

# MEMO



To:  
Paul Owens, District Supervisor  
EGLE Warren District Office  
27700 Donald Court  
Warren, Michigan 48092-2793  
[owensp@michigan.gov](mailto:owensp@michigan.gov)

Copies:  
Ms. Jeanne Schlaufman  
Mr. Matt Williams, EGLE  
Ms. Beth Vens, EGLE  
Mr. Todd Walton, Ford  
Mr. Chuck Pinter, Ford

Arcadis of Michigan, LLC  
28550 Cabot Drive  
Suite 500  
Novi  
Michigan 48377  
Tel 248 994 2240

From:  
Kris Hinskey

Date:  
March 4, 2022

Arcadis Project No.:  
30050315

Subject:  
Utility Corridor Assessment – Response to EGLE Letter Dated February 11, 2022  
and Scope of Work for offsite Utility Corridor Assessment  
36200 Plymouth Road, Livonia, Wayne County  
Consent Decree No 2:1712372-GAD-RSW (CJ)  
Site ID No.: 82002970

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On behalf of Ford Motor Company (Ford), this memorandum (memo) and scope of work has been prepared by Arcadis of Michigan, LLC (Arcadis) for the Livonia Transmission Plant (LTP) site (the site). This memo provides a response to the request from the Michigan Department of Environmental, Great Lakes, and Energy (EGLE) in the February 11, 2022 letter. The response to comments and scope work outlines action items completed and in progress to satisfy EGLE's request in the letter. In addition, Ford and Arcadis attended a meeting with EGLE (Paul Owens, Beth Vens, Matt Williams, and Jeanne Schlaufman) on March 1, 2022 to review the action items outlined in this memo and to seek concurrence on the approach. Therefore, Ford is in compliance with the requirements of the Consent Decree and demand the stipulated penalties be retracted by EGLE. Below details the response to EGLE's comments and requested scope of work.

- a) *Identify the presence and extent of any laterals intercepting the length of the sewer corridors where concentrations are above the applicable site-specific criteria, including any locations on the Ford property.*

- b) *At structures along the sewer corridor where vapors are identified, and concentrations are above the applicable site-specific criteria, Ford was required to document the laterals and their connections and determine if each structure does or does not connect to the sewer or portions of the sewer.*
- c) *For each lateral and structure that is connected to the sewer corridors where vapor concentrations are above the applicable site-specific criteria, each lateral pipe must be evaluated for the presence of contaminated groundwater, sediment, and vapors, including the point of entry into the structure.*
- d) *At structures where it could not be demonstrated there was an exterior vapor trap preventing vapor migration or the indoor plumbing did not prevent the migration of vapors into the indoor air, Ford was to immediately conduct sampling of the indoor air.*

**Response:** The activities detailed in the scope of work section below satisfy EGLE's comments for a, b, and d. EGLE's comment for c regarding sampling water, sediment, and vapor from the sanitary sewer lateral pipes is not applicable to this investigation. All lateral pipes visually identified are connected to the large diameter main sanitary sewer pipes in the city rights-of-way at top of main pipe, not the side of main pipe, which physically limits the ability to sample the laterals. In addition, any sediment found in the lateral would be from the property owner as sediment from the mainline could not accumulate in the laterals. In addition, groundwater samples collected to date from the monitoring well network offsite do not show any evidence that impacted groundwater is in the utility corridor. The groundwater analytical results are provided to EGLE quarterly in the Progress Report. Arcadis has detailed a process to evaluate vapor in the commercial and residential scopes of work which is provided below. The scope of work detailed below satisfy a, b, and d.

#### **Access Agreement Scope of Work:**

Access agreements were mailed to the following properties, located in **Exhibit 1** on March 3, 2022. The selected properties to receive access agreements is based on laboratory analytical results from sanitary sewer vapor and liquid samples located along Plymouth and Stark Roads.

#### **Plymouth Road**

Vapor samples have been collected from November 2, 2022 through the week of February 7, 2022. Vapor results exceeding the Site-Specific Volatilization to Indoor Air Criteria (SSVIAC) 12-hr workday exposure has been identified in sanitary locations SL-3, SL-16, and SL-17. Twenty-two downstream vapor samples have been collected in total from sanitary locations SL-18, SL-4, and SL-5 since November 2, 2021 with no exceedances of the SSVIAC 12-hour workday exposure criteria. Therefore, access agreements will be requested from the commercial properties detailed below. Out of an abundance of caution, even though exceedances of criteria have only been observed in sanitary locations SL-3, SL-16, and SL-17, Ford is requesting access from the remaining four (4) properties along Plymouth Road.

#### **Intersection of Hathaway and Stark Roads**

Vapor samples have been collected from November 2, 2022 through the week of February 7, 2022. Vapor results exceeding the SSVIA unrestricted residential criteria has been identified in sanitary location SL-12. Sixty-two upstream vapor samples have been collected in total from sanitary locations SL-5, SL-6, SL-7, SL-8, SL-9, SL-10, SL-11, SL-14, SL-15, and SL-23 since November 2, 2021 have primarily been below

SSVIA unrestricted criteria for SSVIA unrestricted residential criteria with the exception of single intermittent exceedance of at sanitary locations SL-7, SL-10, and SL-1410, SL. Therefore, using an extremely conservative approach, access agreements will be requested from the residential properties detailed below, which include properties between sanitary locations SL-23 to SL-12 and SL-12 to SL-20.

Analytical results for vapor and liquid sanitary samples are provided in **Figures 1** through **4**.

Property Designation	Site Address (Livonia, MI 48150)
Commercial	34800 Plymouth Road
Commercial	34706-34730 Plymouth Road
Commercial	34450 Plymouth Road
Commercial	9375 Stark Road
Residential	9551 Stark Road
Residential	9491 Stark Road
Residential	9487 Stark Road
Residential	9552 Stark Road
Residential	9480 Stark Road
Residential	34284 Hathaway Street
Residential	34277 Hathaway Street
Residential	34252 Hathaway Street
Residential	34247 Hathaway Street

Exhibit 1: Residential and Commercial Access Agreement Requests

The commercial and residential locations where access is being requested are provided on **Figures 5** and **6**. If access has not been granted by the property owners by March 17, 2022, two weeks after the access agreements have been mailed, Arcadis will call the property owner to discuss access request as well as go door to door to address questions. Arcadis will implement the phone call and door-to-door follow-up by March 25, 2022. If the property owner's refuse to sign the access agreement by April 1, 2022, per the Consent Decree Section 7.2, Ford will take legal action to pursue access.

For the properties where access has previously been granted, refer to **Exhibit 2** and **Figure 2**, the following scope of work and process will be implemented for each commercial property.

Property Designation	Site Address (Livonia, MI 48150)
Commercial	34900 Plymouth Road
Commercial	34850 Plymouth Road
Commercial	35000 Plymouth Road
Commercial	35400 Plymouth Road
Commercial	35200 Plymouth Road

Exhibit 2: Commercial Access Agreement Approved

A site visit will be completed to evaluate if the plumbing at the properties is intact and functioning properly as well as confirm where the lateral sanitary sewer connects to the sanitary mainline. Refer to **Figure 7** for lateral connection locations. The investigation activities at each commercial property will follow the process outlined below.

## **Commercial Scope of Work**

### **Initial Site Visit:**

- Obtain building construction or layout drawings if available to evaluate later connections, and a licensed plumber will be contracted to complete the following inspections:
  - visually inspect plumbing to determine if deficiencies are present,
  - if minor deficiencies are present then those will be repaired by the licensed plumber,
  - if major deficiencies are present then proposed next steps will be communicated to EGLE,
  - removal of toilets to confirm wax rings are present and replace the wax ring if necessary, and
  - push camera scope any floor drain to confirm a P-trap is present and if possible, identify the connection into the lateral

### **Second Site Visit**

In the event, the initial site visit is inconclusive, if the plumber cannot identify sanitary sewer lateral connections, or if internal p-traps to the floor drains are not in place, then the following will be implemented:

- Utilize tracer dye to identify where the lateral pipes at the property are connected to the main line through the laterals. Tracer dye will be introduced into the toilets, faucets, wash areas, if applicable, and floor drains to determine lateral connections into the main lines. A specialty contractor will provide closed circuit (CCTV) televised documentation from inside the main line documenting discharge from the active laterals. Laterals adjacent to the property where no dye is exiting will be documented. The City of Livonia does not have records for lateral connections to individual properties, so laterals that appear to not be connected to the main line in Plymouth Road will be documented and next steps will be discussed with EGLE.
- A specialty contractor will also attempt to video lateral connections via push camera through cleanouts and floor drains to confirm connection or p-traps are present.

### **Third Site Visit**

If the CCTV and/or tracer study cannot confirm where each identified lateral sanitary sewer pipe connects into the mainlines, then indoor air sampling will be conducted. The indoor air sampling will follow the same process outlined in the EGLE-approved Vapor Intrusion Response Activity Plan (VI RespAP). Below details the process to complete the vapor intrusion assessment at each property.

Building-specific indoor air samples will be collected to evaluate conditions within each commercial property included in the VI evaluation. Indoor air samples will be collected to determine if there is a potential for vapor to migrate through a sanitary sewer into a building. The process for building-specific sampling outlined here is aligned with the process outlined in the 2013 EGLE VI Guidance. Ambient air samples (outside air) will also be collected concurrent with all indoor air samples to build an understanding of background conditions. The general scope of work for building-specific sampling is provided below; detailed sampling methods are included in the QAPP (Arcadis 2017b).

- Indoor air samples will be collected over operating hours (8-12 hours) representative of a workday. Indoor air samples will be collected from the lowest habitable level of each building following Section 5.5 and Appendix F.4 of the 2013 EGLE VI Guidance. The process for collecting indoor air samples is detailed below:



- During the initial site visit, the property owner will fill out the EGLE indoor air building survey and sampling form with Arcadis. Once the survey has been completed, Arcadis will complete a detailed chemical survey. Chemicals identified to potentially interfere with the indoor air sampling will be placed in a closed container and removed from the building for at least 24 hours prior to the second site visit.
  - During the second site visit, Arcadis will place indoor air sampling canisters in designated locations and allow them to collect over an 8-to-12 hour period.
  - Once the 8-to-12-hour period has been completed, Arcadis will retrieve the canisters and send the samples to a qualified laboratory.
- Outdoor/ambient air samples representative of each building or group of neighboring buildings will be collected concurrent with indoor air samples following Appendix F.4 of the 2013 EGLE VI Guidance.

All indoor air samples collected will be analyzed by United States Environmental Protection Agency (USEPA) Method TO-15 and analyzed for the site-specific constituents of concern, including 1,1-Dichloroethylene (1,1-DCE), Trichloroethene (TCE), trans-1,2-Dichloroethylene (trans-1,2-DCE), 1,4-Dioxane (1,4-D), Tetrachloroethylene (PCE), and Vinyl Chloride (VC).

Data collected from the indoor air sampling will be provided to EGLE once the data has been validated.

Commercial properties 35000 and 35400 Plymouth Road have already been part of the vapor intrusion assessment that was conducted between 2017 and 2018 in which four (4) rounds of sub-slab and indoor air sampling have been collected. The data for both properties are included in **Table 1**.

### **Residential Scope of Work**

After access agreements have been executed the residential properties referenced in Exhibit 1, Arcadis will implement the following process to evaluate deficiencies in the plumbing and confirm where lateral pipes connect to the sanitary sewer mainlines. Lateral connections have been identified for up to four (4) residential properties on Hathaway, as illustrated on **Figure 8**.

In addition, on March 3, 2022, Arcadis oversaw a specialty contractor to identify the laterals between SL-23 and SL-12 on Stark Road, refer to **Figure 8**. The findings will be provided in a subsequent memo submitted to EGLE on April 1, 2022.

#### **Initial Site Visit:**

- Obtain building construction or layout drawings if available to determine later connections, and a licensed plumber will be contracted to complete the following inspections:
  - o visually inspect plumbing to determine if deficiencies are present,
  - o if minor deficiencies are present then those will be repaired by the licensed plumber,
  - o if major deficiencies are present then proposed next steps will be communicated to EGLE ,
  - o removal of toilets to confirm wax rings are present and replace the wax ring if necessary, and
  - o scope and camera (push camera) any floor drain to confirm a P-trap is present and if possible, identify the connection into the lateral

#### **Second Site Visit**

In the event, the initial site visit is inconclusive and if the plumber cannot identify sanitary sewer lateral connections or if internal p-traps to the floor drains are not in place then the following will be implemented:

- Utilize tracer dye to identify where the drain/s at the property are connected to the main line through the lateral. Tracer dye will be introduced into the toilet/s, faucet/s, and floor drain/s, if present, to determine lateral connections into the main line. A specialty contractor will provide CCTV to document lateral discharge from within the main line pipe,
- A specialty contractor will also attempt to video lateral connections through cleanouts and floor drains to confirm connection or p-traps are present, and
- Utilize ground penetrating radar to locate the lateral from the mainline to the residence.

### **Third Site Visit**

If the CCTV and/or tracer study cannot confirm where each identified lateral sanitary sewer pipe connects into the mainlines, then indoor air sampling will be conducted. The indoor air sampling will follow the same process outlined in the EGLE-approved Vapor Intrusion Response Activity Plan (VI RespAP). Below details the process to complete the vapor intrusion assessment at each property. .

- Indoor air samples will be collected over a 24-hour period. Indoor air samples will be collected from the lowest habitable level of each building following Section 5.5 and Appendix F.4 of the 2013 EGLE VI Guidance. The process for collecting indoor air samples is detailed below:
  - During the initial site visit, the property owner will fill out the EGLE indoor air building survey and sampling form with Arcadis. Once the survey has been completed, Arcadis will complete a detailed chemical survey. Chemicals identified to potentially interfere with the indoor air sampling will be placed in a closed container and removed from the building for at least 24 hours prior to the second site visit.
  - During the second site visit, Arcadis will place indoor air sampling canisters in designated locations and allowed to collect over a 24-hour period.
  - Once the 24-hour collection period has been completed, Arcadis will retrieve the canisters and will ship the samples to a qualified laboratory.
- Outdoor/ambient air samples representative of each building or group of neighboring buildings will be collected concurrent with indoor air samples following Appendix F.4 of the 2013 EGLE VI Guidance.

All indoor air samples collected will be analyzed by USEPA Method TO-15 and analyzed for the site-specific constituents of concern, including 1,1-DCE, TCE, trans-1,2-DCE, 1,4-D, PCE, and VC.

Data collected from the indoor air sampling will be provided to EGLE once the data has been validated.

*The December 14, 2021, vapor samples collected from the sanitary sewer still indicate the presence of vapors (SAMH-1231, SL-2, and SL-3) at concentrations above the applicable residential and nonresidential site-specific criteria for vapor in a preferential pathway. According to the Memo and the Report, Arcadis identified and confirmed 40 lateral pipes on the Ford property and 44 lateral pipes off-property between manholes SL-2 and SL-5. EGLE requested that Ford, in the letters dated June 2, 2021, and November 9, 2021, for each lateral pipe and structure that is connected to the sewer corridors where vapor concentrations are above the applicable site-specific criteria, be evaluated for the presence of contaminated groundwater, sediment, and vapors, including the point of entry into the structure. The Report does not include a figure that identifies the locations of any of the 40 on-property or 44 off-property lateral pipes.*

**Response:** Please refer to **Figure 7** for lateral connection locations onsite and offsite along Plymouth Road.

*The Report also does not indicate that Ford identified any of the laterals within or adjacent to the residential area or homes, requested access, or has done any investigation to determine whether vapors were or had the potential to migrate into the residential structures. Ford requested access to only seven (7) commercial properties of which only three (3) granted access. EGLE reviewed Section 3.3 — (Commercial Property Inspections) of the Report and finds the inspection and or the information provided regarding the following inspections to be insufficient:*

- **34850 Plymouth Road**

- *The inspection was to confirm that each of the identified p-traps was wetted as described and was functioning, as required. The Report does not indicate this was confirmed by the inspection conducted.*

**Response:** As stated in the Utility Corridor Evaluation Report (Report) submitted to EGLE on December 9, 2021, the p-traps at this property were confirmed by the property owner to be wetted approximately 15 times per day, 4 days per week. The water present inside each p-trap would act as a barrier to sanitary sewer gas migrating to indoor air and that the p-traps were functional. As stated in the Report, two of the four sink p-traps identified were determined to have secure piping with no evidence of leaking. Arcadis will contract a licensed plumber to inspect the other two p-traps that did show evidence of loose piping to determine if they are functional.

