



September 12, 2018

Mayor Barnett  
City of Franklin  
70 E. Monroe Street  
Franklin, Indiana 46131

City Attorney Gray  
City of Franklin  
70 E. Monroe Street  
Franklin, Indiana 46131

Re: Focused Groundwater and Soil Gas Investigation  
Glendale-Ross Neighborhood / Near-Northeast Franklin  
Franklin, Indiana

Dear Mayor Barnett and City Attorney Gray:

EnviroForensics has conducted a focused groundwater and soil gas investigation in the neighborhood south of the former Amphenol Corporation facility (EPA ID# IND 044 587 848) near the intersection of Hamilton Avenue and Forsythe Avenue, and in the Glendale Drive neighborhood. This report documents the activities conducted during the investigation and presents our findings regarding subsurface environmental conditions in the area of potential concern.

## **1.0 SCOPE OF WORK**

Field work was conducted on August 29 and 30, 2018 and consisted of the advancement of seven (7) soil borings for the collection of groundwater samples and four (4) hand auger borings, which were completed to facilitate soil gas sampling within the sanitary sewer backfill. The soil boring locations (designated as DP-1 through DP-7) and soil gas sampling locations (SGU-1 through SGU-4) are depicted on **Figure 1** and **Figure 2**, respectively.

Sampling was performed in accordance with Indiana Department of Environmental Management (IDEM) and U.S. Environmental Protection Agency (EPA) protocols for environmental investigations. Prior to advancing borings, public utilities were notified in advance of sampling activities, and ground-penetrating radar (GPR) was used to verify subsurface utility locations and ensure that the subsurface was free of underground obstructions at each boring location. All work was conducted within City of Franklin (the City) right-of-ways (ROWs) in accordance with ROW Permit No. 2018-270 issued by the City prior to commencing work activities. Non-

dedicated sampling or drilling equipment was decontaminated with an Alconox solution and a tap water rinse before and following its use at each sampling location. All soil and groundwater media generated during investigation activities was stored in 55-gallon steel drums and temporarily staged on City property pending characterization and eventual transport and disposal by a licensed contractor.

### **Groundwater Sampling Methodology**

The direct push soil borings were advanced using a Geoprobe® Direct-Push Dual Tube Sampling System (Geoprobe®). Continuous soil sampling was performed to maximum depths ranging from 16 to 20 feet below ground surface (bgs). The stratigraphy of each soil sample was visually classified in general accordance with the Unified Soil Classification System and field screened for odor, staining, and the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). Boring logs from direct push borings DP-1 through DP-7 are provided as **Appendix A**.

Groundwater was generally encountered at a depth of approximately 8 feet bgs to 14 feet bgs in the direct push borings. Grab groundwater samples were collected from each direct push boring through a discrete Geoprobe® sampler that was driven to depth. A four-foot stainless steel screen was then exposed within the discrete groundwater interval. Samples were collected using Teflon™-lined polyethylene tubing and a stainless-steel check valve. The check valve was decontaminated, and new nitrile gloves and single-use disposable tubing were used during the collection of each sample.

The samples were collected into laboratory supplied 40-milliliter (mL) vials containing a hydrochloric acid preservative. The samples were labeled and placed in an ice-chilled cooler under chain-of-custody control until their delivery that same day to ENVision Laboratories, Inc. in Indianapolis, Indiana. The groundwater samples were analyzed for volatile VOCs using SW-846 Method 8260.

### **Soil Gas Sampling Methodology**

The IDEM Remediation Closure Guide (RCG) considers subsurface utility corridors as preferential pathways for the migration of contaminated groundwater and vapors. Their potential to serve as a vapor migration and exposure route at nearby residential structures was evaluated by installing four (4) soil gas monitoring points within the backfill of the sanitary sewer beneath sections of Hamilton Avenue, Glendale Drive, and Forsythe Street. Sampling locations are depicted on **Figure 2**.

