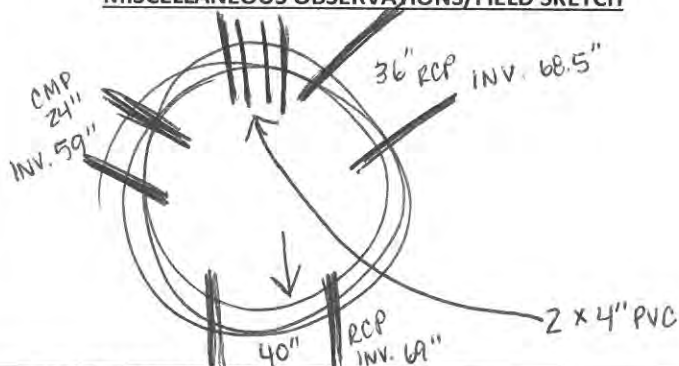
Depth to Water	67"
Depth to Bottom	71.5"
Flow or Stagnant?	LOW FLOW
Sediment Present? How much?	YES, 2" DEEP; COLLECTED
Any lateral pipes?	5 PIPE PENETRATION
Condition of pipe penetrations?	POOR
Condition of Chimney?	POOR
Turbidity	32.6 NTU

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓

Sample ID: MH-266-W-07182017 15:35
 Sample Time: MH-266-S-07182017 15:25
 Total Bottles: 7

Duplicate: ☐ Yes ☐ No
 Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SEDIMENT / ROCKS @ BOTTOM
- SHEEN PRESENT
 - ↳ IRIDESCENT
 - ↳ JAGGED EDGES
 - ↳ NOT COHESIVE WHEN DISTURBED
- MH BRICKS BROKEN
- SUMP IN POOR CONDITION

PHOTOS (12)

- PAPERWORK
- MH LOC.
- MH-UPSTREAM
- PP
- DOWNSTREAM (5 O'CLOCK)
- DOWNSTREAM
- DOWNSTREAM (10 O'CLOCK)
- PP
- SHEEN
- SHEEN VIDEO
- UPSTREAM
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1880-1891

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1555 - 1620

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-711B

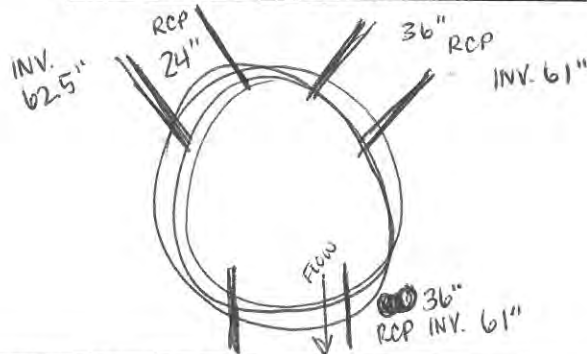
STORMWATER FIELD PARAMETERS

Depth to Water	58"
Depth to Bottom	6.7'
Flow or Stagnant?	LOW FLOW
Sediment Present? How much?	THIN FILM, NOT ENOUGH FOR SAMPLE
Any lateral pipes?	3 PIPE PEN.
Condition of pipe penetrations?	GOOD
Condition of Chimney?	GOOD
Turbidity	3.48 NTU

(SQ LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-711B-W-07182017</u>			
Sample Time: <u>16:05</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SHEEN [POSSIBLY BIO]
 - ↳ IRIDESCENT
 - ↳ JAGGED EDGES
- EPOXY / CHIMNEY SEAL
-

PHOTOS (8)

- PAPERWORK
- MH LOCATION
- CHIMNEY SEAL
- DOWNSTREAM PP
- 10 O'CLOCK PIPE
- 2 O'CLOCK PIPE
- 2 O'CLOCK PIPE
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

PIC 1892-1899

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-597

STORMWATER FIELD PARAMETERS

Depth to Water	<u>60.5"</u>
Depth to Bottom	<u>NR</u>
Flow or Stagnant?	<u>LOW FLOW</u>
Sediment Present? How much?	<u>SOME, BUT NOT ENOUGH TO SMPL.</u>
Any lateral pipes?	<u>2 PIPE PENETRATIONS</u>
Condition of pipe penetrations?	<u>GOOD</u>
Condition of Chimney?	<u>GOOD</u>
Turbidity	<u>3.48</u>

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓

Sample ID: MH-597-W-07182017

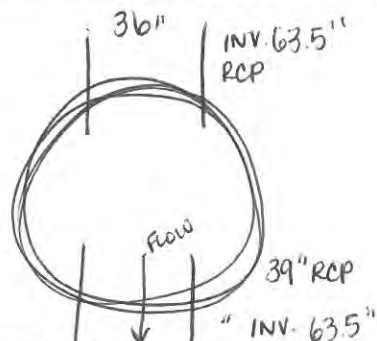
Sample Time: 16:30

Total Bottles: 5

Duplicate: ☐ Yes ☐ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- EPOXY / CHIMNEY SEAL
- LITTLE SEDIMENT BUT NOT ENOUGH TO SAMPLE

PHOTOS (7)

- PAPERWORK
- LOCATION
- CS
- UPSTREAM PIPE
- DWSTM PIPE
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

PIC 1900-1906

STORMWATER SAMPLING LOG


 Design & Consultancy
for natural and
built assets
Sampling Personnel: R. WISMAN / A. DEGRANDIS

13:20 —

Site: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-704

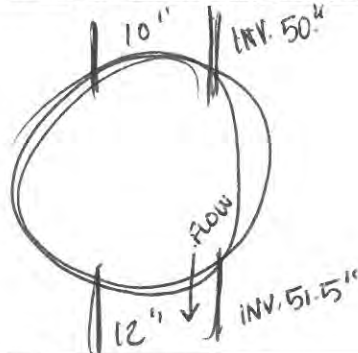
STORMWATER FIELD PARAMETERS

Depth to Water	44.5"
Depth to Bottom	64"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	YES, 2-3" DEEP
Any lateral pipes?	2 PIPE PENETRATIONS
Condition of pipe penetrations?	GOOD
Condition of Chimney?	GOOD
Turbidity	11.1

(SQ LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-704-W-07182017 1335</u> Sample Time: <u>MH-704-S-07182017 1330</u> Total Bottles: <u>7</u>			
Duplicate: ☐ Yes ☒ No			Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- EPOXY/CHIMNEY SEAL
- DISCOLORATION OF REHAB
- 12-3" SEDIMENT IN SUMP
-

PHOTOS

- PAPERWORK
- MH LOCATION
- CS
- MH
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1917-1921 & 1933

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

1345 - 1420

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002Sampling Location: MH-711

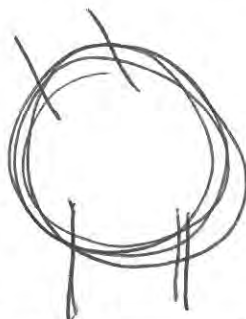
STORMWATER FIELD PARAMETERS

Depth to Water	17.8
Depth to Bottom	NR
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	SOME ON EDGES
Any lateral pipes?	2 PIPE PEN
Condition of pipe penetrations?	GOOD; LINED FROM THIS MH TO DS
Condition of Chimney?	OKAY
Turbidity	2.60

(CIRCLE LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-711-W-071917</u>			
Sample Time: <u>14:10</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- DEEP
- LINED DOWNSTREAM TO MH-719

PHOTOS (4)

- PAPERWORK
- MH LOC.
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1934 - 1938