- *The absence of odors at the floor drain does not constitute an adequate inspection of the drain, the identified contaminants of concern are not likely to be present above their odor threshold. The floor drain must be investigated further to confirm that a p-trap is present and to confirm it is functioning properly or Ford must conduct an evaluation of the indoor air.*

**Response:** The presence or absence of odors from a floor drain is an adequate inspection of the functionality of the p-trap within the drainpipe. Odors are a qualitative indicator of the presence of sanitary sewer gas entering inside the building that may contain contaminants of concern and also indicates whether the p-trap is wet (functioning) or dry (not functioning). If the p-trap within the floor drain is dry, there is no water to act as a barrier for sanitary sewer gas entering the structure, so odors would most likely be present inside the building resulting from the migration of sanitary sewer gas.. If the p-trap is wet, a water barrier is present within the p-trap that would act to inhibit the migration of sanitary sewer gas inside the building, therefore odors would most likely not be present. In either case, the p-trap can be evaluated for functionality based on the presence or absence of sanitary sewer odors.

- *The toilets were not inspected as indicated in EGLE letters dated June 2, and November 9, 2021. If access was not granted and could not be secured to inspect the wax ring(s) to determine it was functional, an evaluation of the indoor air should have been conducted.*
- *The Report also indicates that no roof vent was identified. It is not understood why, as part of the inspection, it was not determined where or how the sewer lines vent to assure the sewer is venting to the outside.*

**Response:** Arcadis is currently coordinating with the property owner to complete the investigation detailed above in the section commercial scope work of this memo in order to address these two points.

- **34900 Plymouth Road**

- *The inspection was to confirm that each of the identified p-traps was wetted as described and was functioning, as required. The Report does not indicate this was confirmed by the inspection conducted.*

**Response:** As stated in the Report, the property tenant indicated that p-traps located in the bathrooms on the first floor are wetted 6 days per week. This would indicate that water would be present inside each p-trap to act as a barrier to sanitary sewer gas migrating and that the p-traps are functional. The second-floor p-traps identified at this property were confirmed to be wetted approximately once a month. As stated in the Report, one of these toilets was confirmed to be wetted, the other was confirmed to be dry. Arcadis wetted the dry toilet's p-trap by flushing the toilet. Four of the seven sink/urinal p-traps identified were determined to have secure piping with no evidence of leaking. Arcadis will contract a licensed plumber to inspect the two p-traps that did show evidence of loose piping to determine if they are functional.

- *The absence of odors at the floor drain does not constitute an adequate inspection of the drain, the identified contaminants of concern are not likely to be present above their odor threshold. The floor drain must be investigated further to confirm that a p-trap is present and to confirm it is functioning properly or Ford must conduct an evaluation of the indoor air.*

**Response:** The presence or absence of odors from a floor drain is an adequate inspection of the functionality of the p-trap within the drainpipe. Odors are a qualitative indicator of the presence of sanitary sewer gas entering inside the building that may contain contaminants of concern and also indicate whether the p-trap is wet (functioning) or dry (not functioning). If the p-trap within the floor drain is dry, there is no water to act as a barrier for sanitary sewer gas entering the structure, so odors would most likely be present inside the building resulting from the migration of sanitary sewer gas. If the p-trap is wet, a water barrier is present within the p-trap that would act to inhibit the migration of sanitary sewer gas inside the building. Therefore, odors would most likely not be present. In either case, the p-trap can be evaluated for functionality based on the presence or absence of sanitary sewer odors.

- *The toilets were not inspected as indicated in EGLE letters dated June 2, and November 9, 2021. If access was not granted and could not be secured to inspect the wax ring(s) to determine it was functional, an evaluation of the indoor air should have been conducted.*

**Response:** Arcadis is currently coordinating with the property owner to complete the investigation detailed above in the section commercial scope work of this memo.

- **35000 Plymouth Road**

- *The inspection was to confirm that each of the identified p-traps was wetted as described and was functioning, as required. The Report does not indicate this was confirmed by the inspection conducted.*

**Response:** As stated in the Report, the property tenant indicated that p-traps located within the break room and bathrooms are wetted daily except for weekends. This indicates that water would be present inside these p-traps to act as a barrier to sanitary sewer gas and that the p-traps are functional. The p-trap located in the women's bathroom is wetted less due to infrequent use. As stated in the Report, all p-traps identified were determined to have secure piping with no evidence of leaking except for one in the below-grade bathroom that had sludge around the fittings. Arcadis will contract a licensed plumber to inspect the p-trap that did show evidence of leaking to determine if it is functional.

- *The absence of odors at the floor drains or trench drains does not constitute an adequate inspection of the drains and trench drains, the identified contaminants of concern are not likely to be present above their odor threshold. The floor drain must be investigated further to confirm that a p-trap is present and to confirm it is functioning properly or Ford must conduct an evaluation of the indoor air.*

**Response:** The presence or absence of odors from a floor drain is an adequate inspection of the functionality of the p-trap within the drainpipe. Odors are a qualitative indicator of the presence of sanitary sewer gas entering inside the building that may contain contaminants of concern and also indicates whether the p-trap is wet (functioning) or dry (not functioning). If the p-trap within the floor drain is dry, there is no water to act as a barrier for sanitary sewer gas entering the structure, so odors would most likely be present inside the building resulting from the migration of sanitary sewer gas. If the p-trap is wet, a water barrier is present within the p-trap that would act to inhibit the migration of sanitary sewer gas inside the building. Therefore odors would most likely not be present. In either case, the p-trap can be evaluated for functionality based on the presence or absence of odors within the indoor air.

- *The toilets were not inspected as indicated in EGLE letters dated June 2, and November 9, 2021. If access was not granted and could not be secured to inspect the wax ring(s) to determine it was functional, an evaluation of the indoor air should have been conducted.*

**Response:** Arcadis is currently coordinating with the property owner to complete the investigation detailed above in the section commercial scope work of this memo.

*In addition, EGLE identified the following deficiencies in the Report that must be addressed.*

- **Appendix A — Onsite and Offsite Recon and Sampling Log.**  
*Provide a Figure that corresponds to the logs and identifies each of the manholes or drains.*

**Response:** **Figure 9**, provides the location of each for offsite manholes identified in the logs. **Figure 7**, provides the locations and names for each manhole that has been investigated. Additional manhole locations and identifications will be provided in the April 1, 2022 memo.

- *Figures 1 and 2 included in the report depict many of the manholes and catch basins identified on the logs, but they do not include most of the manholes at the LTP property inside or outside of the plant such as: Manhole 1, 2, 1A, 1B, 3A, 3B, etc. or any of the floor drains, or vaults, etc. There should a figure that identifies all on-site manholes, vaults, floor drains, etc. that were inspected as identified in Appendix A — even if only to show the location of the restroom where a drain is located.*

**Response:** **Figure 7**, provide the locations and identification for the manholes and restrooms that have been identified to date throughout the plant property. Exhibit 3 has been updated to reflect the current identification names of the manholes that is discussed above. The identification change was made to stay consistent with the pipe rehabilitation identification that was completed from June to November 2021.

Previous Manhole Identifications	Revised Manhole Identifications
Manhole 1	MH-123
Manhole 1A	SAMH-1260
Manhole 1B	SAMH-1253
Manhole 2	SAMH-1252
Manhole 3A	SAMH-1258
Manhole 13	SAMH-1261

Exhibit 3: Update manhole identifications.

In addition, **Figure 7**, also provides the locations of above grade sanitary piping versus below grade sanitary piping as well as onsite lateral connections.

The floor drains, vaults, and additional manholes that are currently or will be inspected and documented. The findings of this investigation will be included in the April 1, 2022 update memo.

- *There are photos of a manhole identified as being at the intersection of Plymouth and Levan, the manhole should be depicted on Figure 1, as should SAMH-1228, SAMH-1088 and 1067, STMH 1001, 1041, 1088, and 1210.*

**Response:** Please refer to **Figure 9** for the locations of described above. SAMH-1228 has been updated and identified as SL-2 for all figures.

- *Depict on Figures the sewer lines that DO NOT connect in a different color.*

**Response:** **Figure 10** Provides details to where Arcadis has visually confirmed which sanitary sewer connects to either Plymouth or Stark Road. The remainder of the locations depicted on **Figure 10** has been provided by the City of Livonia. Sewer connection locations that have not been verified in the field, refer to **Figure 11**, will be verified and communicated in the April 1, 2022 memo.

- *Section VII. Access — 7.2 requires Ford to provide copies of the secured access agreements to EGLE. Section 3.3 of the Report states that access agreements were secured for 3 commercial properties (34850, 34900, and 35000) Plymouth Road. Copies of the secured access agreements are not included in or were otherwise provided to EGLE.*

**Response:** Please refer to **Attachment A** for the secured access agreements.

*During the January 4, 2022, meeting between EGLE and Ford, EGLE advised Ford they need to undertake the response activities necessary to determine the source of the contamination (groundwater and or vapors) that are entering the sewer and evaluate the concentration; it was acknowledged that the trend based on the current data seems to indicate the presence of contamination in the sewers has decreased in concentration and appears no longer to be continuous. EGLE indicated that the collection of vapor samples from within the sewers needed to occur on a more frequent basis (weekly was proposed by Ford, but not agreed to by EGLE) and would need to continue for a period of time period not yet determined. EGLE requested that Ford (Arcadis) develop and provide to EGLE a scope of work (SOW) to determine the source of the contamination and to continue to collect vapor data at an interval that will capture the variation in presence and concentrations within the sewers as suggested by the most recent sampling data. The information and SOW provided to EGLE from Arcadis via email dated January 18, 2022, was not responsive; see email from EGLE dated January 28, 2022, to Arcadis (Ford).*

**Response:** As of February 14, 2022, Arcadis has been conducting an adaptive investigation to screen the manholes on Ford's property to determine if there is a potential source that is leading to the vapor migration in the sanitary sewers. The FROG 5000 is the instrument that was recommended by EGLE and is currently being utilized in the field. The FROG 5000 can screen for the following constituent of concerns: TCE, Trans-1,2-DCE, CIS-1,2-DCE, and PCE. In addition to the screening, grab samples are also being collected while the FROG is screening to correlate the data quantitatively. The screening locations, draft results from the FROG screening, and grab sampling is provided in **Table 2** and on **Figure 11**.

The FROG screening is an adaptive investigation in which primary locations have been identified as initial screening locations. Based on the primary location results, Arcadis then screens the secondary locations, and then followed by the tertiary, refer to **Figure 11**. The primary and secondary locations are accessible manholes while the tertiary locations have been cleanouts. Based on the data collected as of February 28, 2022, the following findings has been observed.

- Primary locations (MH-1244, MH-1255, SAMH-1259, MH-1256, SAMH-1260, SAMH 1260B, and MH-1231A) have consistently exceeded the SSVIAC for Restricted 12-hour workday exposure for TCE and CIS.
- Secondary locations (MH-A-B54 and MH-A-B36) have exceeded SSVIAC for TCE and for CIS.
- Secondary locations MH-1245, MH-1247, and MH-1248 have provided delineation to the west of primary location MH-1244, while secondary locations MH-1253 has provided delineation to the north of primary location MH1260B. Delineation of the secondary locations is ongoing and additional details will be provided in the April 1, 2022 update memo.



## MEMO

The information provided in this memo satisfies EGLE's request outlined in the February 11, 2022 letter. Therefore, Ford is in compliance with the requirements of the Consent Decree and the potential for stipulated penalties should be retracted by EGLE. Additional information related to ongoing field activities will be provided within the subsequent April 1, 2022 update memo. Ford continues to work diligently to determine the root cause of the source of the vapor and liquids present in the sanitary sewer both for onsite and offsite and is committed to completing the activities outlined in this memo.

Enclosures:

### Tables

Table 1 – 35000 Plymouth Road and 35400 Plymouth Road Vapor Intrusion Analytical Results

Table 2 – FROG Screening and Co-located Grab Sampling Results

### Figures

Figure 1 – On-site and Offsite Vapor Results Trichloroethene and Vinyl Chloride

Figure 2 – Offsite Vapor Results Trichloroethene and Vinyl Chloride

Figure 3 – On-site and Offsite Liquid Results Trichloroethene and Vinyl Chloride

Figure 4 – Off-site Liquid Results Trichloroethene and Vinyl Chloride

Figure 5 – Commercial Access Agreements

Figure 6 – Residential Access Agreements

Figure 7 – Sanitary Sewer

Figure 8 – Residential Off-site Later Connections and CCTV/Cleaning

Figure 9 – Off-site Sewer Locations

Figure 10 – Sanitary and Storm Sewer Line Connections

Figure 11 – FROG Sanitary Screening Results

Attachment A – Secured Access Agreements

# Tables

Table 1  
35000 Plymouth Road and 35400 Plymouth Road Vapor Intrusion Analytical Results  
Ford Livonia Transmission Plant  
Livonia, MI