Prior to installing sampling points at each location, the depth of the sanitary sewer main was determined by opening a nearby manhole and measuring the depth to the top of the sewer pipe. Soil gas utility sampling points SGU-1 through SGU-4 were installed in boreholes advanced by hand-auger methods to depths ranging from 5.3 to 7.5 feet bgs, which corresponded to observed sanitary sewer depths at each respective location. Hand auger borings SGU-3 and SGU-4 were determined to have encountered backfill when increased sand and gravel was observed in hand auger soil cuttings at 7.2 and 7.5 ft bgs, respectively, which was not observed in native material logged at the same depth in nearby soil borings DP-7 and DP-6, respectively. Sand and gravel was also observed at 5.3 ft bgs at SGU-2, which indicated the presence of fill, as the native material observed at the same depth in nearby boring DP-5 was sandy clay. A direct push boring was not advanced in the area near SGU-1, however the presence of backfill was determined using the known depth of sanitary sewer and the observation of sand and gravel, like that observed in the other hand auger borings.

Each soil gas point was constructed from a 6-inch stainless steel screen implant, attached to ¼-inch Teflon™-lined polyethylene tubing, which was extended to the surface. A sand pack consisting of #5 washed quartz sand was placed around the implant screen in the open borehole to a depth of approximately 6 inches above the steel screen implant. The remaining annular space was filled with hydrated bentonite to surface grade. Immediately after installation, the sand pack volume was calculated and three (3) sand pack air volumes were purged using a peristaltic pump to develop the sampling point. The appropriate volume of gas purged was measured by collecting the purge gas into a 1-Liter Tedlar bag.

Each location was sampled a minimum of 24 hours after development to allow for vapor equilibration. Prior to soil gas sample collection, the integrity of the sample tubing and fittings were tested by conducting a negative pressure test with a hand pump equipped with a pressure gauge. A negative pressure was induced within the sample line and observed for 60 seconds for any pressure changes. No change to the pressure was observed in any of the sampling points; therefore, the sampling trains were considered intact and sampling activities ensued. To ensure that the collected soil gas sample was representative of subsurface vapor conditions, leak testing was performed during the purging of three (3) dead air volumes of the sampling screen and attached tubing. Leak testing involved the use of a helium tracer gas and was performed at each point in accordance with methods presented in the IDEM RCG and *Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapor Intrusion Evaluation*, ASTM Standard D7663-11.

Following purging, a batch-certified 1-Liter canister was connected to the end of the exposed tubing and a sample was collected using a recommended sampling flow rate of 200 milliliters per

minute (mL/min). Upon completion, the soil gas sample was submitted to EnvisionAir Laboratories, Inc. (EnvisionAir) located in Indianapolis, Indiana for analysis of VOCs using EPA Method TO-15.

## 2.0 INVESTIGATION RESULTS

The soils encountered in direct push boring locations consisted primarily of clay and unsaturated sand units interbedded and overlaying saturated sand units encountered ranging from 8 to 14 feet bgs. Underlying the saturated sand unit is a sandy clay unit. Borings were not advanced deeper than 20 feet bgs and a second, deeper saturated unit was not encountered at any boring location. Hand auger borings were located within utility corridors and generally consisted of mixtures of clay, gravel, and sand fill material. Direct push boring logs are provided as **Appendix A**.

The groundwater and soil gas analytical laboratory reports are provided as **Appendix B**. The groundwater and soil gas analytical results were compared to the IDEM RCG 2018 residential screening levels, designed to be protective of human health and the environment. Soil gas sample results were evaluated in accordance with the IDEM RCG and the IDEM Attenuation Factors Technical Guidance Document, dated September 29, 2016. The soil gas results were compared to the applicable Residential Soil Gas Screening Levels (SGSLs), which were derived by dividing the IDEM 2018 Residential Indoor Air Screening Levels (RIASLs) by an attenuation factor of 0.1 in accordance with the RCG.