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS / D. STOCKARD 14:45 - 15:05 Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002 Sampling Location: MH-719

STORMWATER FIELD PARAMETERS

Depth to Water	8.97'
Depth to Bottom	NR.
Flow or Stagnant?	LOW FLOW
Sediment Present? How much?	COULD NOT SEE ALL SIDES OF SUMP
Any lateral pipes?	3 PIPE PENETRATIONS
Condition of pipe penetrations?	OKAY; CANT SEE ALL
Condition of Chimney?	GOOD; REHAB
Turbidity	2.09

(CIRCLED)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

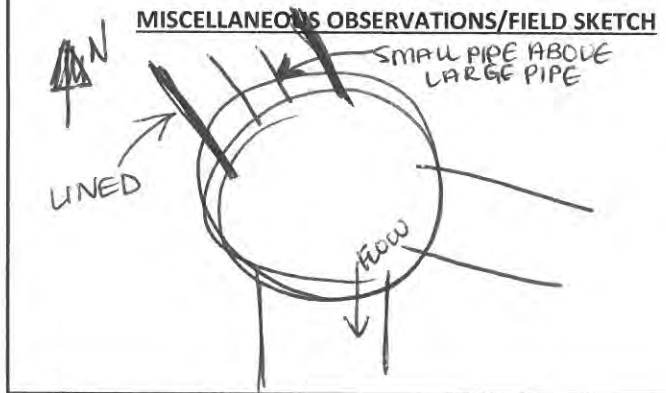
Sample ID: MH-719-W-0192017

Sample Time: 14:55

Total Bottles: 5

Duplicate: ☐ Yes ☐ No

Duplicate _____



- NOTES
- DEEP
 - LINED UPSTREAM FROM ^{MH} 711
 - SHEEN PRESENT
 - ↳ LIGHT BLUE / IRIDESCENT
 - ↳ JAGGED EDGES
 - ↳ NOT COHESIVE.
 - EPOXY / CHIMNEY SEAL

- PHOTOS (6)
- PAPERWORK
 - MH LOC.
 - MH / CS
 - MH
 - MH
 - PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____ ☐ sent on: _____

PIC 1939 - 1944

Sampling Personnel: R. WISMAN / A. DEGRANDIS / D. STOCKARD

1505 - 1530

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

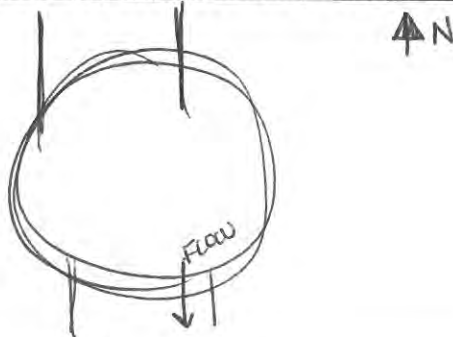
Sampling Location: MH-642

STORMWATER FIELD PARAMETERS

Depth to Water	NR
Depth to Bottom	NR
Flow or Stagnant?	Flowing, no sump
Sediment Present? How much?	None
Any lateral pipes?	2 pipe pen.
Condition of pipe penetrations?	Good
Condition of Chimney?	Good
Turbidity	2.06

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1
Sample ID: <u>MH-642-W-0719 2017</u> Sample Time: <u>1520</u> Total Bottles: <u>5</u> Duplicate: ☐ Yes ☒ No Duplicate <u> </u>				

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- LID STUCK, COULD NOT MEASURE IN VERTS OR SIZES.
- EPOXY / CHIMNEY SEAL
- FLOW MOVES THROUGH STRUCTURE
↳ NO SUMP

PHOTOS (32)

- ~~PAPERWORK~~
- MIT LOC.
- PAPERWORK

PIC 1945-1946

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Chain of Custody Signed By:

Shipped Via: ☐ Fedex ☐ Other:

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

Site: Ford LTP, Livonia, MI

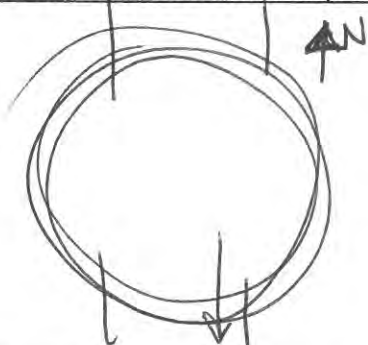
Job Number: MI001316.0001.00002Sampling Location: MH-596

STORMWATER FIELD PARAMETERS

Depth to Water	12.76
Depth to Bottom	12.83
Flow or Stagnant?	GOOD FLOW
Sediment Present? How much?	NONE
Any lateral pipes?	2 PIPE PEN. (PIPES SUBSET)
Condition of pipe penetrations?	GOOD CANT SEE.
Condition of Chimney?	BRICK; SOME MISSING
Turbidity	14.8

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1
Sample ID: <u>MH-596-W-07192017</u>			
Sample Time: <u>15:50</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- PIPE PENS. SUBSET
- NO REHAB
- HIGH FLOW / SHEET FLOW
- NOT A SUMP CONDITION

PHOTOS (4)

- PAPERWORK
- MH/CHIMNEY
- MH
- PAPERWORK

PIC 1947-1955

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. NISMAN/A. DEGRANDIS

1610 - 1640

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-419

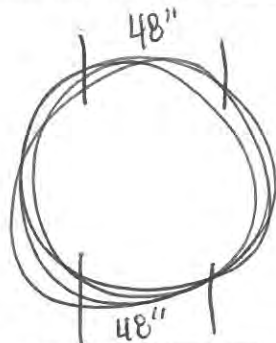
STORMWATER FIELD PARAMETERS

Depth to Water	<u>13.96</u>
Depth to Bottom	<u>14.0</u>
Flow or Stagnant?	<u>HIGH FLOW; SHEET FLOW</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>2 PIPE PEN.</u>
Condition of pipe penetrations?	<u>GOOD; REHABED</u>
Condition of Chimney?	<u>GOOD; REHABED</u>
Turbidity	<u>2.22 2.22</u>

(CIRCLE UD/CLOSED)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1
Sample ID: <u>MH-419-W-07192017</u>			
Sample Time: <u>16:25</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- EPOXY / CHIMNEY SEALED
- LINER THROUGH STRUCTURE FROM 642 - 375.
- SOME DISCOLORATION OF CS.
- LOW SUMP → SHEET FLOW
- STYRENE ODOR

PHOTOS

- PAPERWORKS
- MH LOCAT.
- CS
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Shipped Via: ☐ Fedex ☐ Other: _____

Chain of Custody Signed By: _____

PIC 1951-1955

STORMWATER SAMPLING LOG

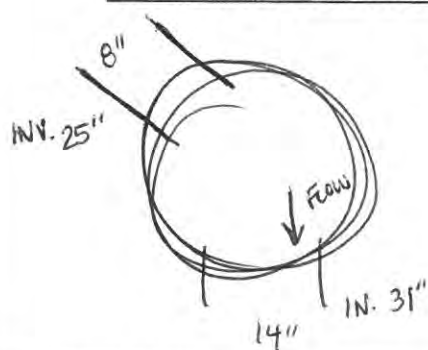
Sampling Personnel: R. WISMAN / A. DEGRANDISSite: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-709

STORMWATER FIELD PARAMETERS

Depth to Water	32"
Depth to Bottom	37.5"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	YES, SAMPLE COLLECTED
Any lateral pipes?	2 PIPE PENS.
Condition of pipe penetrations?	OKAY; REHABED
Condition of Chimney?	GOOD; REHABED
Turbidity	14-6

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-709-W-07202017 (0925)</u>			
Sample Time: <u>MH-709-S-07202017 (0920)</u>			
Total Bottles: <u>7</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- EPOXY / CHIMNEY SEAL
- DISCOLORATION OF CHIMNEY SEAL
- SHEEN PRESENT
 - ↳ BLUE IRIDESCENT
 - ↳ JAGGED EDGES
 - ↳ NOT COHESIVE WHEN DISTURBED.