Constituent of Concern				1,1-Dichloroethene	1,4-Dioxane	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride
Unit				ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Non-Residential Volatilization to Indoor Air RIASL12 (Indoor/Ambient Air) - EGLE January 2020 Table (commercial):				610	24	25	82	250	4	27
Nonresidential Volatilization to Indoor Air Criteria adjusted for 12 hour work-day exposure. Slab-on-grade, <50,000 sqft. Provided by MDEQ 10/30/2018:				20000	800	820	2700	8200	130	910
Location	Sample Date	Sample Location	Matrix							
35000 Plymouth Road	9/20/2018	AA-35000Plymouth-01_092018	AA	< 0.74	< 0.67	< 0.74	< 1.3	< 0.74	< 1.0	< 0.48
35000 Plymouth Road	9/20/2018	IA-35000Plymouth-01_092018	AI	< 0.72	< 0.66	< 0.72	< 1.2	< 0.72	< 0.98	< 0.47
35000 Plymouth Road	9/20/2018	IA-35000Plymouth-02_092018	AI	< 0.71	< 0.64	< 0.71	< 1.2	< 0.71	< 0.96	< 0.46
35000 Plymouth Road	9/20/2018	IA-35000Plymouth-03_092018	AI	< 1.4	< 1.2	< 1.4	< 2.3	< 1.4	< 1.8	< 0.87
35000 Plymouth Road	9/20/2018	IA-35000Plymouth-04_092018	AI	< 0.64	< 0.58	< 0.64	< 1.1	< 0.64	< 0.86	< 0.41
35000 Plymouth Road	9/20/2018	IA-35000Plymouth-05_092018	AI	< 1.7	< 1.6	< 1.7	< 3.0	< 1.7	< 2.4	< 1.1
35000 Plymouth Road	9/21/2018	SSMP-35000PLYMOUTH-01_092118	GS	< 5.0	< 18	< 5.0	38	< 5.0	< 6.8	< 3.2
35000 Plymouth Road	9/21/2018	SSMP-35000PLYMOUTH-02_092118	GS	< 4.7	< 17	< 4.7	13	< 4.7	< 6.4	< 3.0
35000 Plymouth Road	9/21/2018	SSMP-35000PLYMOUTH-03_092118	GS	< 4.9	< 18	< 4.9	39	< 4.9	< 6.6	< 3.2
35000 Plymouth Road	9/21/2018	SSMP-35000PLYMOUTH-04_092118	GS	< 5.0	< 18	< 5.0	63	< 5.0	< 6.8	< 3.2
35000 Plymouth Road	9/21/2018	SSMP-35000PLYMOUTH-05_092118	GS	< 5.0	< 18	< 5.0	14	< 5.0	< 6.8	< 3.2
35000 Plymouth Road	12/13/2018	AA-35000Plymouth-01_121318	AA	< 0.59	< 0.54	< 0.59	< 1.0	0.84	< 0.81	< 0.38
35000 Plymouth Road	12/13/2018	IA-35000Plymouth-01_121318	AI	< 6.3	< 5.8	< 6.3	< 11	< 6.3	0.30 J	< 4.1
35000 Plymouth Road	12/13/2018	IA-35000Plymouth-02_121318	AI	< 6.2	< 5.6	< 6.2	< 10	< 6.2	0.59 J	< 4.0
35000 Plymouth Road	12/13/2018	IA-35000Plymouth-03_121318	AI	< 6.3	< 5.8	< 6.3	< 11	< 6.3	0.71 J	< 4.1
35000 Plymouth Road	12/13/2018	IA-35000Plymouth-04_121318	AI	< 6.3	< 5.7	< 6.3	< 11	< 6.3	0.39 J	< 4.0
35000 Plymouth Road	12/13/2018	IA-35000Plymouth-05_121318	AI	< 6.3	< 5.8	< 6.3	< 11	< 6.3	0.30 J	< 4.1
35000 Plymouth Road	12/13/2018	SSMP-35000PLYMOUTH-01_121318	GS	< 4.5	< 16	< 4.5	17	< 4.5	< 6.1	< 2.9
35000 Plymouth Road	12/13/2018	SSMP-35000PLYMOUTH-02_121318	GS	< 4.8	< 17	< 4.8	6.5 J	< 4.8	< 6.4	< 3.1
35000 Plymouth Road	12/13/2018	SSMP-35000PLYMOUTH-03_121318	GS	< 4.4	< 16	< 4.4	11	< 4.4	< 6.0	< 2.8
35000 Plymouth Road	12/13/2018	SSMP-35000PLYMOUTH-04_121318	GS	< 4.6	< 17	< 4.6	27	< 4.6	< 6.3	< 3.0
35000 Plymouth Road	12/13/2018	SSMP-35000PLYMOUTH-05_121318	GS	< 4.8	< 18	< 4.8	< 8.3	< 4.8	< 6.6	< 3.1
35000 Plymouth Road	7/12/2019	SSMP-35000PLYMOUTH-01_071219	GS	< 4.9	< 18	< 4.9	34	< 4.9	< 6.6	< 3.1
35000 Plymouth Road	7/12/2019	SSMP-35000PLYMOUTH-02_071219	GS	< 5.1	< 18	< 5.1	14	< 5.1	< 6.9	< 3.3
35000 Plymouth Road	7/12/2019	SSMP-35000PLYMOUTH-03_071219	GS	< 5.1	< 18	< 5.1	56	< 5.1	< 6.9	< 3.3
35000 Plymouth Road	7/12/2019	SSMP-35000PLYMOUTH-04_071219	GS	< 5.0	< 18	< 5.0	9.4	< 5.0	< 6.8	< 3.2
35000 Plymouth Road	7/12/2019	SSMP-35000PLYMOUTH-05_071219	GS	< 5.2	< 19	< 5.2	5.1 J	< 5.2	< 7.0	< 3.3
35000 Plymouth Road	8/4/2019	AA-35000PLYMOUTH-01_080419	AA	< 0.69	< 0.63	< 0.69	< 1.2	< 0.69	< 0.94	< 0.45
35000 Plymouth Road	8/4/2019	IA-35000PLYMOUTH-01_080419	AI	< 0.67	< 0.60	< 0.67	0.72 J	< 0.67	< 0.90	< 0.43
35000 Plymouth Road	8/4/2019	IA-35000PLYMOUTH-02_080419	AI	< 0.61	< 0.56	< 0.61	0.81 J	< 0.61	< 0.83	< 0.40
35000 Plymouth Road	8/4/2019	IA-35000PLYMOUTH-03_080419	AI	< 0.68	< 0.62	< 0.68	1.6	< 0.68	1.6	< 0.44
35000 Plymouth Road	8/4/2019	IA-35000PLYMOUTH-04_080419	AI	< 0.68	< 0.62	< 0.68	1.4	< 0.68	2.0	< 0.44
35000 Plymouth Road	8/4/2019	IA-35000PLYMOUTH-05_080419	AI	< 0.68	< 0.62	< 0.68	1.5	< 0.68	1.8	< 0.44
35000 Plymouth Road	11/26/2019	AA-35000PLYMOUTH-01_112619	AA	< 0.68	< 0.62	< 0.68	< 1.2	< 0.68	< 0.92	< 0.44
35000 Plymouth Road	11/26/2019	IA-35000PLYMOUTH-04_112619	AI	< 0.72	< 0.66	< 0.72	< 1.2	< 0.72	0.45 J	< 0.47
35000 Plymouth Road	11/26/2019	DUP-35000PLYMOUTH-01_112619	AI	< 0.73	< 0.67	< 0.73	0.53 J	< 0.73	0.41 J	< 0.47
35000 Plymouth Road	11/26/2019	IA-35000PLYMOUTH-01_112619	AI	< 0.72	< 0.66	0.33 J	< 1.2	< 0.72	< 0.98	< 0.47
35000 Plymouth Road	11/26/2019	IA-35000PLYMOUTH-02_112619	AI	< 0.71	< 0.65	0.28 J	< 1.2	< 0.71	< 0.97	< 0.46
35000 Plymouth Road	11/26/2019	IA-35000PLYMOUTH-03_112619	AI	< 0.70	< 0.63	< 0.70	0.54 J	< 0.70	0.51 J	< 0.45
35000 Plymouth Road	11/26/2019	IA-35000PLYMOUTH-05_112619	AI	< 1.5	< 1.4	< 1.5	< 2.6	< 1.5	0.29 J	< 0.97
35000 Plymouth Road	11/26/2019	SSMP-35000PLYMOUTH-01_112619	GS	< 5.0	< 18	< 5.0	39	< 5.0	< 6.8	< 3.2
35000 Plymouth Road	11/26/2019	SSMP-35000PLYMOUTH-02_112619	GS	< 5.3	< 19	< 5.3	10	< 5.3	< 7.2	< 3.4
35000 Plymouth Road	11/26/2019	SSMP-35000PLYMOUTH-03_112619	GS	< 4.8	< 18	< 4.8	24	< 4.8	< 6.5	< 3.1
35000 Plymouth Road	11/26/2019	SSMP-35000PLYMOUTH-04_112619	GS	< 5.4	< 20	< 5.4	32	< 5.4	2.6 J	< 3.5
35000 Plymouth Road	11/26/2019	SSMP-35000PLYMOUTH-05_112619	GS	< 5.0	< 18	< 5.0	1.3 J	< 5.0	< 6.7	< 3.2

Table 1  
35000 Plymouth Road and 35400 Plymouth Road Vapor Intrusion Analytical Results  
Ford Livonia Transmission Plant  
Livonia, MI



Constituent of Concern				1,1-Dichloroethene	1,4-Dioxane	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride
Unit				ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Non-Residential Volatilization to Indoor Air RIASL12 (Indoor/Ambient Air) - EGLE January 2020 Table (commercial):				610	24	25	82	250	4	27
Nonresidential Volatilization to Indoor Air Criteria adjusted for 12 hour work-day exposure. Slab-on-grade, <50,000 sqft. Provided by MDEQ 10/30/2018:				20000	800	820	2700	8200	130	910
Location	Sample Date	Sample Location	Matrix							
35400 Plymouth Road	11/8/2018	AA-35400Plymouth-01_110818	AA	< 0.59	< 0.54	< 0.59	< 1.0	< 0.59	< 0.80	< 0.38
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-01_110818	AI	R	R	R	R	R	R	R
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-02_110818	AI	< 0.64	< 0.58	< 0.64	1.8	< 0.64	< 0.87	< 0.41
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-03_110818	AI	< 0.61	< 0.55	< 0.61	2.2	< 0.61	< 0.82	< 0.39
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-04_110818	AI	< 0.67	< 0.61	< 0.67	2.2	< 0.67	< 0.91	< 0.43
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-05_110818	AI	< 0.64	< 0.58	< 0.64	2.1	< 0.64	< 0.86	< 0.41
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-06_110818	AI	< 0.62	< 0.56	< 0.62	3.2	< 0.62	< 0.84	< 0.40
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-07_110818	AI	R	R	R	R	R	R	R
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-08_110818	AI	< 0.63	0.52 J	< 0.63	2.7	< 0.63	< 0.86	< 0.41
35400 Plymouth Road	11/8/2018	IA-35400Plymouth-09_110818	AI	< 0.70	< 0.64	< 0.70	1.2	< 0.70	< 0.95	< 0.45
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-01_110818	GS	< 4.7	< 17	< 4.7	< 8.0	< 4.7	< 6.3	< 3.0
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-02_110818	GS	< 4.4	< 16	< 4.4	1.4 J	< 4.4	< 5.9	< 2.8
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-03_110818	GS	< 4.6	< 17	< 4.6	< 7.9	< 4.6	< 6.3	< 3.0
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-04_110818	GS	< 4.6	< 17	< 4.6	< 7.9	< 4.6	< 6.3	< 3.0
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-05_110818	GS	< 4.5	< 16	< 4.5	< 7.7	< 4.5	< 6.1	< 2.9
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-06_110818	GS	< 4.5	< 16	< 4.5	2.7 J	< 4.5	< 6.1	< 2.9
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-07_110818	GS	< 4.4	< 16	< 4.4	< 7.6	< 4.4	< 6.0	< 2.8
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-08_110818	GS	< 4.5	< 16	< 4.5	5.1 J	< 4.5	< 6.1	< 2.9
35400 Plymouth Road	11/8/2018	SSMP-35400PLYMOUTH-09_110818	GS	< 4.6	< 17	< 4.6	22	< 4.6	< 6.2	< 3.0
35400 Plymouth Road	3/19/2019	AA-35400PLYMOUTH-01_031919	AA	< 0.66	< 0.60	< 0.66	0.29 J	< 0.66	< 0.90	< 0.43
35400 Plymouth Road	3/19/2019	DUP-35400PLYMOUTH-01_031919	AA	< 0.64	< 0.58	< 0.64	0.64 J	< 0.64	< 0.87	< 0.41
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-01_031919	AI	< 0.70	< 0.64	< 0.70	1.2 J	< 0.70	< 0.96	< 0.46
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-02_031919	AI	< 0.62	< 0.56	< 0.62	1.6	< 0.62	< 0.84	< 0.40
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-03_031919	AI	< 0.58	< 0.53	< 0.58	1.6	< 0.58	< 0.78	< 0.37
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-04_031919	AI	< 0.67	< 0.60	< 0.67	1.6	< 0.67	< 0.90	< 0.43
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-05_031919	AI	< 0.73	< 0.66	< 0.73	1.6	< 0.73	< 0.99	< 0.47
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-06_031919	AI	< 0.65	< 0.59	< 0.65	1.6	< 0.65	< 0.88	< 0.42
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-07_031919	AI	< 0.63	< 0.58	< 0.63	1.6	< 0.63	< 0.86	< 0.41
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-08_031919	AI	< 0.65	< 0.59	< 0.65	1.6	< 0.65	< 0.88	< 0.42
35400 Plymouth Road	3/19/2019	IA-35400PLYMOUTH-09_031919	AI	< 0.65	< 0.59	< 0.65	0.98 J	< 0.65	< 0.89	< 0.42
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-03_031919	GS	< 4.8	< 17	< 4.8	< 8.2	< 4.8	< 6.5	< 3.1
35400 Plymouth Road	3/19/2019	DUP-35400PLYMOUTH-01_031919_GS	GS	< 4.6	< 17	< 4.6	< 7.9	< 4.6	< 6.2	< 3.0
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-09_031919	GS	< 4.9	< 18	< 4.9	23	< 4.9	< 6.7	< 3.2
35400 Plymouth Road	3/19/2019	DUP-35400PLYMOUTH-02_031919	GS	< 5.0	< 18	< 5.0	34	< 5.0	< 6.7	< 3.2
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-01_031919	GS	< 5.2	< 19	< 5.2	< 8.8	< 5.2	< 7.0	< 3.3
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-02_031919	GS	180	< 18	< 4.9	< 8.3	< 4.9	< 6.6	< 3.1
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-04_031919	GS	< 5.0	< 18	< 5.0	< 8.6	< 5.0	< 6.8	< 3.2
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-05_031919	GS	< 4.9	< 18	< 4.9	< 8.4	< 4.9	< 6.7	< 3.2
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-06_031919	GS	< 4.8	< 17	< 4.8	< 8.2	< 4.8	< 6.5	< 3.1
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-07_031919	GS	< 4.8	< 18	< 4.8	< 8.3	< 4.8	< 6.6	< 3.1
35400 Plymouth Road	3/19/2019	SSMP-35400PLYMOUTH-08_031919	GS	< 4.8	< 18	< 4.8	8.1 J	< 4.8	< 6.5	< 3.1
35400 Plymouth Road	6/18/2020	AA-35400PLYMOUTH-01_061820	AA	< 0.73	0.29 J	< 0.73	< 1.2	< 0.73	< 0.99	< 0.47
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-01_061820	AI	< 0.70	0.22 J	< 0.70	1.0 J	< 0.70	< 0.96	< 0.46
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-02_061820	AI	< 0.69	0.28 J	< 0.69	2.5	1.0	< 0.94	< 0.44
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-03_061820	AI	< 0.68	0.19 J	< 0.68	1.6	0.25 J	< 0.92	< 0.44

Table 1  
35000 Plymouth Road and 35400 Plymouth Road Vapor Intrusion Analytical Results  
Ford Livonia Transmission Plant  
Livonia, MI