### **Groundwater Analytical Results**

The groundwater sample collected from DP-6 contained tetrachloroethene (PCE) at a concentration of 49.6 micrograms per liter (µg/L) and trichloroethene (TCE) at a concentration of 31.5 µg/L, which exceed the IDEM RCG Ground Water Tap Screening Levels (GWSL) of 5 µg/L for each compound. In addition, the TCE concentration in the DP-6 sample exceeded the IDEM RCG Residential Vapor Intrusion Groundwater Screening Level (VIGWSL) of 9.1 µg/L. This screening level is used by IDEM per their RCG guidance to note where vapor intrusion (VI) exposure may exist due to off-gassing from groundwater. No other VOCs were detected above laboratory detection limits in the sample from DP-6.

No VOCs were detected above laboratory reporting limits in the samples collected from DP-1, DP-2, DP-3, DP-4, DP-5 and DP-7. The groundwater analytical results are summarized in **Table 1** and depicted on **Figure 1**.

### **Soil Gas Analytical Results**

Sewer backfill vapor samples collected from SGU-1 and SGU-4 contained PCE at concentrations of 2,920 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) and 22,300  $\mu\text{g}/\text{m}^3$ , respectively. These concentrations exceed the IDEM Residential Soil Gas Screening Level (SGSL) of 420 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). PCE was also detected at 197  $\mu\text{g}/\text{m}^3$  in the sample collected from SGU-2 along northern Glendale Drive, but this concentration is below the IDEM Residential SGSL. PCE was not detected in the soil gas sample collected from SGU-3 along southern Glendale Drive.

The sewer backfill vapor samples from SGU-1 and SGU-4 also contained TCE at concentrations of 3,120  $\mu\text{g}/\text{m}^3$  and 5,130  $\mu\text{g}/\text{m}^3$ , respectively. These concentrations exceed the IDEM SGSL of 21  $\mu\text{g}/\text{m}^3$ .

TCE was not detected in the sewer backfill vapor samples collected from Glendale Drive, SGU-2 and SGU-3.

Note that chloroform and m, p-xylene were also detected in the sewer backfill vapor sample collected from SGU-4. Chloroform was detected at a concentration of 14.6  $\mu\text{g}/\text{m}^3$ , which exceeds the IDEM Residential SGSL of 12 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Xylene was detected at a concentration of 462  $\mu\text{g}/\text{m}^3$ , which is below the IDEM Residential SGSL of 1,000  $\mu\text{g}/\text{m}^3$ . Chloroform and xylene were not detected in sewer backfill vapor samples collected from SGU-1, SGU-2, and SGU-3.

The sewer backfill vapor analytical results are summarized in **Table 2** and depicted on **Figure 2**.

### **3.0 DISCUSSION OF RESULTS AND RECOMMENDATIONS**

Groundwater and soil gas samples collected in the eastern portion of the Glendale Ross neighborhood do not indicate the presence of VOCs above actionable levels established by IDEM.

VOCs were detected in groundwater and soil gas samples above IDEM's established levels in the western portion of the Glendale Ross neighborhood. Specifically, VOCs above action levels were detected in grab groundwater sample DP-6, located along Forsythe Street and they were detected in soil gas samples (SGU-1 and SGU-4) along Hamilton Avenue and Forsythe Street, respectively. These data show that additional work is necessary to determine the extent of the groundwater and soil gas impacts south of the former Amphenol site and to determine whether indoor air and sub-slab vapor samples should be collected in residential homes farther

downgradient of already identified impacts. The data does show that certain residential homes fall within the area of interest and need to be sampled to determine whether the vapor intrusion pathway is complete and mitigation is warranted in these homes. Additional investigative work would likely include the following:

Groundwater Sampling from Existing Monitoring Wells - Groundwater wells, installed by Amphenol, exist along Forsythe Street and Ross Court. These wells were last sampled in 1996 and the water quality results and locations are presented in **Appendix C**. These wells should be rehabilitated and redeveloped and groundwater samples should be analyzed to determine the current groundwater quality in these locations and to evaluate whether concentrations would trigger potential VI exposure in the area of those wells.

Soil Gas Sample Collection Within Sanitary Sewer Backfill - The extent of soil gas contaminants within the underground sanitary sewer corridor has not been defined. The collection of additional soil gas samples within the sanitary sewer backfill to the south along Forsythe Street, to the west along Hamilton Avenue, and on Glendale Drive is warranted.