PHOTOS (7)

- PAPERWORK
- MH LOC
- MH LOC
- MH
- CS
- PIPE PENS.
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling

Shipped Via: ☐ Fedex ☐ Other: _____ ☐ sent on: _____

Chain of Custody Signed By: _____

PIC 1959-1965

STORMWATER SAMPLING LOG



Sampling Personnel: A. DEGRANDIS / R. WISMAN

0945-1010

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-730B

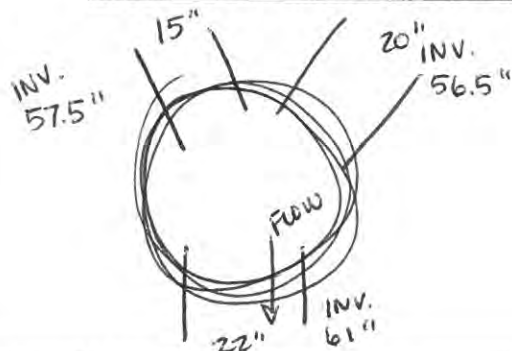
STORMWATER FIELD PARAMETERS

Depth to Water	<u>51.5"</u>
Depth to Bottom	<u>72.5"</u>
Flow or Stagnant?	<u>STAGNANT</u>
Sediment Present? How much?	<u>YES, SOME IN CORNERS; CANT SAMPLE</u>
Any lateral pipes?	<u>3 PIPE PENS.</u>
Condition of pipe penetrations?	<u>OKAY, SOME CORROSION</u>
Condition of Chimney?	<u>OKAY</u>
Turbidity	<u>10.4</u>

(CIRCLE LID)

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1 ✗
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1 ✗
Sample ID: <u>MH-730B-W-07202017</u>				
Sample Time: <u>10:00</u>			Duplicate: ☐ Yes ☐ No	
Total Bottles: <u>5</u>			Duplicate _____	

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SEDIMENT PRESENT; ^{NOT} SAMPLED
- SOME DROPS OF IRIDESCENT BLUE.
- NOT REHABED
-

PHOTOS

- PAPERWORK
- MH LOCATION
- MH
- PP
- MH
- PAPERWORK

PIC 1966-1971

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1025 — 1100

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-375

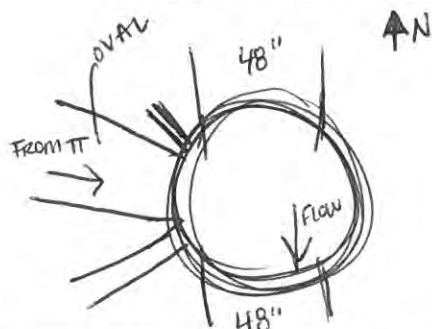
STORMWATER FIELD PARAMETERS

Depth to Water	<u>17.55'</u>
Depth to Bottom	<u>17.7'</u>
Flow or Stagnant?	<u>FLOW, LOW SUMP</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>5 PP</u>
Condition of pipe penetrations?	<u>OKAY; SOME DETERIORATION</u>
Condition of Chimney?	<u>GOOD</u>
Turbidity	<u>9.34</u>

(CIRCLE LID; CLOSED)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved
Sample ID: <u>MH-375 - W - 07202017</u>			
Sample Time: <u>10:40</u>		Duplicate: ☐ Yes ☐ No	
Total Bottles: <u>5</u>		Duplicate _____	

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- PIPE UPSTREAM OF MH LINED FROM MH 642 — MH 375.
- SLIGHT STYRENE SMELL
- 48" PIPE PENS OUT OF VIEW.
- DEEP
- APPEARS TO BE IN GOOD CONDITION
- LARGE BASIN.

PHOTOS

- PAPERWORK
- MH LOCATION
- MH
- CHIMNEY
- MH
- PAPERWORK

PIC 1972 — 1977

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG

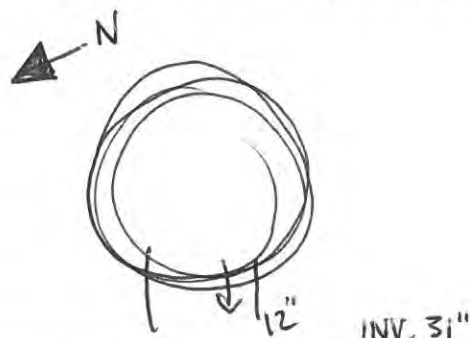

 Division & Consultancy
for natural and
built assets
Sampling Personnel: R. WISMAN / A. DEGRANDISSite: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-764A

STORMWATER FIELD PARAMETERS

Depth to Water	29"
Depth to Bottom	51.5"
Flow or Stagnant?	STAG.
Sediment Present? How much?	YES;
Any lateral pipes?	1 PP
Condition of pipe penetrations?	GOOD; REHABED
Condition of Chimney?	GOOD; REHABED
Turbidity	74.2

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved
Sample ID: <u>MH-764A-W-07202017</u> 1130 Sample Time: <u>MH-764A-S-07202017</u> 1120 Total Bottles: <u>7</u>			
Duplicate: ☐ Yes ☐ No			Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- STAGNANT → CAUSING SLIGHT ODOR
- SHALLOW
- TURBID

PHOTOS (3)

- PAPERWORK
- MH
- PAPERWORK

PIC 1978-1981

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDIS

i250 — 1320

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-124

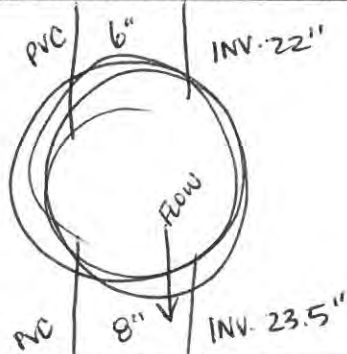
STORMWATER FIELD PARAMETERS

Depth to Water	31"
Depth to Bottom	31.5"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	YES; MOSTLY ROCK FROM SURROUND
Any lateral pipes?	2 PIPE PENETRATIONS
Condition of pipe penetrations?	POOR; SEE PICS
Condition of Chimney?	POOR; SEE PICS
Turbidity	110

(CIRCLE TOP, OPEN)

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1
Sample ID: <u>MH-124-W-07202017</u>				
Sample Time: <u>13:10</u>			Duplicate: ☐ Yes ☐ No	
Total Bottles: <u>5</u>			Duplicate _____	

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- ROCK SURROUNDING MH FELL IN.
- POOR PP CONDITIONS
- STAGNANT WATER & ODOR
- VERY TURBID
- BIOFILM ON SURFACE OF WATER.