Constituent of Concern				1,1-Dichloroethene	1,4-Dioxane	cis-1,2-Dichloroethene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl chloride
Unit				ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Non-Residential Volatilization to Indoor Air RIASL12 (Indoor/Ambient Air) - EGLE January 2020 Table (commercial):				610	24	25	82	250	4	27
Nonresidential Volatilization to Indoor Air Criteria adjusted for 12 hour work-day exposure. Slab-on-grade, <50,000 sqft. Provided by MDEQ 10/30/2018:				20000	800	820	2700	8200	130	910
Location	Sample Date	Sample Location	Matrix							
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-04_061820	AI	< 0.73	0.14 J	< 0.73	1.8	< 0.73	< 0.99	< 0.47
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-05_061820	AI	< 0.71	0.27 J	< 0.71	1.4	< 0.71	< 0.97	< 0.46
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-06_061820	AI	< 0.68	0.24 J	< 0.68	2.1	< 0.68	< 0.93	< 0.44
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-07_061820	AI	< 0.76	0.22 J	< 0.76	3.6	< 0.76	< 1.0	< 0.49
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-08_061820	AI	< 0.71	0.36 J	< 0.71	2.2	< 0.71	< 0.97	< 0.46
35400 Plymouth Road	6/18/2020	IA-35400PLYMOUTH-09_061820	AI	< 0.74	0.27 J	< 0.74	1.6	0.65 J	< 1.0	< 0.48
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-01_061820	GS	< 5.0	< 18	< 5.0	< 8.5	< 5.0	< 6.8	< 3.2
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-02_061820	GS	< 5.0	< 18	< 5.0	< 8.5	< 5.0	< 6.8	< 3.2
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-03_061820	GS	< 5.1	< 18	< 5.1	4.4 J	< 5.1	< 6.9	< 3.3
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-04_061820	GS	< 4.9	< 18	< 4.9	5.6 J	< 4.9	< 6.6	< 3.2
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-05_061820	GS	< 5.2	< 19	< 5.2	3.6 J	2.5 J	< 7.1	< 3.4
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-06_061820	GS	< 5.3	< 19	< 5.3	5.4 J	< 5.3	< 7.2	< 3.4
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-07_061820	GS	< 5.1	< 18	< 5.1	3.3 J	< 5.1	< 6.9	< 3.3
35400 Plymouth Road	6/18/2020	SSMP-35400PLYMOUTH-08_061820	GS	< 5.0	< 18	< 5.0	14	1.9 J	< 6.8	< 3.2
35400 Plymouth Road	9/16/2020	AA-35400PLYMOUTH-01_091620	AA	< 0.74	< 0.67	< 0.74	1.3	< 0.74	< 1.0	< 0.48
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-01_091620	AI	< 0.72	< 0.65	< 0.72	37	< 0.72	< 0.97	< 0.46
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-02_091620	AI	< 0.72	< 0.66	< 0.72	32	< 0.72	< 0.98	< 0.47
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-03_091620	AI	< 0.71	< 0.65	< 0.71	25	< 0.71	< 0.97	< 0.46
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-04_091620	AI	< 0.71	< 0.65	< 0.71	33	< 0.71	< 0.97	< 0.46
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-05_091620	AI	< 0.74	< 0.68	< 0.74	26	< 0.74	< 1.0	< 0.48
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-06_091620	AI	< 0.74	< 0.68	< 0.74	31	< 0.74	< 1.0	< 0.48
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-07_091620	AI	< 0.74	< 0.67	< 0.74	50	< 0.74	< 1.0	< 0.48
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-08_091620	AI	< 0.72	< 0.66	< 0.72	41	< 0.72	< 0.98	< 0.47
35400 Plymouth Road	9/16/2020	IA-35400PLYMOUTH-09_091620	AI	< 0.76	< 0.69	< 0.76	20	< 0.76	< 1.0	< 0.49
35400 Plymouth Road	9/16/2020	DUP-35400PLYMOUTH-01_091620	AI	< 0.70	< 0.63	< 0.70	44	< 0.70	< 0.94	< 0.45
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-01_091620	GS	< 5.2	< 19	< 5.2	< 8.8	< 5.2	< 7.0	< 3.3
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-02_091620	GS	< 5.0	< 18	< 5.0	3.9 J	< 5.0	< 6.8	< 3.2
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-03_091620	GS	< 5.1	< 18	< 5.1	4.1 J	< 5.1	< 6.9	< 3.3
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-04_091620	GS	< 5.3	< 19	< 5.3	6.5 J	< 5.3	< 7.1	< 3.4
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-05_091620	GS	< 4.8	< 18	< 4.8	7.1 J	< 4.8	< 6.6	< 3.1
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-06_091620	GS	< 5.0	< 18	< 5.0	5.4 J	< 5.0	< 6.8	< 3.2
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-07_091620	GS	< 5.1	< 18	< 5.1	7.8 J	< 5.1	< 6.9	< 3.3
35400 Plymouth Road	9/16/2020	SSMP-35400PLYMOUTH-08_091620	GS	< 5.0	< 18	< 5.0	11	< 5.0	< 6.8	< 3.2

NOTES

All samples were analyzed via modified United States Environmental Protection Agency (USEPA) Method TO-15.

Abbreviations:

- ug/m3            Microgram per cubic meter
- AA                Ambient Air
- AI                Indoor Air
- GS                Subslab Soil Gas
- SSMP            Sub slab monitoring point
- DUP              Duplicate
- J                 Estimated result
- <                Denotes not detected above reporting limit.
- EGLE            Michigan Department of Environment, Great Lakes, and Energy

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Table 2  
FROG Screening and Co-Located Grab Sampling Results  
Ford Livonia Transmission Plant  
Livonia, Michigan



Sample ID Number	Measured Feature	Time	Date	TCE (ug/m³)	TCE (ug/m³) (grab)	cis-1,2-DCE (ug/m³)	cis-1,2-DCE (ug/m³) (grab)	trans-1,2-DCE (ug/m³)	trans-1,2-DCE (ug/m³) (grab)	PCE (ug/m³)	PCE (ug/m³) (grab)
Site Specific Criteria (ug/m^3) for 12 hour exposure: Detections are Bolded Exceedences are Shaded Gray				4.0	4.0	25	25	250	250	82	82
MH-A-B54	Sanitary Sewer Secondary Location	12:48	2/23/2022	7.99	--	414.18	--	0.00	--	0.0 J	--
MH-A-B54	Saintary Sewer Secondary Location	13:22	2/24/2022	0.00	--	22.15	--	0.00	--	0.00	--
MH-A-B54	Saintary Sewer Secondary Location	12:02	2/25/2022	0.00	--	30.23	--	0.00	--	0.00	--
MH-A-B54	Saintary Sewer Secondary Location	13:46	2/28/2022	0.00	--	14.12	--	219.56	--	0.00	--
MH-OD-OE-52	Sanitary Sewer Secondary Location	13:02	2/24/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-OD-OE-52	Sanitary Sewer Secondary Location	11:09	2/25/2022	0.00	--	0.00	--	86.84	--	0.00	--
MH-1231A	Sanitary Sewer Primary Location	14:49	2/16/2021	0.00	2.6	0.00	70	0.00	0.67	0.00	< 1.4
MH-1231A	Sanitary Sewer Primary Location	11:57	2/18/2022	0.00	--	0.00	--	0.00	--	3.84	--
MH-1231A	Sanitary Sewer Primary Location	9:56	2/21/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1231A	Sanitary Sewer Primary Location	9:48	2/22/2022	0.00	--	211.33	--	237.41	--	37.91	--
MH-1231A	Sanitary Sewer Primary Location	10:18	2/23/2022	0.00	--	22.26	--	0.00	--	3.59	--
MH-1231A	Sanitary Sewer Primary Location	9:28	2/24/2022	0.0 J	< 1.1	28.81	7.7	0.00	< 0.79	0.00	< 1.4
MH-1231A	Sanitary Sewer Primary Location	10:41	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1231A	Sanitary Sewer Primary Location	12:00	2/28/2022	0.0 J	--	87.10	--	0.00	--	3.15	--
MH-1244	Sanitary Sewer Primary Location	14:29	2/16/2022	0.00	0.92	0.00	14	0.00	< 0.79	0.00	< 1.4
MH-1244	Sanitary Sewer Primary Location	11:19	2/18/2022	0.00	--	0.00	--	0.00	--	2.92	--
MH-1244	Sanitary Sewer Primary Location	9:23	2/21/2022	6.98	--	571.00	--	0.00	--	4.44 J	--
MH-1244	Sanitary Sewer Primary Location	13:38	2/22/2022	0.00	15	0.00	360	62.43	3.1	76.74	< 1.4
MH-1244	Sanitary Sewer Primary Location	9:45	2/23/2022	7.88 J	--	355.81	--	0.00	--	0.00	--
MH-1244	Sanitary Sewer Primary Location	9:12	2/24/2022	0.00	--	726.56	--	51.40	--	0.00	--
MH-1244	Sanitary Sewer Primary Location	10:19	2/25/2022	0.00	--	35.93	--	0.00	--	0.00	--
MH-1244	Sanitary Sewer Primary Location	11:22	2/28/2022	0.00	--	8.94	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	8:56	2/21/2022	0.00	--	73.46	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	9:30	2/22/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	9:34	2/23/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	9:02	2/24/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	9:44	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1245	Sanitary Sewer Primary Location	11:10	2/28/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1247	Sanitary Sewer Secondary Location	14:01	2/21/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1248	Sanitary Sewer Secondary Location	14:22	2/21/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1253	Sanitary Sewer Secondary Location	13:29	2/22/2022	0.0 J	--	0.00	--	0.00	--	7.48	--
MH-1253	Sanitary Sewer Secondary Location	13:14	2/23/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1253	Sanitary Sewer Secondary Location	14:50	2/24/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1253	Sanitary Sewer Secondary Location	11:05	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1255	Sanitary Sewer Primary Location	13:15	2/16/2022	866.37	4.5	0.00	100	0.00	1.3	0.00	1.8
MH-1255	Sanitary Sewer Primary Location	13:38	2/18/2022	0.00	--	0.00	--	0.00	--	3.67	--



Table 2  
FROG Screening and Co-Located Grab Sampling Results  
Ford Livonia Transmission Plant  
Livonia, Michigan



Sample ID Number	Measured Feature	Time	Date	TCE (ug/m <sup>3</sup> )	TCE (ug/m <sup>3</sup> ) (grab)	cis-1,2-DCE (ug/m <sup>3</sup> )	cis-1,2-DCE (ug/m <sup>3</sup> ) (grab)	trans-1,2-DCE (ug/m <sup>3</sup> )	trans-1,2-DCE (ug/m <sup>3</sup> ) (grab)	PCE (ug/m <sup>3</sup> )	PCE (ug/m <sup>3</sup> ) (grab)
Site Specific Criteria (ug/m^3) for 12 hour exposure: Detections are Bolded Exceedences are Shaded Gray				4.0	4.0	25	25	250	250	82	82
MH-1255	Sanitary Sewer Primary Location	10:45	2/21/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1255	Sanitary Sewer Primary Location	10:18	2/22/2022	0.00	--	<b>21.32</b>	--	0.00	--	0.00	--
MH-1255	Sanitary Sewer Primary Location	10:37	2/23/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1255	Sanitary Sewer Primary Location	11:07	2/24/2022	0.00	< 1.1	<b>128.72</b>	<b>15</b>	<b>57.05</b>	< 0.79	<b>2.15</b>	< 1.4
MH-1255	Sanitary Sewer Primary Location	9:50	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1255	Sanitary Sewer Primary Location	12:53	2/28/2022	0.00	--	<b>38.31</b>	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	14:01	2/16/2022	<b>15.40</b>	<b>6.9</b>	0.00	<b>130</b>	0.00	<b>2.1</b>	0.00	<b>1.1</b>
MH-1256	Sanitary Sewer Primary Location	12:39	2/18/2022	0.00	--	<b>62.95</b>	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	10:24	2/21/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	13:08	2/22/2022	0.00	<b>1.1</b>	0.00	<b>160</b>	<b>63.75</b>	< 0.79	<b>820.51</b>	< 1.4
MH-1256	Sanitary Sewer Primary Location	10:56	2/23/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	10:27	2/24/2022	0.0 J	--	<b>201.56</b>	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	9:28	2/25/2022	0.00	--	<b>19.63</b>	--	0.00	--	0.00	--
MH-1256	Sanitary Sewer Primary Location	12:36	2/28/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1259	Sanitary Sewer Primary Location	15:21	2/18/2022	<b>2.52</b>	--	<b>213.75</b>	--	0.00	--	<b>4.64</b>	--
MH-1259	Sanitary Sewer Primary Location	11:22	2/21/2022	<b>3.95</b>	--	<b>157.54</b>	--	0.00	--	0.00	--
MH-1259	Sanitary Sewer Primary Location	11:41	2/22/2022	<b>18.32</b>	--	<b>273.66</b>	--	0.00	--	<b>3.63</b>	--
MH-1259	Sanitary Sewer Primary Location	11:45	2/23/2022	0.0 J	--	<b>195.38</b>	--	<b>200.22</b>	--	0.00	--
MH-1259	Sanitary Sewer Primary Location	11:46	2/24/2022	<b>12.66</b>	<b>14</b>	<b>250.08</b>	<b>180</b>	0.00	<b>2.0</b>	<b>3.84</b>	< 1.4
MH-1259	Sanitary Sewer Primary Location	11:34	2/25/2022	0.0J	--	<b>107.26</b>	--	0.00	--	<b>3.20</b>	--
MH-1259	Sanitary Sewer Primary Location	14:51	2/28/2022	<b>21.18</b>	--	<b>456.69</b>	--	0.00	--	0.00	--
MH-1260	Sanitary Sewer Secondary Location	12:59	2/22/2022	0.00	--	0.00	--	0.00	--	<b>4.03</b>	--
MH-1260	Sanitary Sewer Secondary Location	13:31	2/23/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-1260	Sanitary Sewer Secondary Location	14:42	2/24/2022	<b>10.40</b>	--	<b>82.90</b>	--	0.00	--	<b>3.63</b>	--
MH-1260	Sanitary Sewer Secondary Location	11:41	2/25/2022	0.00	--	<b>26.03</b>	--	0.00	--	0.00	--
MH-1260B	Sanitary Sewer Primary Location	14:45	2/18/2022	0.0 J	--	<b>216.91</b>	--	0.00	--	<b>6.23</b>	--
MH-1260B	Sanitary Sewer Primary Location	12:17	2/21/2022	0.00	--	<b>183.85</b>	--	0.00	--	0.00	--
MH-1260B	Sanitary Sewer Primary Location	10:54	2/22/2022	<b>10.73</b>	--	<b>615.46</b>	--	0.00	--	<b>5.61</b>	--
MH-1260B	Sanitary Sewer Primary Location	11:32	2/23/2022	<b>11.79</b>	--	<b>182.98</b>	--	0.00	--	0.00	--
MH-1260B	Sanitary Sewer Primary Location	12:26	2/24/2022	<b>6.64</b>	--	<b>503.66</b>	--	0.00	--	<b>4.54</b>	--
MH-1260B	Sanitary Sewer Primary Location	10:24	2/25/2022	<b>9.37</b>	--	<b>281.19</b>	--	0.00	--	<b>5.01</b>	--
MH-1260B	Sanitary Sewer Primary Location	13:33	2/28/2022	<b>8.64</b>	--	<b>315.83</b>	--	0.00	--	0.00	--
CO-A-B54	Cleanout	13:33	2/24/2022	0.00	--	<b>146.95</b>	--	0.00	--	0.00	--
CO-A-B54	Cleanout	12:26	2/25/2022	0.00	--	0.00	--	<b>186.13</b>	--	0.00	--
CO-A-B54	Cleanout	13:55	2/28/2022	<b>6.55</b>	--	0.0J	--	0.0J	--	0.0J	--
CO-A-OB-54	Cleanout	12:53	2/25/2022	0.00	--	0.00	--	<b>791.48</b>	--	0.00	--



Table 2  
FROG Screening and Co-Located Grab Sampling Results  
Ford Livonia Transmission Plant  
Livonia, Michigan



Sample ID Number	Measured Feature	Time	Date	TCE (ug/m³)	TCE (ug/m³) (grab)	cis-1,2-DCE (ug/m³)	cis-1,2-DCE (ug/m³) (grab)	trans-1,2-DCE (ug/m³)	trans-1,2-DCE (ug/m³) (grab)	PCE (ug/m³)	PCE (ug/m³) (grab)
Site Specific Criteria (ug/m^3) for 12 hour exposure: Detections are Bolded Exceedences are Shaded Gray				4.0	4.0	25	25	250	250	82	82
CO-B-88	Cleanout	14:48	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-B-90	Process Line	14:15	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-B-90	Process Line	14:02	2/25/2022	0.00	--	0.00	--	0.00	--	0.00	--
MH-A-B-36	Sanitary Sewer Secondary Location	13:51	2/25/2022	0.0 J	--	165.55	--	0.00	--	3.90	--

**Notes:**

1. All results are in micrograms per cubic meter (ug/m3).

2. Locations were screened with a FROG-5000 gas chromatograph. Results with "(grab)" are 1-liter Summa canister grab sample results co-located with Frog screening results. Grab samples were analyzed via modified United States Environmental Protection Agency (USEPA) Method TO-15.