Sewer Air Sample Collection Within Sanitary Sewer Manholes - Contaminant vapors can travel through existing sewer pipes as well as through the surrounding backfill. The collection of grab sewer air samples within manholes along Forsythe Street, Hamilton Avenue, and Glendale Drive is warranted to determine if this is a potential exposure pathway.

Additional Direct Push Borings - Additional direct push borings are needed to delineate groundwater impacts observed at DP-6 and determine if and where groundwater concentrations exceed IDEM RCG VIGWSLs. Borings, along with soil and grab groundwater samples, are warranted to the west, south, and east of DP-6.

Residential VI Assessments - Based on multiple lines of evidence, there is an increased risk of completed VI pathways to occupied structures in the vicinity of our investigation areas. An immediate evaluation of residences near direct push boring DP-6 and sewer backfill soil gas samples SGU-1 and SGU-4 should be conducted to determine which structures require further VI assessment. These VI assessments should include the collection of paired indoor air, sub-slab vapor, and/or crawl space air samples, as appropriate.

EnviroForensics appreciates the opportunity to be of service in this matter. If you have questions or would like to further discuss this report, please do not hesitate to contact us.

Sincerely,

A handwritten signature in blue ink that reads "Megan Hamilton".

Megan Hamilton  
Director of Vapor Intrusion and  
Risk Assessment

A handwritten signature in blue ink that reads "Casey McFall".

Casey McFall, CHMM  
Director of Field Services

#### Attachments

|            |                                                                                                                                          |
|------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Table 1    | Grab Groundwater Sample Analytical Results                                                                                               |
| Table 2    | Soil Gas Sample Analytical Results                                                                                                       |
| Figure 1   | Grab Groundwater Analytical Results                                                                                                      |
| Figure 2   | Soil Gas Sample Analytical Results                                                                                                       |
| Appendix A | Direct Push Boring Logs                                                                                                                  |
| Appendix B | Laboratory Analytical Reports                                                                                                            |
| Appendix C | Excerpts from <i>Report of Additional Corrective Measures Studies for the Former Amphenol Facility Franklin, Indiana</i> , November 1996 |

## **Tables**

**TABLE 1**  
**GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Limited Groundwater and Soil Gas Investigation  
Franklin, Indiana

| Boring Identification                                     | Date Sampled | Depth Sampled (feet bgs) | Chlorinated VOCs (µg/L) |                 |                        |                          |                |
|-----------------------------------------------------------|--------------|--------------------------|-------------------------|-----------------|------------------------|--------------------------|----------------|
|                                                           |              |                          | Tetrachloroethene       | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Vinyl Chloride |
| Residential Tap Ground Water Screening Levels             |              |                          | 5                       | 5               | 70                     | 100                      | 2              |
| Vapor Intrusion Groundwater Screening Level - Residential |              |                          | 110                     | 9.1             | NL                     | NL                       | 2.1            |
| Vapor Intrusion Groundwater Screening Level - Commercial  |              |                          | 470                     | 38              | NL                     | NL                       | 35             |
| DP-1                                                      | 8/29/2018    | 9-13                     | <5                      | <5              | <5                     | <5                       | <2             |
| DP-2                                                      | 8/29/2018    | 14-18                    | <5                      | <5              | <5                     | <5                       | <2             |
| DUP-1                                                     |              |                          | <5                      | <5              | <5                     | <5                       | <2             |
| DP-3                                                      | 8/29/2018    | 9-13                     | <5                      | <5              | <5                     | <5                       | <2             |
| DP-4                                                      | 8/29/2018    | 7.5-11.5                 | <5                      | <5              | <5                     | <5                       | <2             |
| DP-5                                                      | 8/29/2018    | 9-13                     | <5                      | <5              | <5                     | <5                       | <2             |
| DP-6                                                      | 8/29/2018    | 12-16                    | 49.6                    | 31.5            | <5                     | <5                       | <2             |
| DP-7                                                      | 8/29/2018    | 7-11                     | <5                      | <5              | <5                     | <5                       | <2             |