PHOTOS (8)

- PAPERWORK
- MH LOCATION
- MH
- PPS
- DOWNSTREAM PP
- UPSTREAM PP
- UPSTREAM PP
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

PIC 1982-1992

STORMWATER SAMPLING LOG


 Design & Consultancy
for natural and
built assets
Sampling Personnel: R. WISMAN / A. DEGRANDIS

1335-1345

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-728B

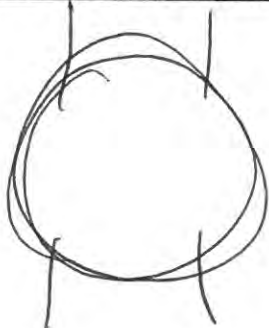
STORMWATER FIELD PARAMETERS

Depth to Water	NR
Depth to Bottom	
Flow or Stagnant?	
Sediment Present? How much?	
Any lateral pipes?	
Condition of pipe penetrations?	
Condition of Chimney?	
Turbidity	

(CIRCLE LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved
Sample ID: <u>MH-728B</u>			
Sample Time: <u>NA</u>			
Total Bottles: <u>NA</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

DRY

PHOTOS (4)

• PAPERWORK

• MH LOC.

• MH

• MH

PCB WORK

PIC 1993-1996

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1350 - 1430

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-170

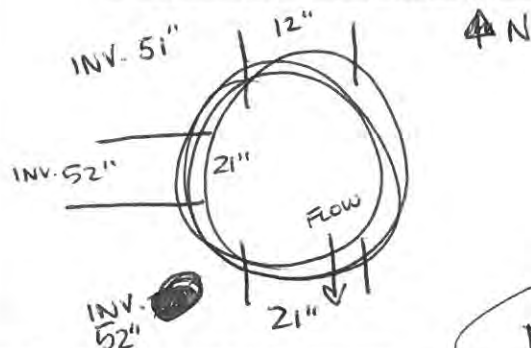
STORMWATER FIELD PARAMETERS

Depth to Water	<u>61.5"</u>
Depth to Bottom	<u>66"</u>
Flow or Stagnant?	<u>STAG.</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>3 PIPE PENS</u>
Condition of pipe penetrations?	<u>OKAY; MAYBE SEEPS?</u>
Condition of Chimney?	<u>GOOD</u>
Turbidity	

(CIRCLE LID)

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1 ✓
Sample ID: <u>MH-170-W-07202017</u>				
Sample Time: <u>14:10</u>				
Total Bottles: <u>5</u>				
Duplicate ☒ Yes ☐ No				
Duplicate <u>SEE BELOW</u>				

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- NO SEDIMENT
- 3 PIPE PENETRATIONS
- SHEEN PRESENT
 - IRIDESCENT BLUE
 - JAGGED EDGES.

PHOTOS

- PAPERWORK
- MH LOCATION
- MH DNSTRM PIPE
- MH ~~DN~~STRM PIPE
- MH-UPSTRM PIPE
- MH-UPSTRM PIPE
- PAPERWORK

DUP SAMPLE

DUP-01-W-072017 14:10 (5)

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

PIC 1998-2005

Site: Ford LTP, Livonia, MI

Sampling Location: MH-598

Depth to Water	NR	
Depth to Bottom	↓	
Flow or Stagnant?		
Sediment Present? How much?		
Any lateral pipes?		3 PP
Condition of pipe penetrations?		
Condition of Chimney?		
Turbidity		

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1

Duplicate

NOTES

- DRY AND ^{PARTIALLY} COVERED BY RACKS

- PAPERWORK
- LOCATION
- MH
- MH
- PAPERWORK

PIC 2007-2012

Chain of Custody Signed By:

Shipped Via: ☐ Fedex ☐ Other:

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

1445 - 1515

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-263

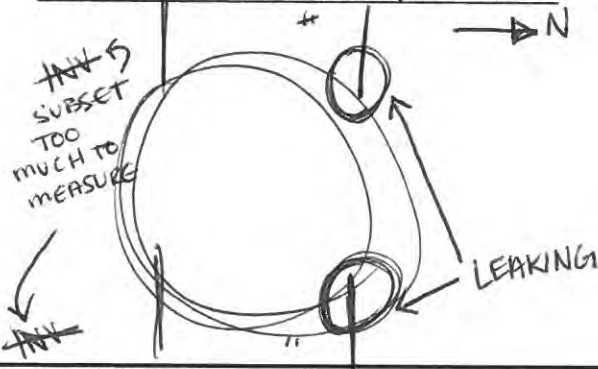
STORMWATER FIELD PARAMETERS

Depth to Water	5.95'
Depth to Bottom	6.43'
Flow or Stagnant?	FLOW (LOW)
Sediment Present? How much?	YES;
Any lateral pipes?	2 PIPE PENETRATIONS
Condition of pipe penetrations?	VERY POOR;
Condition of Chimney?	VERY POOR;
Turbidity	23.9

(CIRCLE TOP)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: MH-263-W-07202017 15:00			
Sample Time: MH-263-S-07202017 14:50			
Total Bottles: 7			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SEDIMENT PRESENT
- CHIMNEY DESTROYED.
- LOOKS LIKE PIPE PENETRATIONS HAVE SEEPS
-

PHOTOS (8)

- PAPERWORK
- MH LOCATION
- CHIMNEY OFFSET
- MANHOLE ~~LOOKING FROM DS.~~
- CHIMNEY DESTROYED
- LEAKING @ PP (DS PIPE) NORTH SIDE
- UPSTREAM PIPE PEN.
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Shipped Via: ☐ Fedex ☐ Other: _____

Chain of Custody Signed By: _____

PIC 2013-2022

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-264

STORMWATER FIELD PARAMETERS

Depth to Water	<u>49.5"</u>
Depth to Bottom	<u>50.5"</u>
Flow or Stagnant?	<u>STAG.</u>
Sediment Present? How much?	<u>NONE</u>
Any lateral pipes?	<u>2 PP</u>
Condition of pipe penetrations?	<u>ENCASED IN CONCRETE</u>
Condition of Chimney?	<u>OKAY</u>
Turbidity	<u>56.6 NTU</u>

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

Sample ID: MH-264-W-07202017

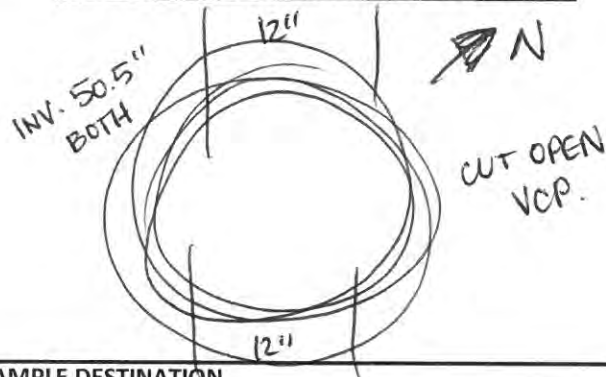
Sample Time: 16:35

Total Bottles: 5

Duplicate: ☐ Yes ☐ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- SHALLOW.
- SHEEN PRESENT
 - ↳ IRIDESCENT / BLUE / PURPLE / ORANGE
 - ↳ SMOOTH EDGES / SWIRLS.
 - ↳ THE MORE SAMPLE COLLECTED, THE MORE VIBRANT THE COLORS

PHOTOS (9)

- PAPERWORK
 - MH LOCATION
 - MH
 - PP
 - PP
 - PAPERWORK
- PICTURES OF SURROUNDING STAINING (3)