**Bold** Result exceeds the Detection Limits.

**BOLD** Result exceeds the Site Specific Criteria (ug/m^3) for 12 hour exposure.

**Abbreviations:**

TCE Trichloroethene

DCE Dichloroethene

PCE Tetrachloroethene

ID Identification

-- A co-located grab sample was not collected.

J Value below Defiant's quoted detection limit and non-detect. Still has peak software unable to integrate due to limit of detection .

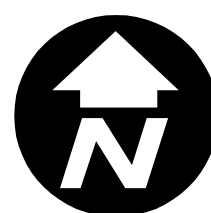
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# Figures



LEGEND

- SANITARY MANHOLE
- FLOW DIRECTION
- SANITARY SEWER LINE
- FORD PROPERTY BOUNDARY
- RESULT EXCEEDS THE EGLE SSVIAC



NOTES:

FIGURE SHOWS DATA FOR TRICHLOROETHENE AND VINYL CHLORIDE ONLY. FULL SET OF DATA CAN BE FOUND IN THE CORRESPONDING TABLES.

"ND", "<" - INDICATES THE VALUE IS BELOW THE LABORATORY METHOD DETECTION LIMIT FOR THE ASSOCIATED SAMPLING EVENT

EGLE = DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY

SAMH = SANITARY MANHOLE

SL = SAMPLING LOCATION

J = ESTIMATED RESULT

NA = NOT PART OF THE PROGRAM AT THE DATE

NS = NOT SAMPLED DUE TO WEATHER OR OTHER CONDITION

TRAFFIC = NOT SAMPLED DUE TO TRAFFIC CONTROL NOT AVAILABLE

\* = SAMPLE COLLECTED FOLLOWING MANHOLE CLEANING

VAPOR RESULTS REPORTED IN MICROGRAMS PER CUBIC METER  $\mu\text{g}/\text{m}^3$ . ANALYTICAL METHOD: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) TO-15.

RESULTS FROM LOCATIONS ON-SITE AND ALONG PLYMOUTH RD ARE COMPARED TO THE EGLE RESTRICTED NONRESIDENTIAL SITE-SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA (SSVIAC) 12-HOUR WORKDAY EXPOSURE FOR TRICHLOROETHENE OF  $4.0 \mu\text{g}/\text{m}^3$  AND FOR VINYL CHLORIDE OF  $27 \mu\text{g}/\text{m}^3$ . RESULTS FROM LOCATIONS ALONG STARK ROAD (INCLUDING SL-5) ARE COMPARED TO BOTH EGLE RESTRICTED NONRESIDENTIAL SSVIAC AND THE EGLE UNRESTRICTED RESIDENTIAL SSVIAC FOR TRICHLOROETHENE OF  $2.0 \mu\text{g}/\text{m}^3$  AND VINYL CHLORIDE OF  $1.6 \mu\text{g}/\text{m}^3$ .

RESULTS DISPLAYED IN BLUE INDICATES RESULT EXCEEDS THE EGLE SSVIAC.

[ ] = DUPLICATE SAMPLE RESULTS



FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

ON-SITE AND OFF-SITE VAPOR RESULTS  
TRICHLOROETHENE AND VINYL CHLORIDE



FIGURE  
1

SAMH-1259	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	13
2/4/2022	29
2/7/2022	16
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	62
2/4/2022	830
2/7/2022	230

SAMH-1255	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
2/4/2022	ND (< 0.4)
2/7/2022	4.0
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	400
2/4/2022	ND (< 0.2)
2/7/2022	140

SAMH-1256	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	2.8
2/4/2022	ND (< 0.4)
2/7/2022	ND (< 0.72)
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NA
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	160
2/4/2022	ND (< 0.2)
2/7/2022	86

SAMH-1244	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
12/15/2020	280
3/22/2021	1,100
4/19/2021	11,000
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NS
1/14/2022	ND (< 0.4)
1/20/2022	NS
1/27/2022	1017.8
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
12/15/2020	100
3/22/2021	1,200
4/19/2021	8,500
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NS
1/14/2022	0.73
1/20/2022	NS
1/27/2022	650 [610]
2/1/2022	11
2/7/2022	3.2

SAMH-1231A	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	23
2/4/2022	ND (< 0.4)
2/7/2022	ND (< 0.72)
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	1,000
2/4/2022	ND (< 0.2)
2/7/2022	0.88

SAMH-1231	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	33
11/24/2021	9.3 [8.0]
12/10/2021	NS
12/14/2021	2.5 J
1/14/2022	ND (< 0.4)
1/20/2022	ND (< 0.4)
1/27/2022	ND (< 0.4)
2/1/2022	190
2/9/2022	ND (< 0.72)
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	14
11/24/2021	4.4
12/10/2021	NS
12/14/2021	62
1/14/2022	10
1/20/2022	4.0
1/27/2022	4.4
2/1/2022	12
2/9/2022	11

SL-1	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.3)
11/24/2021	ND (< 2.3)
12/10/2021	NS
12/14/2021	ND (< 2.4) [ND (< 2.2)]
1/13/2022	ND (< 0.4)
1/18/2022	ND (< 0.4)
1/27/2022	1.8
2/1/2022	1.3 [2.0]
2/8/2022	0.73 J [ND (< 0.62)]
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	3.2
11/24/2021	ND (< 1.9) [ND (< 1.8)]
12/10/2021	NS
12/14/2021	ND (< 1.9) [ND (< 1.8)]
1/13/2022	ND (< 0.2)
1/18/2022	ND (< 0.2)
1/27/2022	0.49 J
2/1/2022	10 [ND (< 0.42)]
2/8/2022	0.46 J [ND (< 0.46)]

SL-4	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	620
11/24/2021	ND (< 2.3)
12/10/2021	3.9 J*
12/14/2021	ND (< 2.4)
1/12/2022	ND (< 0.4)
1/20/2022	ND (< 0.4)
1/27/2022	ND (< 0.4)
1/31/2022	ND (< 0.4)
2/8/2022	ND (< 0.72)
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.7)
11/24/2021	ND (< 1.8)
12/10/2021	ND (< 1.8)
12/14/2021	ND (< 1.8)
1/12/2022	ND (< 0.2)
1/20/2022	ND (< 0.2)
1/27/2022	1.3
1/31/2022	0.28 J
2/8/2022	0.71

SL-15	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.4)
11/24/2021	ND (< 2.4)
12/10/2021	NS
12/16/2021	ND (< 2.5)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	TRAFFIC
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.8)
11/24/2021	ND (< 1.8)
12/10/2021	NS
12/16/2021	ND (< 2.0)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	TRAFFIC
2/9/2022	TRAFFIC

SL-14	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.4)
11/24/2021	ND (< 2.5)
12/10/2021	NS
12/16/2021	ND (< 2.6)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	TRAFFIC
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.9)
11/24/2021	ND (< 1.9)
12/10/2021	NS
12/16/2021	ND (< 2.0)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	TRAFFIC
2/9/2022	TRAFFIC

SL-13	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.3)
11/24/2021	ND (< 2.4)
12/10/2021	NS
12/16/2021	ND (< 2.5)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.8)
11/24/2021	ND (< 1.9)
12/10/2021	NS
12/16/2021	ND (< 1.9)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.2)
2/9/2022	TRAFFIC

SL-7	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.3)
11/24/2021	ND (< 2.3)
12/10/2021	NS
12/16/2021	ND (< 2.4)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.8)
11/24/2021	ND (< 1.8)
12/10/2021	NS
12/16/2021	ND (< 1.9)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.2)
2/9/2022	TRAFFIC

SL-6	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.4)
11/24/2021	ND (< 2.4)
12/10/2021	NS
12/16/2021	ND (< 2.6)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.8)
11/24/2021	ND (< 1.8)
12/10/2021	NS
12/16/2021	ND (< 2.0)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.2)
2/9/2022	TRAFFIC

SL-8	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.5)
11/24/2021	ND (< 2.5)
12/10/2021	NS
12/16/2021	ND (< 2.5)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.0)
11/24/2021	ND (< 2.0)
12/10/2021	NS
12/16/2021	ND (< 2.0)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.2)
2/9/2022	TRAFFIC

SL-5	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.3) [ND (< 2.4)]
11/24/2021	ND (< 2.4)
12/10/2021	NS
12/16/2021	ND (< 2.5)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.9) [ND (< 1.9)]
11/24/2021	ND (< 1.9)
12/10/2021	NS
12/16/2021	ND (< 2.0)
1/12/2022	1.0
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	0.34 J
2/9/2022	TRAFFIC

SL-9	
Trichloroethene ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 2.4)
11/24/2021	ND (< 2.4)
12/10/2021	NS
12/16/2021	ND (< 2.4)
1/12/2022	ND (< 0.4)
1/19/2022	ND (< 0.4)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride ( $\mu\text{g}/\text{m}^3$ )	
11/2/2021	ND (< 1.8)
11/24/2021	ND (< 1.8)
12/10/2021	NS
12/16/2021	ND (< 1.9)
1/12/2022	ND (< 0.2)
1/19/2022	ND (< 0.2)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.2)
2/9/2022	TRAFFIC

SL-10	
Trichloroethene (µg/m³)	
11/2/2021	ND (< 2.4)
11/23/2021	ND (< 2.5)
12/10/2021	NS
12/16/2021	ND (< 2.6)
1/12/2022	ND (< 0.4)
1/19/2022	0.921
1/28/2022	TRAFFIC
2/1/2022	ND (< 0.4)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/m³)	
11/2/2021	ND (< 1.9)
11/23/2021	ND (< 1.9)
12/10/2021	NS
12/16/2021	ND (< 2.1)
1/12/2022	ND (< 0.2)
1/19/2022	14
1/28/2022	TRAFFIC
2/1/2022	ND (< 0.2)
2/9/2022	TRAFFIC





**LEGEND**

⊕ SANITARY MANHOLE

▲ FLOW DIRECTION

— SANITARY SEWER LINE

**BLUE/BOLD TEXT** RESULT EXCEEDS THE EGLE SSVIAC

NOTES:

FIGURE SHOWS DATA FOR TRICHLOROETHENE AND VINYL CHLORIDE ONLY. FULL SET OF DATA CAN BE FOUND IN THE CORRESPONDING TABLES.

"ND", "<" - INDICATES THE VALUE IS BELOW THE LABORATORY METHOD DETECTION LIMIT FOR THE ASSOCIATED SAMPLING EVENT

EGLE = DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY

SAMH = SANITARY MANHOLE

SL = SAMPLING LOCATION

J = ESTIMATED RESULT

NA = NOT PART OF THE PROGRAM AT THE DATE

NS = NOT SAMPLED DUE TO WEATHER OR OTHER CONDITION

TRAFFIC = NOT SAMPLED DUE TO TRAFFIC CONTROL NOT AVAILABLE

\* = SAMPLE COLLECTED AFTER MANHOLE CLEANING

VAPOR RESULTS REPORTED IN MICROGRAMS PER CUBIC METER (µg/m³). ANALYTICAL METHOD: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) TO-15.

RESULTS FROM LOCATIONS ON-SITE AND ALONG PLYMOUTH RD ARE COMPARED TO THE EGLE RESTRICTED NONRESIDENTIAL SITE-SPECIFIC VOLATILIZATION TO INDOOR AIR CRITERIA (SSVIAC) 12-HOUR WORKDAY EXPOSURE FOR TRICHLOROETHENE OF 4.0 µg/m AND FOR VINYL CHLORIDE OF 27 µg/m. RESULTS FROM LOCATIONS ALONG STARK ROAD (INCLUDING SL-5) ARE COMPARED TO BOTH EGLE RESTRICTED NONRESIDENTIAL SSVIAC AND THE EGLE UNRESTRICTED RESIDENTIAL SSVIAC FOR TRICHLOROETHENE OF 2.0 µg/m AND VINYL CHLORIDE OF 1.6 µg/m.

RESULTS DISPLAYED IN BLUE INDICATES RESULT EXCEEDS THE EGLE SSVIAC.

0 100 200

SCALE IN FEET

FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

**OFF-SITE VAPOR RESULTS  
TRICHLOROETHENE AND VINYL CHLORIDE**

FIGURE

**2**





- LEGEND**
- SANITARY MANHOLE
  - ▲ FLOW DIRECTION
  - SANITARY SEWER LINE
  - FORD PROPERTY BOUNDARY

**NOTES:**

FIGURE SHOWS DATA FOR TRICHLOROETHENE AND VINYL CHLORIDE ONLY. FULL SET OF DATA CAN BE FOUND IN THE CORRESPONDING TABLES.

"ND", "<" - INDICATES THE VALUE IS BELOW THE LABORATORY METHOD DETECTION LIMIT FOR THE ASSOCIATED SAMPLING EVENT

EGLE = DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY

SAMH = SANITARY MANHOLE  
SL = SAMPLING LOCATION

J = ESTIMATED RESULT

NA = NOT PART OF THE PROGRAM AT THE DATE

NS = NOT SAMPLED DUE TO WEATHER OR OTHER CONDITION

TRAFFIC = NOT SAMPLED DUE TO TRAFFIC CONTROL NOT AVAILABLE

\* = SAMPLE COLLECTED FOLLOWING MANHOLE CLEANING

LIQUID RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L). ANALYTICAL METHOD: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) 8260B FOR VOLATILE ORGANIC COMPOUNDS (VOCs).