**Notes:**

- VOCs = Volatile Organic Compounds
- bgs = below ground surface
- NL = not listed (screening level not established in IDEM RCG)
- DUP denotes duplicate sample collected from this location.
- Samples analyzed for VOCs using United States Environmental Protection Agency SW-846 Method 8260
- Screening levels are from Table A-6 of the IDEM Remediation Closure Guide (RCG), updated 2018
- Only PCE, TCE, and associated daughter products are shown. All other VOCs were not detected above laboratory reporting limits.
- Bolded** values are above laboratory reporting limits
- Bolded, blue** values are above IDEM Residential GWSLs
- Bolded, green** values are above IDEM Residential Vapor Intrusion GWSLs

**TABLE 2**  
**SUMMARY OF SOIL GAS SAMPLE ANALYTICAL RESULTS**

Limited Groundwater and Soil Gas Investigation  
Franklin, Indiana

| Sample Location                       | Sample Identificaiton | Screen Depth (feet bgs) | Sample Date | VOCs (µg/m <sup>3</sup> ) |                 |                        |                          |                |            |            |
|---------------------------------------|-----------------------|-------------------------|-------------|---------------------------|-----------------|------------------------|--------------------------|----------------|------------|------------|
|                                       |                       |                         |             | Tetrachloroethene         | Trichloroethene | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | Vinyl Chloride | Chloroform | m,p-Xylene |
| Residential Soil Gas Screening Levels |                       |                         |             | 420                       | 21              | NL                     | NL                       | 17             | 12         | 1,000      |
| SGU-1                                 | FC-SGU-1              | 5.3                     | 8/30/2018   | 2,920                     | 3,120           | <198                   | <396                     | <12.8          | <8.30      | <434       |
| SGU-2                                 | FC-SGU-2              | 5.3                     | 8/30/2018   | 197                       | <10.7           | <198                   | <396                     | <12.8          | <8.30      | <434       |
| SGU-3                                 | FC-SGU-3              | 7.2                     | 8/30/2018   | <31.9                     | <10.7           | <198                   | <396                     | <12.8          | <8.30      | <434       |
| SGU-4                                 | FC-SGU-4              | 7.5                     | 8/30/2018   | 22,300                    | 5,310           | <198                   | <396                     | <12.8          | 14.6       | 462        |

**Notes:**

Results reported in microgragms per cubic meter (ug/m<sup>3</sup>)

NL=Screening level not listed in Table A-6 of IDEM's RCG

Utility corridor soil gas screening levels derived by dividing the 2018 Residential Indoor Air Screening Levels by an attenuation factor of 0.1 from IDEM's Remediation Closure Guide and Attenuation Factors Guidance