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

PIC 2023-2032

STORMWATER SAMPLING LOG

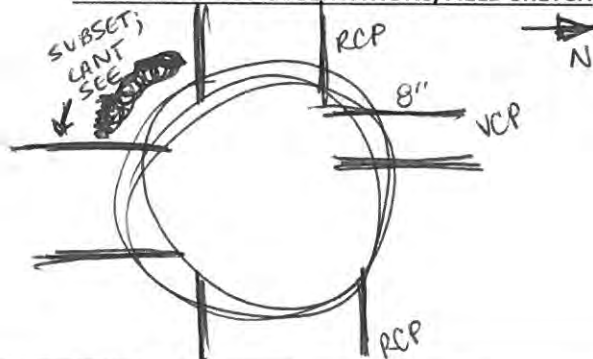

 Design & Construction
for natural and
built assets
Sampling Personnel: R. WISMAN / AD DEGRANDISSite: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-521

STORMWATER FIELD PARAMETERS

Depth to Water	8.04'
Depth to Bottom	8.8'
Flow or Stagnant?	LOW LOW FLOW
Sediment Present? How much?	NO SEDIMENT BESIDES ROCKS
Any lateral pipes?	4 PP.
Condition of pipe penetrations?	OKAY; ONES THAT WE CAN SEE
Condition of Chimney?	OKAY; SLIGHTLY OFFSET
Turbidity	14-7

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1*
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1*
Sample ID: <u>MH-521-W-07212017</u>			
Sample Time: <u>900</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☐ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CHIMNEY OFFSET
- PIPE PENETRATIONS OKAY
- HIGH FOOT TRAFFIC AREA
- NOT REHABED.

PHOTOS(S)

- PAPERWORK
- MH LOCATION
- CHIMNEY
- MH
- PAPERWORK

PIC 2033 - 2037

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG



Design & Consultancy
for natural and
built assets

Sampling Personnel: A. DEGRANDIS / A. WISMAN

0920 - 1005

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-523

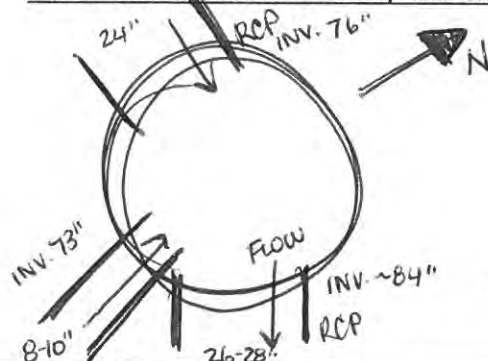
STORMWATER FIELD PARAMETERS

Depth to Water	80.5"
Depth to Bottom	89.5" - 92" (SUMP VARIES)
Flow or Stagnant?	FLOW
Sediment Present? How much?	NO SAND SEDIMENT
Any lateral pipes?	3 PIPE PENS.
Condition of pipe penetrations?	POOR.
Condition of Chimney?	DETERIORATING
Turbidity	41.4

(CIRCLE LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved ✓
Sample ID: <u>MH-523-W-072120170935</u> Sample Time: <u>MH-523-S-07212017 0940</u> Total Bottles: <u>7</u>			
Duplicate ☒ Yes ☐ No Duplicate <u>SEE BELOW</u>			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CHIMNEY OFFSET/DETERIORATING
- APPEARS THAT THERE ARE SEEPS AROUND ALL PIPE PENETRATIONS
- SEDIMENT SAMPLED (~~NO~~ SANDY)
-

PHOTOS (7)

- PAPERWORK
- MH LOCATION
- MH
- PP
- VIDEO
- SEDIMENT
- PAPERWORK

DUP-02 WATER
DUP-02-07212017

DUP-01 SEDIMENT
DUP-01-S-07212017

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Chain of Custody Signed By: _____

PIC 2038-2045

Shipped Via: ☐ Fedex ☐ Other: _____

STORMWATER SAMPLING LOG


 Design & Consulting
for natural and
built assets
Sampling Personnel: R. WISMAN1015-1115Site: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-625

STORMWATER FIELD PARAMETERS

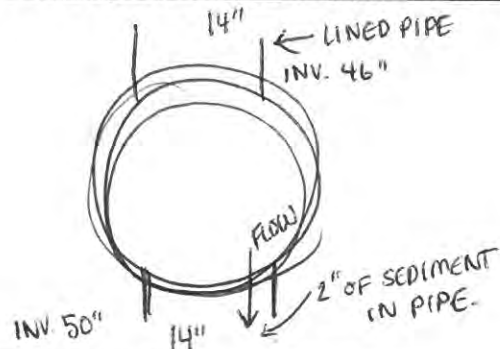
Depth to Water	<u>48"</u>
Depth to Bottom	<u>52"</u>
Flow or Stagnant?	<u>STAGNANT</u>
Sediment Present? How much?	<u>YES;</u>
Any lateral pipes?	<u>2 PIPE PENETRATIONS</u>
Condition of pipe penetrations?	<u>OKAY;</u>
Condition of Chimney?	<u>OKAY; DETERIORATED LINER?</u>
Turbidity	<u>45.4 NTU</u>

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

Sample ID: MH-625-W-07262017 11:00Sample Time: MH-625-S-07262017 10:50Total Bottles: 7Duplicate: ☐ Yes ☒ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- APPEARS TO HAVE A DETERIORATED LINER IN STRUCTURE.
- PIPE LINER PRESENT IN UPSTREAM PIPE
- SEDIMENT PRESENT (~2 INCHES)
- BOTTOM EDGES OF SUMP ERRODED
- NO VISIBLE SEEPS

PHOTOS

- PAPERWORK
- MH LOC.
- MH
- UPSTREAM PP
- CHIMNEY
- CHIMNEY
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / A. DEGRANDIS

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

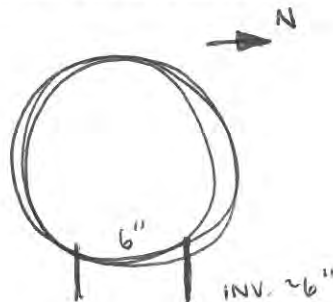
Sampling Location: PW-01

STORMWATER FIELD PARAMETERS

Depth to Water	<u>5"</u>
Depth to Bottom	<u>NM</u>
Flow or Stagnant?	<u>STAGNANT</u>
Sediment Present? How much?	<u>SUSPENDED SOLIDS</u>
Any lateral pipes?	<u>1 PIPE PEN... SURFACE DRAIN ATTACHED</u>
Condition of pipe penetrations?	<u>OKAY</u>
Condition of Chimney?	<u>OKAY; DIRTY</u>
Turbidity	<u>NR.</u>

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>PW-01-07212017</u>			
Sample Time: <u>1025</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☒ No			
Duplicate _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- OIL/HYDROCARBON SHEENS
↳ RAINBOW
↳ SMOOTH/SWIRLY

PHOTOS (5)

- PAPERWORK
- MH LOC.
- MH LOC.
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG

Sampling Personnel: A. DEGRANDIS / R. WISMAN1230 - 1250Site: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: PW-02

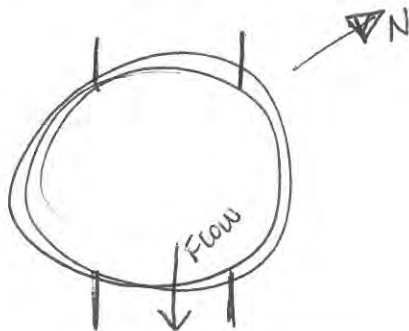
STORMWATER FIELD PARAMETERS

Depth to Water	NR
Depth to Bottom	NR
Flow or Stagnant?	HIGH FLOW
Sediment Present? How much?	NO CAN'T SEE; FLOW TOO HIGH
Any lateral pipes?	2 PIPE PENS.
Condition of pipe penetrations?	GOOD; NEWER MH STRUCTURE
Condition of Chimney?	GOOD; NEWER MH STRUCTURE
Turbidity	NR