[ ] = DUPLICATE SAMPLE RESULTS

FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

## ON-SITE AND OFF-SITE LIQUID RESULTS TRICHLOROETHENE AND VINYL CHLORIDE



FIGURE  
3

SAMH-1259	
Trichloroethene (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NS
1/27/2022	NS
2/4/2022	1.6
2/7/2022	1.5
Vinyl Chloride (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	NS
2/4/2022	3.7
2/7/2022	2.7

SAMH-1256	
Trichloroethene (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NS
1/27/2022	NS
2/4/2022	ND (< 0.44)
2/7/2022	ND (< 0.44)
Vinyl Chloride (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NS
1/27/2022	NS
2/4/2022	ND (< 0.45)
2/7/2022	1.0

SAMH-1255	
Trichloroethene (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	NS
2/4/2022	1.0
2/7/2022	1.2
Vinyl Chloride (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	NS
2/4/2022	100
2/7/2022	92

SAMH-1231A	
Trichloroethene (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NA
1/27/2022	NS
2/4/2022	0.53 J
2/7/2022	1.0
Vinyl Chloride (µg/L)	
11/2/2021	NA
11/24/2021	NA
12/10/2021	NS
12/15/2021	NA
1/13/2022	NA
1/20/2022	NS
1/27/2022	NS
2/4/2022	39
2/7/2022	75

SL-3	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/24/2021	ND (< 0.44)
12/10/2021	ND (< 0.44)*
12/14/2021	ND (< 0.44)
1/14/2022	2.5
1/20/2022	ND (< 0.44)
1/27/2022	NS
1/31/2022	ND (< 0.44)
2/8/2022	ND (< 0.44)
Vinyl Chloride (µg/L)	
11/2/2021	4.4
11/24/2021	2.3
12/10/2021	11 *
12/14/2021	4.5
1/14/2022	ND (< 0.45)
1/20/2022	7.0
1/27/2022	NS
1/31/2022	12
2/8/2022	7.0

SL-17	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/24/2021	ND (< 0.44)
12/10/2021	ND (< 0.44)*
12/14/2021	ND (< 0.44)
1/14/2022	ND (< 0.44)
1/20/2022	ND (< 0.44)
1/27/2022	NS
1/31/2022	ND (< 0.44)
2/8/2022	ND (< 0.44)
Vinyl Chloride (µg/L)	
11/2/2021	3.5
11/24/2021	12
12/10/2021	7.1 *
12/14/2021	5.7
1/13/2022	3.8
1/20/2022	5.9
1/27/2022	NS
1/31/2022	3.4
2/8/2022	5.5

SL-4	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/24/2021	ND (< 0.44) [0.54 J]
12/10/2021	NS
12/14/2021	ND (< 0.44) [ND (< 0.44)]
1/13/2022	ND (< 0.44)
1/18/2022	ND (< 0.44)
1/27/2022	NS
2/1/2022	ND (< 0.44) [0.48 J]
2/8/2022	0.70 J [0.76 J]
Vinyl Chloride (µg/L)	
11/2/2021	2.6
11/24/2021	2.9 [ND (< 0.45)]
12/10/2021	NS
12/14/2021	4.0 [2.9]
1/13/2022	3.1
1/18/2022	4.5
1/27/2022	NS
2/1/2022	4.3 [4.9]
2/8/2022	2.3 [3.0]

SL-13	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	ND (< 0.45)
11/23/2021	ND (< 0.45)
12/10/2021	NS
12/16/2021	0.49 J
1/12/2022	ND (< 0.45)
1/19/2022	ND (< 0.45)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.45)
2/9/2022	TRAFFIC

SL-7	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	ND (< 0.45)
11/23/2021	ND (< 0.45)
12/10/2021	NS
12/16/2021	ND (< 0.45)
1/12/2022	ND (< 0.45)
1/19/2022	ND (< 0.45)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.45)
2/9/2022	TRAFFIC

SL-6	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	ND (< 0.45)
11/23/2021	ND (< 0.45)
12/10/2021	NS
12/16/2021	ND (< 0.45)
1/12/2022	ND (< 0.45)
1/19/2022	ND (< 0.45)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.45)
2/9/2022	TRAFFIC

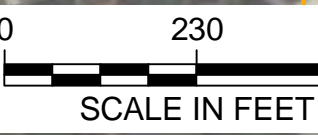
SL-8	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	1.4
11/23/2021	2.3
12/10/2021	NS
12/16/2021	1.8
1/12/2022	2.1
1/19/2022	2.2
1/28/2022	TRAFFIC
1/31/2022	3.8
2/9/2022	TRAFFIC

SL-5	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.88) [ND (< 0.44)]
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	ND (< 0.90) [0.74 J]
11/23/2021	1.5
12/10/2021	NS
12/16/2021	1.7
1/12/2022	1.4
1/19/2022	1.9
1/28/2022	TRAFFIC
1/31/2022	1.7
2/9/2022	TRAFFIC

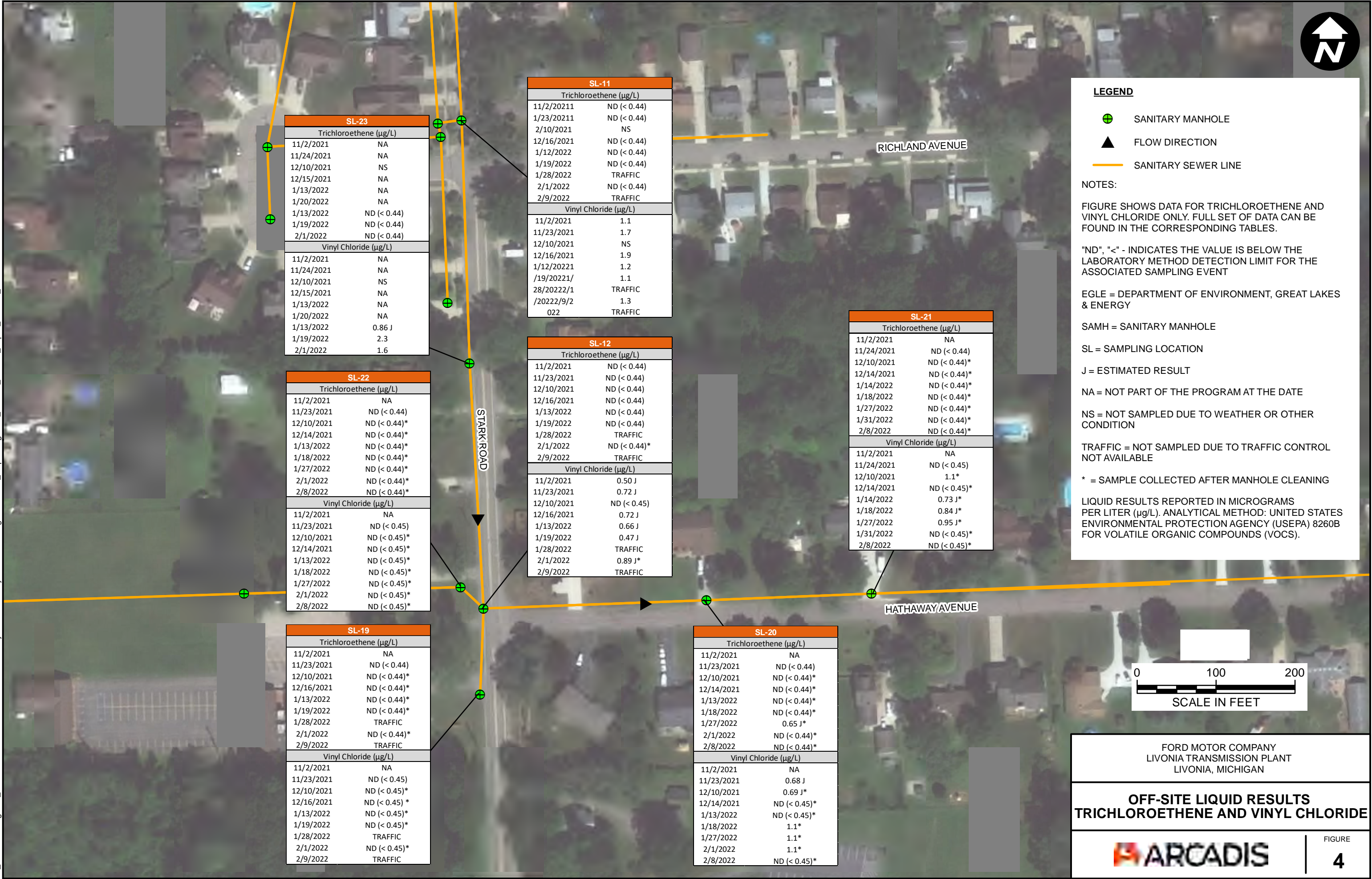
SL-18	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/24/2021	ND (< 0.44)
12/10/2021	NS
12/14/2021	ND (< 0.44)
1/13/2022	ND (< 0.44)
1/18/2022	ND (< 0.44)
1/27/2022	NS
1/31/2022	ND (< 0.44)
2/8/2022	0.45 J
Vinyl Chloride (µg/L)	
11/2/2021	3.2
11/24/2021	1.9
12/10/2021	NS
12/14/2021	4.0
1/13/2022	5.1
1/18/2022	5.3
1/27/2022	NS
1/31/2022	7.5
2/8/2022	4.2

SL-9	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	ND (< 0.44)
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	1.3
11/23/2021	2.8
12/10/2021	NS
12/16/2021	2.5
1/12/2022	1.6
1/19/2022	2.5
1/28/2022	TRAFFIC
1/31/2022	2.3
2/9/2022	TRAFFIC

SL-10	
Trichloroethene (µg/L)	
11/2/2021	ND (< 0.44)
11/23/2021	ND (< 0.44)
12/10/2021	NS
12/16/2021	ND (< 0.44)
1/12/2022	0.49 J
1/19/2022	ND (< 0.44)
1/28/2022	TRAFFIC
1/31/2022	ND (< 0.44)
2/9/2022	TRAFFIC
Vinyl Chloride (µg/L)	
11/2/2021	1.4
11/23/2021	2.3
12/10/2021	NS
12/16/2021	2.3
1/12/2022	1.0
1/19/2022	1.4
1/28/2022	TRAFFIC
1/31/2022	1.6
2/9/2022	TRAFFIC











CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: 30080642 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet  
T: ENV\Novi\Brighton\_M\IFord\Livonia\GIS\docs\GEC\2022\Utility Corridor\Figure 5 - Commercial Access Agreements.mxd PLOTTED: 3/4/2022 11:11:58 AM BY: ma00749

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

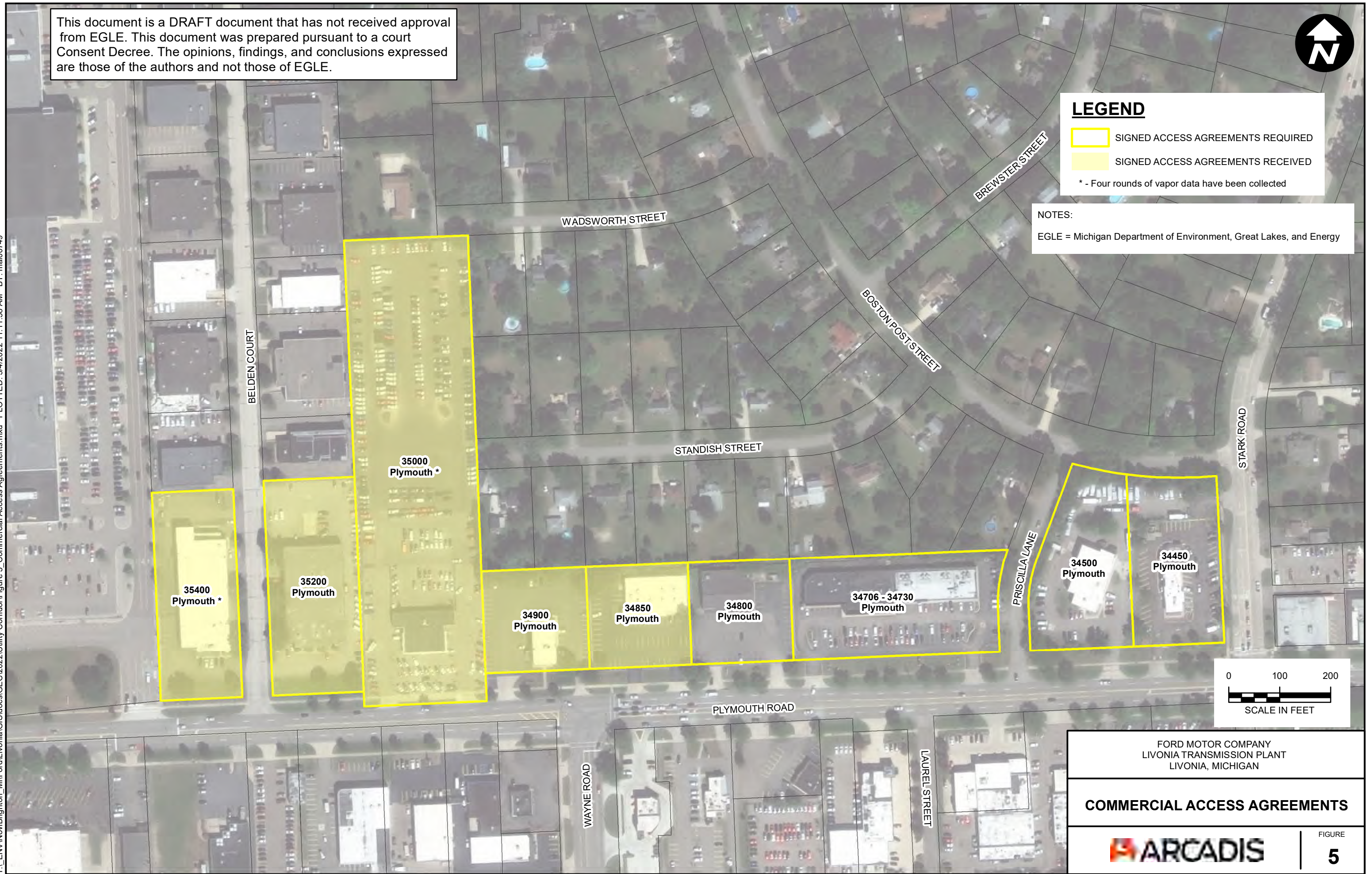


### LEGEND

-  SIGNED ACCESS AGREEMENTS REQUIRED
-  SIGNED ACCESS AGREEMENTS RECEIVED
- \* - Four rounds of vapor data have been collected

### NOTES:

EGLE = Michigan Department of Environment, Great Lakes, and Energy



0 100 200  
SCALE IN FEET

FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

### COMMERCIAL ACCESS AGREEMENTS



FIGURE  
5





CITY: NOVI DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: 30080642 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet  
T:\ENVI\Novi\Brighton\_MilFord\Livonia\GIS\docs\GEC\2022\Utility Corridor\Figure 6\_ Residential Access Agreements.mxd PLOTTED: 3/3/2022 4:12:38 PM BY: mai00749

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**LEGEND**

-  SIGNED ACCESS AGREEMENTS REQUIRED
-  PROPERTY BOUNDARIES

NOTES:

EGLE = Michigan Department of Environment, Great Lakes, and Energy

LAUREL AVENUE

RICHLAND COURT

RICHLAND AVENUE

STARK ROAD

HATHAWAY AVENUE

9551 Stark

9552 Stark

9491 Stark

9480 Stark

34252 Hathaway

9487 Stark

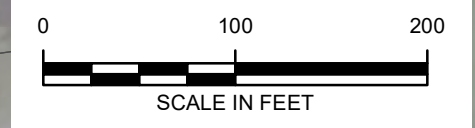
34284 Hathaway

Arcadis will evaluate the house in the northeast section of this parcel. The house is hidden by the trees in this aerial.