(CIRCLE LID, CLOSED)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1
Sample ID: <u>PW-02 - 07212017</u>			
Sample Time: <u>12:40</u>			
Total Bottles: <u>5</u>			
Duplicate: ☐ Yes ☒ No			Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- MH LOCATION DIRECTLY AFTER WW PLANT OUTFALL LOCATION
- SHEEN PRESENT IN WATER. → RAINBOW SWIRLY
- TURBID; ALMOST OPAQUE.
- WW/SANITARY ODOR.
- ~~GOOD~~

PHOTOS

- PAPERWORK
- MH LOCATION
- PIPE PENETRATIONS
- MH
- UPSTREAM PIPE PEN
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / A. DEGRANDISSite: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: PW-03

STORMWATER FIELD PARAMETERS

Depth to Water	
Depth to Bottom	
Flow or Stagnant?	
Sediment Present? How much?	
Any lateral pipes?	
Condition of pipe penetrations?	
Condition of Chimney?	
Turbidity	

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved

Sample ID: PW-03_07212017

Sample Time: _____

Total Bottles: _____

Duplicate: ☐ Yes ☐ No

Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH

NOTESPHOTOS

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / K. PEARSON

10:45 - 11:15

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-730

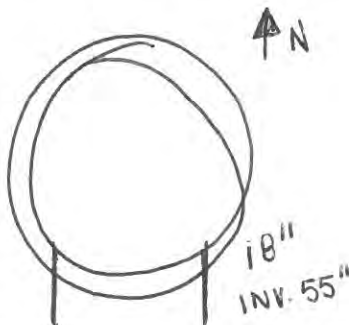
STORMWATER FIELD PARAMETERS

Depth to Water	55"
Depth to Bottom	57"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NO
Any lateral pipes?	1 PIPE PENETRATION
Condition of pipe penetrations?	GOOD
Condition of Chimney?	OKAY
Turbidity	-NR-

(SQ LID)

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved
Sample ID: MH-730-081617 Sample Time: 10:55 AM Total Bottles: 5			
Duplicate: ☐ Yes ☒ No			Duplicate _____

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- 1 PIPE PENETRATION (CAN BE SEEN)
- STAGNANT WATER
- SHEEN PRESENT
↳ IRIDESCENT BLUE/PLATEY/JAGGED EDGES
-

PHOTOS

- PAPERWORK
- MH LOCATION
- MH
- DS PP
- CHIMNEY
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN / K. PEARSON

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-738

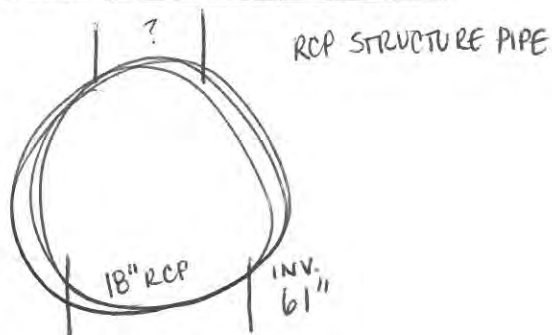
STORMWATER FIELD PARAMETERS

Depth to Water	60"
Depth to Bottom	67"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NO
Any lateral pipes?	1 PENET. (POSSIBLY 2 ND)
Condition of pipe penetrations?	GOOD
Condition of Chimney?	GOOD
Turbidity	-NR-

CIRCLE LID

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 2
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1
Sample ID: MH-738-081617			
Sample Time: 13:12			
Total Bottles: 5			
Duplicate: ☐ Yes ☒ No			
Duplicate: _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- POSSIBLE NORTH (INLET) UNDERWATER
- RCP STRUCTURE IN GOOD CONDITION
- NO CRACKS IN CHIMNEY
- APPROX 6" SUMP.

PHOTOS

- PAPERWORK
- MH LOCATION
- MH
- MH
- MH
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

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built assets

Site: Ford LTP, Livonia, MI

Sampling Location: MH-75

CIRCLE / CLOSED LID

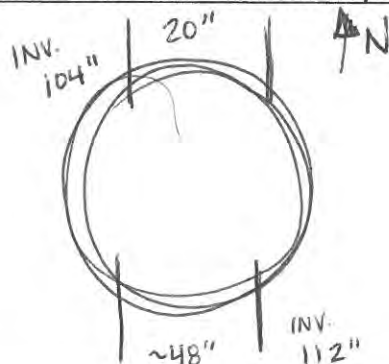
Depth to Water	106"
Depth to Bottom	114"
Flow or Stagnant?	⊙ FLOW FROM UPSTREAM.
Sediment Present? How much?	SOME GRAVEL @ BOTTOM / NOT ENOUGH FOR SAMPLE
Any lateral pipes?	2 PPS / CANT SEE TO EAST
Condition of pipe penetrations?	POOR ; UPSTREAM ERODED
Condition of Chimney?	OKAY
Turbidity	NR —

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1 ✗
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1 ✗

Sample ID: MA-75-081617
 Sample Time: 13:45
 Total Bottles: 5

Duplicate: ☐ Yes ☒ No
 Duplicate

NOTES



- DEEP MANHOLE.
- FLOW COMING FROM UPSTREAM PIPE
- SOME BUBBLES PRESENT
- SHEEN PRESENT
 - ↳ ~~IRIDESCENT~~ ODOR PRESENT
 - ↳ RAINBOW IRIDESCENT.
 - ↳ SMOOTH EDGES.
 - ↳ REGROUPS WHEN DISTURBED

PHOTOS

- PAPERWORK
- MH LOCATION
- LOOKING WEST
- LOOKING NE
- SHEEN
- CHIMNEY
- DS PIPE PEN
- PAPERWORK

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling Chain of Custody Signed By: _____
☐ sent on: _____
 Shipped Via: ☐ Fedex ☐ Other: _____

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built assets

Site: Ford LTP, Livonia, MI

Sampling Location: MH-754

CIRCLE/OPEN TOP

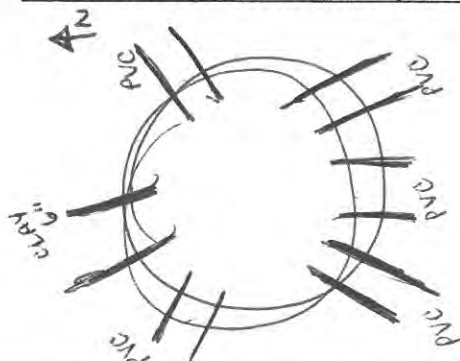
Depth to Water	39"
Depth to Bottom	59"
Flow or Stagnant?	STAG
Sediment Present? How much?	YES, COLLECTED
Any lateral pipes?	YES
Condition of pipe penetrations?	6 VISIBLE CONNECTIONS
Condition of Chimney?	OKAY
Turbidity	NR —

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	x 0 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	x 2 1 ✓

Sample ID: mh-754-081617
 Sample Time: 14:10
 Total Bottles: 7

Duplicate: ☐ Yes ☒ No
 Duplicate

NOTES



- STAGNANT
- 6 VISIBLE PIPE PENETRATIONS
- NO VISIBLE OUTLET
- SEDIMENT ; LOOKS TO BE ASPHALT.
- NO SHEEN PRESENT
- DEEP SUMP.

PHOTOS

- PAPERWORK
- MH LOCATION
- MH / PPS
- MH / PPS
- MH / PPS
- MH / PPS
- SEDIMENT
- PAPERWORK

Laboratory: TestAmerica

Sample was ☐ Shipped/couriered day of sampling
☐ sent on:

Chain of Custody Signed By:

Shipped Via: ☐ Fedex ☐ Other:

STORMWATER SAMPLING LOG



Sampling Personnel: R. WISMAN | K. PEARSON

Site: Ford LTP, Livonia, MI

Job Number: MI001316.0001.00002

Sampling Location: MH-756

STORMWATER FIELD PARAMETERS

Depth to Water	NR
Depth to Bottom	NR
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NR
Any lateral pipes?	COULD NOT CONFIRM
Condition of pipe penetrations?	OKAY FOR WHAT IS VISIBLE
Condition of Chimney?	COULD NOT SEE ENTIRETY
Turbidity	NR

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved 1 ✓
Sample ID: <u>MH-756-081617</u> Sample Time: <u>14:50</u> Total Bottles: <u>5</u> Duplicate: ☐ Yes ☒ No Duplicate: _____			

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- COULD NOT REMOVE LID TO PROPERLY INVESTIGATE INTEGRITY OF MANHOLE.
- COLLECTED SAMPLE USING PERISTALTIC PUMP THROUGH MH OPENING.

PHOTOS

- PAPERWORK
- MH LID
- MH LOCATION
- MH
- MH
- MH
- MH
- MH
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex ☐ Other: _____

☐ sent on: _____

STORMWATER SAMPLING LOG

Sampling Personnel: R. WISMAN / K. PEARSONSite: Ford LTP, Livonia, MIJob Number: MI001316.0001.00002Sampling Location: MH-550

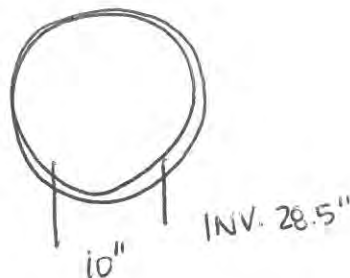
STORMWATER FIELD PARAMETERS

Depth to Water	30.5"
Depth to Bottom	48.5"
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	YES, COLLECTED 1-2" ON BOTTOM
Any lateral pipes?	1 PIPE PEN. VISIBLE
Condition of pipe penetrations?	POOR ; CRACKS
Condition of Chimney?	POOR ; CRACKS
Turbidity	NR -

CIRCLE / OPEN LID

Analyses	Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL 3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved 2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol 1 ✓
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved x 2 ✓
Sample ID: <u>MH-550-081617</u> Sample Time: <u>15:52</u> Total Bottles: <u>7</u>			
Duplicate: ☐ Yes ☒ No			Duplicate <u> </u>

MISCELLANEOUS OBSERVATIONS/FIELD SKETCH



NOTES

- CRACKS IN STRUCTURE.
- PIPE PENETRATION IN POOR CONDITION.
- SEDIMENT COVERS BOTTOM OF SUMP.
- SEDIMENT HAS DECOMPOSING ODOR

PHOTOS

- PAPERWORK
- MH LOCATION
- MH
- CHIMNEY / STRUCTURE
- CHIMNEY
- PIPE PEN.
- SEDIMENT
- PAPERWORK

SAMPLE DESTINATION

Laboratory: TestAmericaSample was ☐ Shipped/couriered day of sampling

Chain of Custody Signed By: _____

Shipped Via: ☐ Fedex☐ Other: _____☐ sent on: _____

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Site: Ford LTP, Livonia, MI

Sampling Location: MH-417

CIRCLE / OPEN LID

Depth to Water	50.5 "
Depth to Bottom	54 "
Flow or Stagnant?	STAGNANT
Sediment Present? How much?	NO; CINDER BLOCK @ BOTTOM
Any lateral pipes?	1 PIPE PEN.
Condition of pipe penetrations?	POOR; CRACKS AROUND PIPE
Condition of Chimney?	POOR; CRACKS
Turbidity	NR -

Analyses		Method	Bottle Type	Quantity
Vinyl Chloride/TCE/1,2-DCE	GW	USEPA 8260	40 mL Voa with HCL	3 ✓
PCBs	GW	USEPA 8082	1 L Glass Amber, unpreserved	2 ✓
Vinyl Chloride/TCE/1,2-DCE	Soil	USEPA 8260	40 mL Voa with methanol	1
PCBs	Soil	USEPA 8082	4 oz. glass jar, unpreserved	1

Sample ID: mh-417-081617

Sample Time: 16:35

Total Bottles: 5

Duplicate: ☐ Yes ☒ No

Duplicate

NOTES



PHOTOS

- PAPERWORK.
- MH LOCATION
- MH
- CHIMNEY CRACK
- CHIMNEY CRACK
- MH SUMP
- PAPERWORK

Laboratory: TestAmerica Sample was ☐ Shipped/couriered day of sampling
☐ sent on: _____

Shipped Via: ☐ Fedex ☐ Other: _____

Chain of Custody Signed By:

APPENDIX D

Off-Site Soil Vapor Field Sampling Logs



Sample ID	Location	Start Date	Lab	Canister			Pressure (in Hg)		Flow Controller			Purging		Tedlar Bag		Leak/Tracer Test		Start Time	End Time
				No.	Size	Type	Initial	Final	No.	Type	Flow Rate (±5%)	Purge Rate	Purge Volume	Size	Fill Rate	Initial Reading	End Reading		
SVMP-22	Rosati	9/18/17	ATL	1L3061	1L	Summa	-28.0	-5.0	22700	BB	40	50	1L	500	50	0	0	9:19	9:39
SVMP-23	Rosati	9/18/17	ATL	1L2996	1L	Summa	-30.0	-5.0	21978	Y	40	50	1L	500	50	0	0	1230	1258
SVMP-24	Rosati	9/18/17	ATL	1L2482	1L	Summa	-30.0	-5.0	20664	Y	40	50	1L	500	50	0	0	1336	1404
SVMP-18	34367 Capitol	9/18/17	ATL	1L2318	1L	Summa	-30.0	-5.0	21035	Y	40	50	1L	500	50	0	0	1450	1520
SVMP-19	34401 Capitol	9/18/17	ATL	1L2849	1L	Summa	-27.0	-5.0	23265	Y	40	50	1L	500	50	0	0	1604	1626
SVMP-20	12088 Capitol	9/19/17	ATL	1L2710	1L	Summa	-29.0	-5.0	23279	Y	40	50	1L	500	50	0	0	0849	0914
SVMP-16	34550 Beacon	9/19/17	ATL	1360	1L	Summa	-30.0	-5.0	23194	Y	40	50	1L	500	50	0	0	1005	1033
SVMP-14	34669 Beacon	9/19/17	ATL	1L2709	1L	Summa	-30.0	-5.0	20693	Y	40	50	1L	500	50	0	0	1110	1141
SVMP-9	34921 Beacon	9/20/17	ATL	1L3075	1L	Summa	-27.0	-5.0	23206	Y	40	50	1L	500	50	0	0	0820	0850
SVMP-7	34965 Wadsworth	9/20/17	ATL	1L2705	1L	Summa	-29.0	-5.0	22708	Y	40	50	1L	500	50	0	0	0930	0959
SVMP-5	34851 Wadsworth	9/20/17	ATL	1L1754	1L	Summa	-28.0	-5.0	21985	Y	40	50	1L	500	50	0	0	1053	1126
SVMP-2D	34963 Standish	9/20/17	ATL	1L2303	1L	Summa	-28.0	-5.0	20702	Y	40	50	1L	500	50	0	0	1241	1304
SVMP-2S	34963 Standish	9/20/17	ATL	1L2596	1L	Summa	-28.0	-5.0	21072	Y	40	50	1L	500	50	0	0	1321	1347
SVMP-2SD	12555 Belden	9/21/17	ATL	1L2741	1L	Summa	-30.0	-5.0	23792	Y	40	50	1L	500	50	0	0	0930	1001
SVMP-2SS	12555 Belden	9/21/17	ATL	35363	1L	Summa	-29.0	-4.0	21297	Y	40	50	1L	500	50	0	0	1023	1053
SVMP-27	11813 Belden	9/21/17	ATL	1L1944	1L	Summa	-30.0	-5.0	13260	Y	40	50	1L	500	50	0	0	1147	1226