9375 Stark

34277 Hathaway

34247 Hathaway



FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

**RESIDENTIAL ACCESS AGREEMENTS**





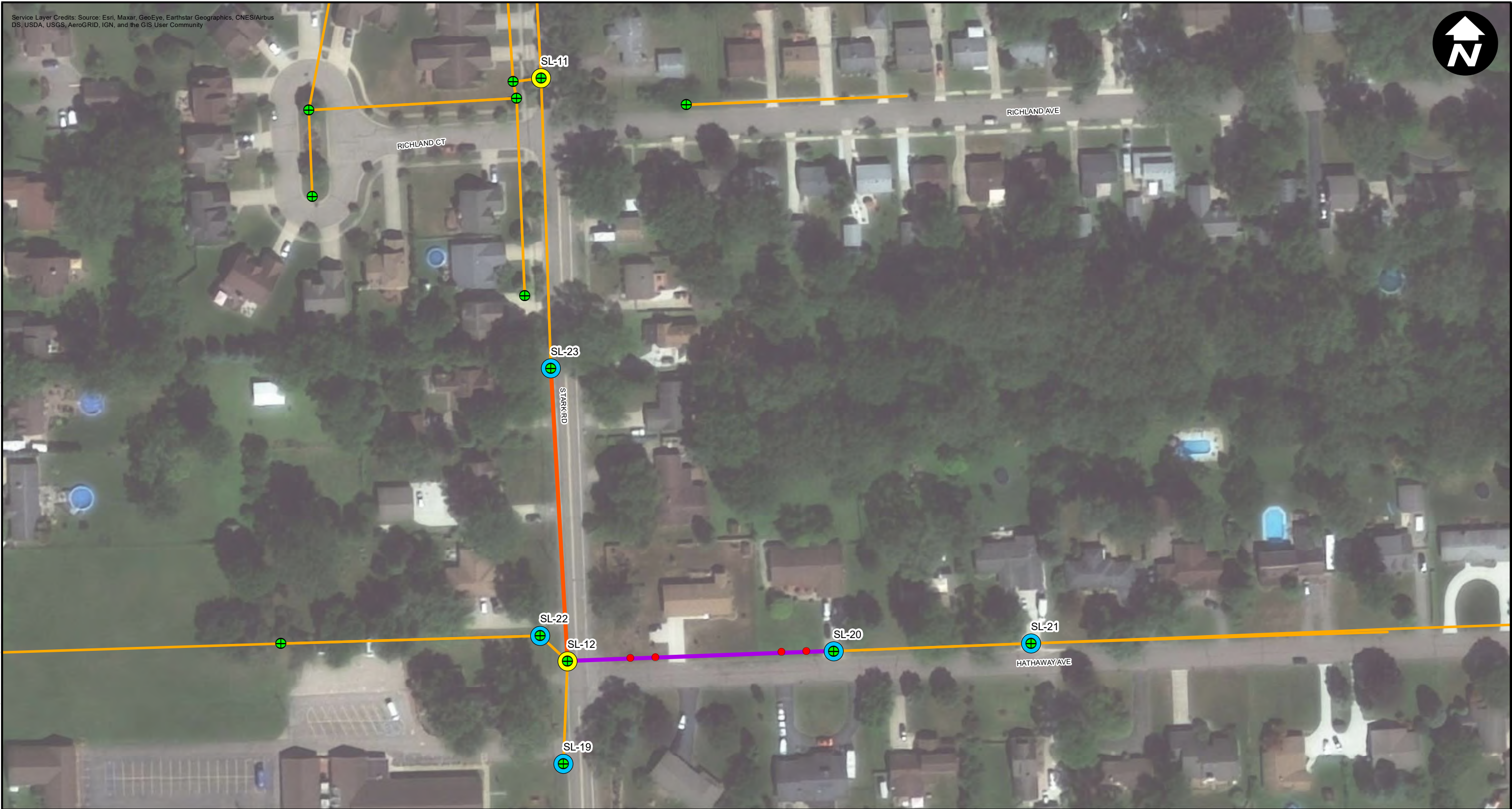
CTY: Novi, DIV: ENV, DE: MG, PIC: R, ELLIS, PM: K, HINSKEY, PROJECT NUMBER: 30080642, COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl, C:\Users\ak00826\ARCADIS\1\Manufacturing Sector Team Site - For GECs\GIS file and reference files\Figure 7\_Sanitary\_Sewer\_MPK.mxd, PLOTTED: 04-03-2022 07:42:21, BY: ak00826








CITY: Novi DIV: ENV DB: MG PIC: R. ELLIS PM: K. HINSKEY PROJECT NUMBER: 30080642.701.02 COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet  
T:\\_ENV\Novi\Brighton\_Mi\Ford\Livonia\GIS\docs\GEC\2022\Utility Corridor\Figure 8\_Residential Offsite Lateral Connections and CCTV-Cleaning.mxd PLOTTED: 3/4/2022 11:25:05 AM BY: ma00749

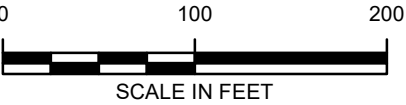
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**LEGEND**

- |   |                      |   |   |
|---|----------------------|---|---|
|  | SAMPLE LOCATION      |  | THE PIPE HAS BEEN CLOSED<br>CIRCUIT TELEVIEWED TO IDENTIFY<br>LATERAL CONNECTIONS ON 3/3/2022 |
|  | DELINEATION LOCATION |  | CCTV/CLEANED  |
|  | SANITARY MANHOLE     |  | LATERAL CONNECTIONS   |
|  | SANITARY SEWER LINE  |   |   |

NOTES:  
SL = SAMPLE LOCATION



FORD LIVONIA TRANSMISSION PLANT

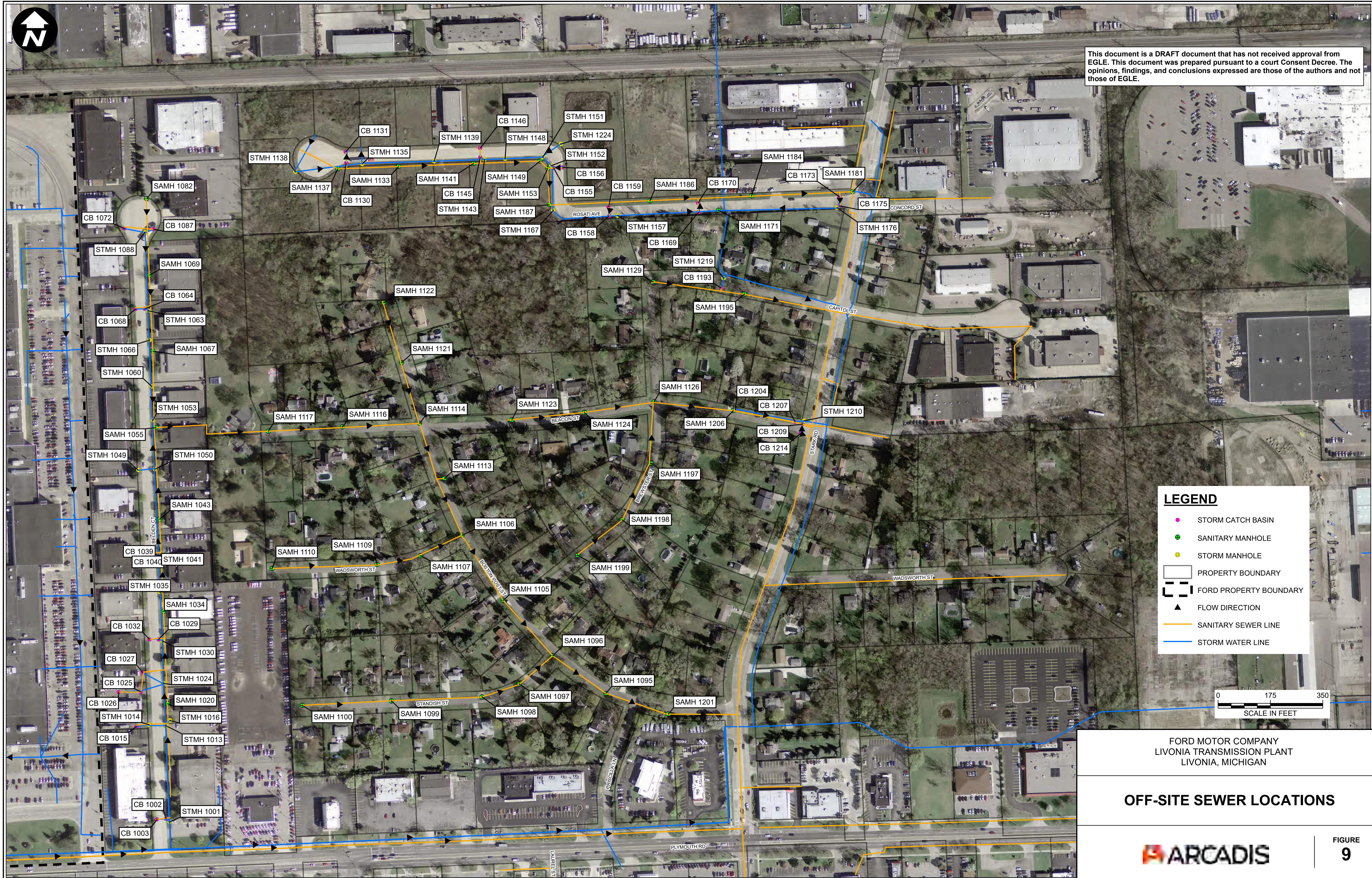
**RESIDENTIAL OFFSITE LATERAL  
CONNECTIONS AND CCTV/CLEANING**



FIGURE  
**8**



CITY: Novi, DIV: ENV, DB: MG, PIC: R, ELLIS, PM: K, HINSKEY, PROJECT NUMBER: 30050315, COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113, Feet, Intl  
TI: ENV\Novi\Brighton\_MilFordLivoniaGIS\docs\GEO\2022\Final\2022\Compliance and Sampling Locations\Figure 3 Offsite Sewer Survey.mxd PLOTTED: 02/22/2022 10:34:44 AM BY: ms01059





CITY: Novi, DIV: ENV, DB: MG, PIC: R. ELLIS, PM: K. HINSKEY, PROJECT NUMBER: 30050315, COORDINATE SYSTEM: NAD 1983 StatePlane Michigan South FIPS 2113 Feet, T:\\_ENV\Novi\Brighton\_Mil\Ford\Livingston\GIS\docs\GEC\2022\Utility Corridor\Figure 11\_Sanitary and Storm Sewer Lines.mxd, PLOTTED: 3/4/2022 2:59:45 PM BY: ma00749



LEGEND

- STORM CATCH BASIN

SANITARY MANHOLE

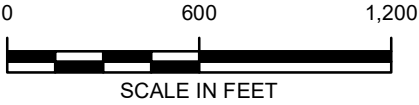
STORM MANHOLE

STORM INLET
- SANITARY SEWER LINE

STORM WATER LINE

FORD PROPERTY BOUNDARY
- DOES NOT CONNECT TO PLYMOUTH/STARK SANITARY SEWER

CONNECTION TO PLYMOUTH/STARK SANITARY SEWER HAS NOT BEEN VERIFIED
- NOTE:  
1. SEWER LINE CONNECTIONS WERE DETERMINED  
BASED ON VISUAL INSPECTION.



FORD LIVONIA TRANSMISSION PLANT

SANITARY AND STORM SEWER LINE CONNECTIONS

FIGURE  
10



NOTES

EGLE = DEPARTMENT OF ENVIRONMENT, GREAT LAKES & ENERGY

EDC = EASTERN DIVERSION CHAMBER

WDC = WESTERN DIVERSION CHAMBER

SAMH = SANITARY MANHOLE

TCE = TRICHLOROETHYLENE

CIS-1,2-DCE = CIS-1,2-DICHLOROETHYLENE

CCTV = CLOSED-CIRCUIT TELEVISION

J = ESTIMATED VALUE

\* = PEAK EXISTS, BUT SOFTWARE DOES NOT INTEGRATE. BELOW  
DEFIANTS QUOTE LIMIT OF DETECTION (3,000 COUNTS)

\*\* = MANUAL INTERGRATION REQUIRED

\*\*\* = PEAK CLOUDED BY ANOTHER CONSTITUENT

G = CO-LOCATED GRAB SAMPLE

ALL RESULTS REPORTED IN  $\mu\text{g}/\text{m}^3$

DETECTIONS ARE BOLDDED

EXCEEDENCES ARE SHADED GRAY

4.0  $\mu\text{g}/\text{m}^3$  = TCE SITE SPECIFIC CRITERIA FOR 12 HOUR EXPOSURE

25.0  $\mu\text{g}/\text{m}^3$  = CIS-1,2-DCE SITE SPECIFIC CRITERIA FOR 12 HOUR  
EXPOSURE

0 300 600  
SCALE IN FEET














FORD MOTOR COMPANY  
LIVONIA TRANSMISSION PLANT  
LIVONIA, MICHIGAN

## FROG SANITARY SCREENING RESULTS



FIGURE 11

## LEGEND

- |   |                                      |   |  |
|---|--------------------------------------|---|--|
|  | STORM CATCH BASIN                    |  | MANHOLE ACCESS POINTS  |
|  | CHAMBER                              |  | CLEANOUST ACCESS POINTS  |
|  | SANITARY MANHOLE                     |  | SANITARY WASTE SOURCES   |
|  | SANITARY SEWER LINE                  |  | LATERAL  |
|  | TEST AND SEAL COMPLETE               |  | BURIED MANHOLE   |
|  | CURED-IN-PLACE PIPE LINING           |  | Primary Screening Manhole Location<br>(screen first)               |
|  | CLEANED AND CCTV'd                   |  | Secondary Screening Manhole Location<br>(screen second, if needed) |
|  | CURED-IN-PLACE POINT REPAIR COMPLETE |  | Tertiary Screening Cleanout Location<br>(screen last, if needed)   |
|  | FORD PROPERTY BOUNDARY               |  | Co-Located Grab Sample Location                                    |



# **Attachment**

**Secured Access Agreements**





**WINKAL MANAGEMENT, L.L.C.**

10 Rye Ridge Plaza, Suite 200  
Rye Brook, N.Y. 10573  
Tel: (914) 468-7300 Fax: (914) 468-7330

Friday, July 16, 2021

**VIA FEDERAL EXPRESS**

**VIA EMAIL: [Kristoffer.hinske@arcadis.com](mailto:Kristoffer.hinske@arcadis.com)**

Mr. Kristoffer Hinskey  
Arcadis of Michigan, LLC  
28550 Cabot Drive  
Suite 500  
Novi, MI 48377

Re: **ACCESS AGREEMENT**

Escape Games  
34850 Plymouth  
Livonia MI

Dear Kristoffer:

Enclosed please find one (1) owner executed original copy of the Access Agreement requestd by Ford Motor Company to access the above referenced property owned by Winkal Holdings, LLC.

Please have Ford Motor Company execute the Access Agreement and return one (1) fully executed copy to the undersigned for our records. The Access Agreement will not be considered valid until it is fully executed, and we receive a copy of the fully executed version for our records.

If you have any questions, or need additional assistance, please do not hesitate to contact the undersigned.

Sincerely,

  
Rick Tarny  
Director of Property Management  
Encl.

**ATTACHMENT A**  
**ACCESS AGREEMENT**

This ACCESS AGREEMENT is executed this 14<sup>th</sup> day of July, 2021, by and between the Ford Motor Company ("Ford") and WINKAL HOLDINGS, LLC ("Owner").