Meteorological Data								Notes
Date	Time	Temp. (°F)		Humidity	Wind (mph)	Press. (in.)	Precip. (in.)	
9/18/17	1100	—	68°F	—	0	—	—	
9/19/17	1100	—	72°F	—	3	—	—	
9/21/17	1220	—	83°F	—	0	—	—	

Air Parameters							
Location ID	CH4 % before	CH4 % after	CO2 %	O2 %	CH4 LEL %	PID (ppm)	Shut in test pass?
SVMP-22	0.0	0.0	1.8	19.8	0	0.5	Y
SVMP-23	0.0	0.0	0.1	15.8	0	0.4	Y
SVMP-24	0.0	0.0	2.5	18.9	0	0.7	Y
SVMP-18	0.0	0.0	5.2	16.8	0	0.4	Y
SVMP-19	0.0	0.0	6.4	16.3	0	0.4	Y
SVMP-20	0.0	0.0	6.0	16.1	0	0.1	Y
SVMP-16	0.0	0.0	1.2	19.8	0	0.1	Y
SVMP-14	0.0	0.0	1.5	19.5	0	0.0	Y
SVMP-9	0.0	0.0	0.0	20.8	0	0.0	Y
SVMP-7	0.0	0.0	0.0	20.8	0	0.0	Y
SVMP-5	0.0	0.0	0.2	20.7	0	0.0	Y
SVMP-2D	0.0	0.0	1.7	19.3	0	0.0	Y
SVMP-2S	0.0	0.0	0.9	20.1	0	0.0	Y
SVMP-2SD	0.0	0.0	5.4	14.0	0	0.0	Y
SVMP-2SS	0.0	0.0	4.0	15.5	0	0.0	Y
SVMP-27	0.0	0.0	0.1	19.2	0	0.0	Y

Sample ID	Location	Start Date	Lab	Canister					Flow Controller			Purging		Tedlar Bag		Leak/Tracer Test		Start Time	End Time
				No.	Size	Type	Pressure (in Hg)		No.	Type	Flow Rate (±5%)	Purge Rate	Purge Volume	Size	Fill Rate	Initial Reading	End Reading		
							Initial	Final											
SUMP-21	Brewster St	9-19-17	ATL	141844	1L	Summa	-30	-5	21656	BB	40 ml/min	50	1L	500	50	0	0	855	920
SUMP-17	Beacon St	9-19-17	ATL	142798	"	"	-28	-5	23226	"	"	"	"	"	"	0	0	948	1013
SUMP-15	34591 Beacon St	9-19-17	ATL	142890	"	"	-30	-5	23227	"	"	"	"	"	"	0	0	1040	1107
SUMP-13	34787 Beacon St	9-19-17	ATL	142658	"	"	-30	-5	2113	"	"	"	"	"	"	0	0	1155	1223
SUMP-12	12100 Boston Post	9-19-17	ATL	141769	"	"	-29	-5	21488	"	"	"	"	"	"	0	0	1248	1313
SUMP-10	34851 Beacon St	9-20-17	ATL	141928	"	"	-29	-5	23241	"	"	"	"	"	"	0	0	827	855
SUMP-8	34969 Beacon St	9-20-17	ATL	141763	"	"	-27	-5	22081	"	"	"	"	"	"	0	0	925	955
SUMP-6	34935 Wadsworth	9-20-17	ATL	141710	"	"	-30	-5	21146	"	"	"	"	"	"	0	0	1020	1048
SUMP-4	11866 Boston Post	9-20-17	ATL	141762	"	"	-28	-5	21649	"	"	"	"	"	"	0	0	1143	1208
SUMP-1-7	34965 Standish	9-20-17	ATL	142757	"	"	-29	-5	21508	"	"	"	"	"	"	0	0	1235	1305
SUMP-1-3.5	34965 Standish	9-20-17	ATL	143029	"	"	-27	-5	21910	"	"	"	"	"	"	0	0	1320	1348
SUMP-3-7	34851 Standish	9-20-17	ATL	142978 143002 SUMP 9-21-17	"	"	-29	-5	23210 23209 SUMP 9-21-17	"	"	"	"	"	"	0	0	915	942
SUMP-3-3.5	34851 Standish	9-20-17	ATL	142922	"	"	-30	-5	23248	"	"	"	"	"	"	0	0	1002	1033
SUMP-26	11895 Baldwin	9-21-17	ATL	142484	"	"	-29	-5	23234	"	"	"	"	"	"	0	0	1117	1143
SUMP-28	11723 Baldwin	9-21-17	ATL	142612	"	"	-30	-5	23872	"	"	"	"	"	"	0	0	1203	1229
			ATL																

Meteorological Data							Notes		
Date	Time	Temp. (°F)		Humidity	Wind (mph)	Press. (in.)	Precip. (in.)		
		Indoor	Outdoor						

Air Parameters							
Location ID	CH4 % before	CH4 % after	CO2 %	O2 %	CH4 LEL %	PID (ppm)	Shut in test pass?
SUMP-21	0.0	0.0	1.8	19.3	0.0	0.0	Yes
SUMP-17	0.0	0.0	4.9	16.8	0.0	0.0	Yes
SUMP-15	0.0	0.0	0.7	20.3	0.0	0.0	Yes
SUMP-13	0.0	0.0	1.2	18.6	0.0	0.0	Yes
SUMP-12	0.0	0.0	1.2	19.9	0.0	0.0	Yes
SUMP-10	0.0	0.0	0.4	19.9	0.0	0.0	Yes
SUMP-8	0.0	0.0	1.4	19.6	0.0	0.0	Yes
SUMP-6	0.0	0.0	0.9	20.1	0.0	0.0	Yes
SUMP-4	0.0	0.0	1.0	20.0	0.0	0.0	Yes
SUMP-1-7	0.0	0.0	1.7	19.2	0.0	0.0	Yes
SUMP-1-3.5	0.0	0.0	1.2	19.3	0.0	0.0	Yes
SUMP-3-7	0.0	0.0	0.8	19.9	0.0	0.0	Yes
SUMP-3-3.5	0.0	0.0	0.6	20.4	0.0	0.0	Yes
SUMP-26	0.0	0.0	11.4	8.6	0.0	0.0	Yes
SUMP-28	0.0	0.0	3.4	16.7	0.0	0.0	Yes

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A decorative graphic consisting of three thin orange lines. One line is horizontal, extending from the left edge of the page towards the right. Two other lines are diagonal, starting from the bottom left and extending towards the top right, intersecting the horizontal line.