In consideration of their mutual promises as set forth in this Agreement, Ford and Owner agree as follows:

1. **Access to Properties:** The Owner owns certain real property described as 111-01-0008-000 (Lot and Block Numbers) and generally known as 345 PI (Address) ("Property"). The Tenant at the Property is GA ("Tenant"). The Owner and its Tenant hereby grants approval to Ford, its representatives, agents, contractors and consultants hereinafter collectively ("Licensee"), to enter and cross the Property, including the interiors of any buildings located on the Property, and to perform indoor air sampling, which shall include but not be limited to complete pre-sampling building surveys, temporarily removing products that may contain chemicals, and collecting samples of indoor air, outdoor air, sub-slab, sump, basement, sewers, sewer cleanouts, and floor drain air samples in both living and work spaces within the Property (including work space, basement, sheds, garages, and other permanent structures); and to perform soil gas sampling, which shall include but not be limited to drilling soil borings, installing temporary soil vapor probes, and collecting samples; and to perform water sampling, which shall include but not be limited to drilling wells, installing permanent well points, and sampling water from wells and/or sub-grade sumps; and to perform mitigation, which may include but not be limited to installation of sub-slab depressurization, sub-membrane depressurization, sump depressurization, dewatering, waterproofing, or alternative mitigation techniques (hereinafter "Work"). In addition, the Owner and/or Tenant will provide access to restrooms to inspect p-traps, wax rings, and/or exterior sanitary traps. This right to access and enter upon the Property shall include the right to bring any and all tools, equipment, and machinery onto or inside the Property that Ford deems necessary to perform the Work and to take photos of the basement areas to show chemical use. Ford will provide a copy of any final data report regarding the Work to the Owner within 14 days of receiving the final reports from Ford's environmental Supplier. Ford shall restore or repair the Property to its substantially similar previous physical condition if any damage is caused to the Property from the Work. The Owner understands that prior notice will be provided to him/her of any Work and that reasonable efforts will be made to minimize disturbances to the Property other than that required to perform the Work. This Agreement shall be binding on all heirs, next of kin, personal representatives, successors, and assigns of the parties and shall continue until all Work is completed.
2. **Owner Responsibilities:** If Licensee identifies indoor chemical use by the Owner and/or the Tenant at the Property during the building survey, the Owner and/or the Tenant hereby agrees to remove from the Property, if requested by Licensee, chemicals present at the Property that could interfere with the interpretation of the indoor air sampling results. Additionally, the Owner and/or Tenant agrees that, if requested by Licensee, the Owner and/or Tenant will avoid the use of chemicals in the forty-eight (48) hours prior to and during the indoor air sampling.
3. **Indemnity:** Ford shall indemnify and save harmless Owner and/or the Tenant, and if applicable its officers, directors, employees, contractors and agents (herein collectively referred to as the "Indemnitees") from and against any and all suits, liabilities, obligations, losses, damages, penalties, or claims (collectively referred to as the "Claims"), which may be imposed upon or incurred by or asserted against the Indemnitees, by reason of actual or alleged damage to the property of any person or legal entity (including, without limitation, the property of one or more of the Indemnitees and the property of its contractors, subcontractors, vendors, agents or employees), arising from the exercise by Licensee of any rights or privileges granted it hereunder. However, the foregoing indemnity shall not apply to the extent that such Claims are caused by the negligence or willful misconduct of the Indemnitees.
4. **Notice:** Any notice given pursuant to this Agreement must be in writing and shall be deemed to have been duly given if mailed by first class, registered or certified mail, postage and fees prepaid, or e-mail, and addressed to the Project Coordinator for Ford or the Owner at their addresses set

forth below. Owner may specify its preferred form of notice. Either of the parties by notice in writing to the other may change the name and address to which notices, requests, demands or other communications shall be mailed

Ford Project Coordinator Address

Arcadis of Michigan, LLC.  
28550 Cabot Drive, Suite 500  
Novi, MI 48377  
Attn: Kristoffer Hinskey  
Email: kristoffer.hinskey@arcadis.com

Owner's Address

WINNAC HOLDINGS, LLC c/o WIN Properties, Inc.  
10 5th FLOOR PLAZA - SUITE 200  
FIVE BRIDGE, NY 10573  
Attn: RICK YARMY  
Email: RYARMY@WINPM.COM  
Phone: 914-468-7319

5. Assignment and Benefit: Nothing in this Agreement precludes the parties from assigning their rights and obligations under this Agreement, provided prior written approval is provided by the other party. This Agreement shall be binding upon and shall inure to the benefit of the respective legal representatives, successors and assigns of the parties, and the provisions of same shall survive the execution of the Agreement or exercise of any options, or closing, except as otherwise provided in the Agreement.
6. Performance: Any failure of either party to insist upon strict compliance with any provisions of this Agreement shall not constitute a waiver, and all provisions of this Agreement shall remain in full force and effect.
7. Entire Agreement: This instrument constitutes the entire agreement between the parties and there are no agreements, understandings, warranties or representations except as set forth in this Agreement. This Agreement cannot be amended except in writing, as executed by Ford and the Owner.
8. Governing Law: This Agreement shall be governed by and construed according to the laws of the State of Michigan.
9. Counterparts: This Agreement may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so executed shall constitute one and the same agreement. Delivery of an executed counterpart to this Agreement by facsimile or e-mail shall be as effective as delivery of a manually executed counterpart of this Agreement, and each party hereto shall be entitled to rely on a facsimile or e-mail signature of each other party hereto as if it were an original.
10. Authority: Each party to this Agreement represents and warrants to the other party that it has full power, authority, and legal right to execute and deliver this Agreement.

In witness thereof, the parties have caused this Agreement to be executed as of the date first above written.

Ford Motor Company

DocuSigned by:

By: Daniel Byrne

79EA3A7871CB4D2  
Its: Attorney & Agent

Owner(s) WINNAC HOLDINGS, LLC

By:

RICK YARMY

Its: WINNAC HOLDINGS, LLC

DIRECTOR OF PROPERTY MANAGEMENT  
AS AGENT FOR WINNAC HOLDINGS, LLC



**ATTACHMENT A**  
**ACCESS AGREEMENT**

This ACCESS AGREEMENT is executed this 12 day of July, 2021, by and between the Ford Motor Company ("Ford") and 34900 PLYMOUTH ROAD LLC ("Owner").

In consideration of their mutual promises as set forth in this Agreement, Ford and Owner agree as follows:

1. **Access to Properties:** The Owner owns certain real property described as 111-01-0010-000 (Lot and Block Numbers) and generally known as 34900 Plymouth (Address) ("Property"). The Tenant at the Property is Canton Computer LLC ("Tenant"). The Owner and its Tenant hereby grants approval to Ford, its representatives, agents, contractors and consultants hereinafter collectively ("Licensee"), to enter and cross the Property, including the interiors of any buildings located on the Property, and to perform indoor air sampling, which shall include but not be limited to complete pre-sampling building surveys, temporarily removing products that may contain chemicals, and collecting samples of indoor air, outdoor air, sub-slab, sump, basement, sewers, sewer cleanouts, and floor drain air samples in both living and work spaces within the Property (including work space, basement, sheds, garages, and other permanent structures); and to perform soil gas sampling, which shall include but not be limited to drilling soil borings, installing temporary soil vapor probes, and collecting samples; and to perform water sampling, which shall include but not be limited to drilling wells, installing permanent well points, and sampling water from wells and/or sub-grade sumps; and to perform mitigation, which may include but not be limited to installation of sub-slab depressurization, sub-membrane depressurization, sump depressurization, dewatering, waterproofing, or alternative mitigation techniques (hereinafter "Work"). In addition, the Owner and/or Tenant will provide access to restrooms to inspect p-traps, wax rings, and/or exterior sanitary traps. This right to access and enter upon the Property shall include the right to bring any and all tools, equipment, and machinery onto or inside the Property that Ford deems necessary to perform the Work and to take photos of the basement areas to show chemical use. Ford will provide a copy of any final data report regarding the Work to the Owner within 14 days of receiving the final reports from Ford's environmental Supplier. Ford shall restore or repair the Property to its substantially similar previous physical condition if any damage is caused to the Property from the Work. The Owner understands that prior notice will be provided to him/her of any Work and that reasonable efforts will be made to minimize disturbances to the Property other than that required to perform the Work. This Agreement shall be binding on all heirs, next of kin, personal representatives, successors, and assigns of the parties and shall continue until all Work is completed.
2. **Owner Responsibilities:** If Licensee identifies indoor chemical use by the Owner and/or the Tenant at the Property during the building survey, the Owner and/or the Tenant hereby agrees to remove from the Property, if requested by Licensee, chemicals present at the Property that could interfere with the interpretation of the indoor air sampling results. Additionally, the Owner and/or Tenant agrees that, if requested by Licensee, the Owner and/or Tenant will avoid the use of chemicals in the forty-eight (48) hours prior to and during the indoor air sampling.
3. **Indemnity:** Ford shall indemnify and save harmless Owner and/or the Tenant, and if applicable its officers, directors, employees, contractors and agents (herein collectively referred to as the "Indemnitees") from and against any and all suits, liabilities, obligations, losses, damages, penalties, or claims (collectively referred to as the "Claims"), which may be imposed upon or incurred by or asserted against the Indemnitees, by reason of actual or alleged damage to the property of any person or legal entity (including, without limitation, the property of one or more of the Indemnitees and the property of its contractors, subcontractors, vendors, agents or employees), arising from the exercise by Licensee of any rights or privileges granted it hereunder. However, the foregoing indemnity shall not apply to the extent that such Claims are caused by the negligence or willful misconduct of the Indemnitees.
4. **Notice:** Any notice given pursuant to this Agreement must be in writing and shall be deemed to have been duly given if mailed by first class, registered or certified mail, postage and fees prepaid, or e-mail, and addressed to the Project Coordinator for Ford or the Owner at their addresses set



forth below. Owner may specify its preferred form of notice. Either of the parties by notice in writing to the other may change the name and address to which notices, requests, demands or other communications shall be mailed.

Ford Project Coordinator Address

Arcadis of Michigan, LLC.  
28550 Cabot Drive, Suite 500  
Novi, MI 48377  
Attn: Kristoffer Hinskey  
Email: kristoffer.hinskey@arcadis.com

Owner's Address

John Wisniewski  
34900 Plymouth Rd.  
Livonia MI 48150  
Attn: John Wisniewski  
Email: John@usa-lab.com  
Phone: 313 477 4800

5. Assignment and Benefit: Nothing in this Agreement precludes the parties from assigning their rights and obligations under this Agreement, provided prior written approval is provided by the other party. This Agreement shall be binding upon and shall inure to the benefit of the respective legal representatives, successors and assigns of the parties, and the provisions of same shall survive the execution of the Agreement or exercise of any options, or closing, except as otherwise provided in the Agreement.
6. Performance: Any failure of either party to insist upon strict compliance with any provisions of this Agreement shall not constitute a waiver, and all provisions of this Agreement shall remain in full force and effect.
7. Entire Agreement: This instrument constitutes the entire agreement between the parties and there are no agreements, understandings, warranties or representations except as set forth in this Agreement. This Agreement cannot be amended except in writing, as executed by Ford and the Owner.
8. Governing Law: This Agreement shall be governed by and construed according to the laws of the State of Michigan.
9. Counterparts: This Agreement may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so executed shall constitute one and the same agreement. Delivery of an executed counterpart to this Agreement by facsimile or e-mail shall be as effective as delivery of a manually executed counterpart of this Agreement, and each party hereto shall be entitled to rely on a facsimile or e-mail signature of each other party hereto as if it were an original.
10. Authority: Each party to this Agreement represents and warrants to the other party that it has full power, authority, and legal right to execute and deliver this Agreement.

In witness thereof, the parties have caused this Agreement to be executed as of the date first above written.

Ford Motor Company

By: \_\_\_\_\_

DocuSigned by:  
David Byrne  
79EA3A7871CB4D2...

Its: Attorney & Agent

Owner(s)

By: \_\_\_\_\_

Its: Managing Member



**ATTACHMENT A**  
**ACCESS AGREEMENT**

This ACCESS AGREEMENT is executed this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by and between the Ford Motor Company ("Ford") and **Edward C. Brown / Bill Brown Ford** ("Owner").

In consideration of their mutual promises as set forth in this Agreement, Ford and Owner agree as follows:

1. **Access to Properties:** The Owner owns certain real property described as **111-99-0003-000** (Lot and Block Numbers) and generally known as **35000 Pl mouth** (Address) ("Property"). The Tenant at the Property is \_\_\_\_\_ ("Tenant"). The Owner and its Tenant hereby grants approval to Ford, its representatives, agents, contractors and consultants hereinafter collectively ("Licensee"), to enter and cross the Property, including the interiors of any buildings located on the Property, and to perform indoor air sampling, which shall include but not be limited to complete pre-sampling building surveys, temporarily removing products that may contain chemicals, and collecting samples of indoor air, outdoor air, sub-slab, sump, basement, sewers, sewer cleanouts, and floor drain air samples in both living and work spaces within the Property (including work space, basement, sheds, garages, and other permanent structures); and to perform soil gas sampling, which shall include but not be limited to drilling soil borings, installing temporary soil vapor probes, and collecting samples; and to perform water sampling, which shall include but not be limited to drilling wells, installing permanent well points, and sampling water from wells and/or sub-grade sumps; and to perform mitigation, which may include but not be limited to installation of sub-slab depressurization, sub-membrane depressurization, sump depressurization, dewatering, waterproofing, or alternative mitigation techniques (hereinafter "Work"). In addition, the Owner and/or Tenant will provide access to restrooms to inspect p-traps, wax rings, and/or exterior sanitary traps. This right to access and enter upon the Property shall include the right to bring any and all tools, equipment, and machinery onto or inside the Property that Ford deems necessary to perform the Work and to take photos of the basement areas to show chemical use. Ford will provide a copy of any final data report regarding the Work to the Owner within 14 days of receiving the final reports from Ford's environmental Supplier. Ford shall restore or repair the Property to its substantially similar previous physical condition if any damage is caused to the Property from the Work. The Owner understands that prior notice will be provided to him/her of any Work and that reasonable efforts will be made to minimize disturbances to the Property other than that required to perform the Work. This Agreement shall be binding on all heirs, next of kin, personal representatives, successors, and assigns of the parties and shall continue until all Work is completed.
2. **Owner Responsibilities:** If Licensee identifies indoor chemical use by the Owner and/or the Tenant at the Property during the building survey, the Owner and/or the Tenant hereby agrees to remove from the Property, if requested by Licensee, chemicals present at the Property that could interfere with the interpretation of the indoor air sampling results. Additionally, the Owner and/or Tenant agrees that, if requested by Licensee, the Owner and/or Tenant will avoid the use of chemicals in the forty-eight (48) hours prior to and during the indoor air sampling.
3. **Indemnity:** Ford shall indemnify and save harmless Owner and/or the Tenant, and if applicable its officers, directors, employees, contractors and agents (herein collectively referred to as the "Indemnitees") from and against any and all suits, liabilities, obligations, losses, damages, penalties, or claims (collectively referred to as the "Claims"), which may be imposed upon or incurred by or asserted against the Indemnitees, by reason of actual or alleged damage to the property of any person or legal entity (including, without limitation, the property of one or more of the Indemnitees and the property of its contractors, subcontractors, vendors, agents or employees), arising from the exercise by Licensee of any rights or privileges granted it hereunder. However, the foregoing indemnity shall not apply to the extent that such Claims are caused by the negligence or willful misconduct of the Indemnitees.
4. **Notice:** Any notice given pursuant to this Agreement must be in writing and shall be deemed to have been duly given if mailed by first class, registered or certified mail, postage and fees prepaid, or e-mail, and addressed to the Project Coordinator for Ford or the Owner at their addresses set

forth below. Owner may specify its preferred form of notice. Either of the parties by notice in writing to the other may change the name and address to which notices, requests, demands or other communications shall be mailed.

Ford Project Coordinator Address

Arcadis of Michigan, LLC.  
28550 Cabot Drive, Suite 500  
Novi, MI 48377  
Attn: Kristoffer Hinskey  
Email: kristoffer.hinskey@arcadis.com

Owner's Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Attn: \_\_\_\_\_  
Email: \_\_\_\_\_  
Phone: \_\_\_\_\_

5. Assignment and Benefit: Nothing in this Agreement precludes the parties from assigning their rights and obligations under this Agreement, provided prior written approval is provided by the other party. This Agreement shall be binding upon and shall inure to the benefit of the respective legal representatives, successors and assigns of the parties, and the provisions of same shall survive the execution of the Agreement or exercise of any options, or closing, except as otherwise provided in the Agreement.
6. Performance: Any failure of either party to insist upon strict compliance with any provisions of this Agreement shall not constitute a waiver, and all provisions of this Agreement shall remain in full force and effect.
7. Entire Agreement: This instrument constitutes the entire agreement between the parties and there are no agreements, understandings, warranties or representations except as set forth in this Agreement. This Agreement cannot be amended except in writing, as executed by Ford and the Owner.
8. Governing Law: This Agreement shall be governed by and construed according to the laws of the State of Michigan.
9. Counterparts: This Agreement may be executed in any number of counterparts, and by different parties hereto in separate counterparts, each of which when so executed shall constitute one and the same agreement. Delivery of an executed counterpart to this Agreement by facsimile or e-mail shall be as effective as delivery of a manually executed counterpart of this Agreement, and each party hereto shall be entitled to rely on a facsimile or e-mail signature of each other party hereto as if it were an original.
10. Authority: Each party to this Agreement represents and warrants to the other party that it has full power, authority, and legal right to execute and deliver this Agreement.

In witness thereof, the parties have caused this Agreement to be executed as of the date first above written.

Ford Motor Company

DocuSigned by:

By: David Byrne

Attorney & Agent

Its: \_\_\_\_\_

Owner(s)

By: \_\_\_\_\_

Its: \_\_\_\_\_