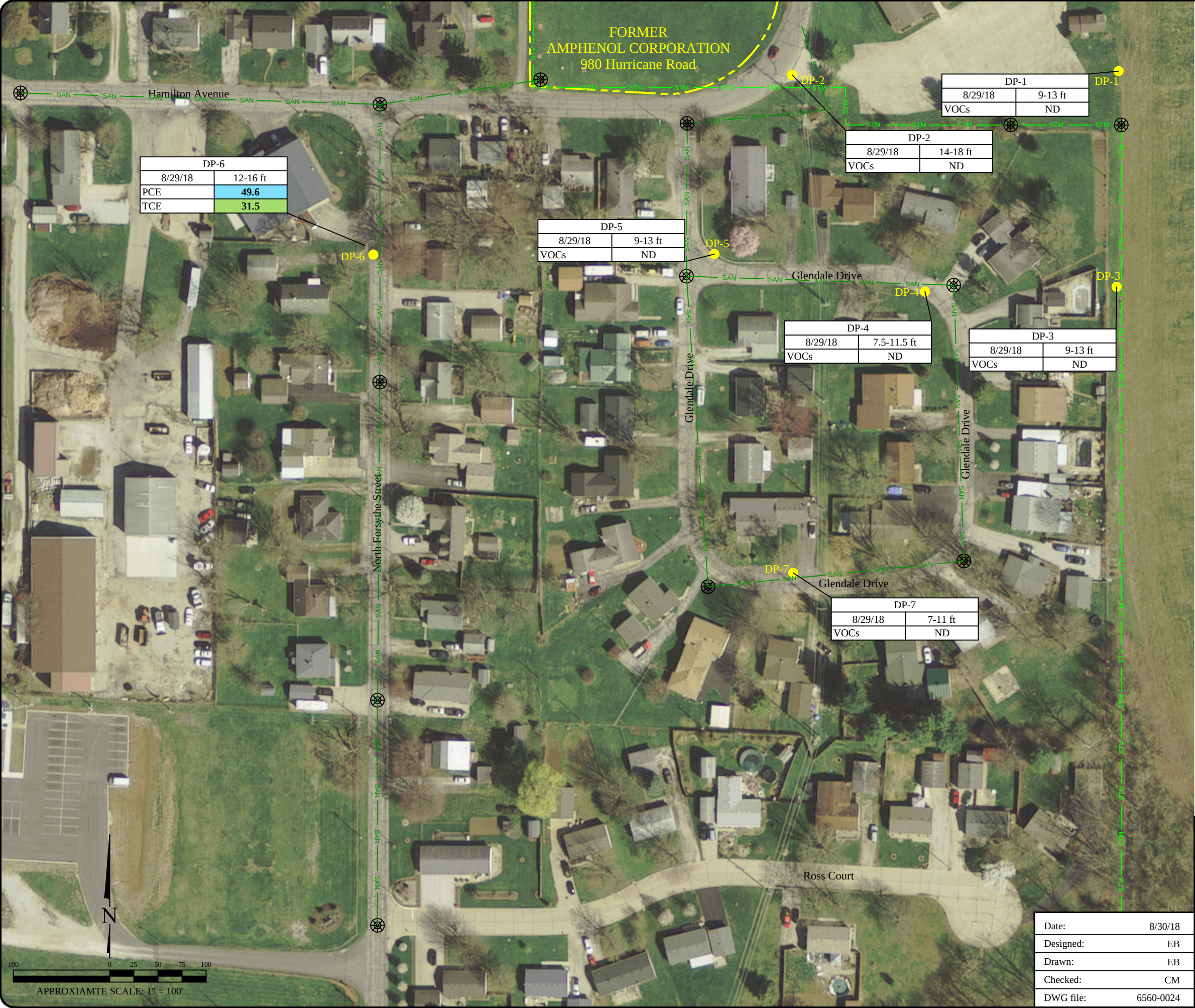
**Bolded** values are above laboratory reporting limits

**Bolded** and blue shaded concentrations exceed the applicable residential screening level

Analysis performed by Envision Laboratories via EPA Method TO-15

Only PCE, TCE, associated daughter products, and compounds with detections are shown here. All other compounds did not have detections above laboratory reporting limits.

## **Figures**



Legend

- Property boundary
- Underground storm utility line
- Underground sanitary utility line
- Manhole
- DP-1 ● Direct push soil boirng

| Analytes | RCG Groundwater Screening Level | Vapor Intrusion Groundwater Screening Levels |            |
|----------|---------------------------------|----------------------------------------------|------------|
|          |                                 | Residential                                  | Commercial |
| PCE      | 5                               | 110                                          | 470        |
| TCE      | 5                               | 9.1                                          | 38         |

- Note:
- Bold shaded blue values exceed IDEM RCG Groundwater Screening Levels
  - Bold shaded blue values exceed IDEM RCG Residential Vapor Intrusion Groundwater Screening Levels
  - Bold values exceed laboratory detection limits
  - Units in micrograms per liter (µg/L)
  - PCE = Tetrachloroethene
  - TCE = Trichloroethene
  - Samples analyzed for VOCs using US EPA SW-846 Method 8260
  - VOCs = Volatile Organic Compounds
  - ND = Not detected

GRAB GROUNDWATER ANALYTICAL RESULTS

Franklin, Indiana

|           |           |
|-----------|-----------|
| Date:     | 8/30/18   |
| Designed: | EB        |
| Drawn:    | EB        |
| Checked:  | CM        |
| DWG file: | 6560-0024 |



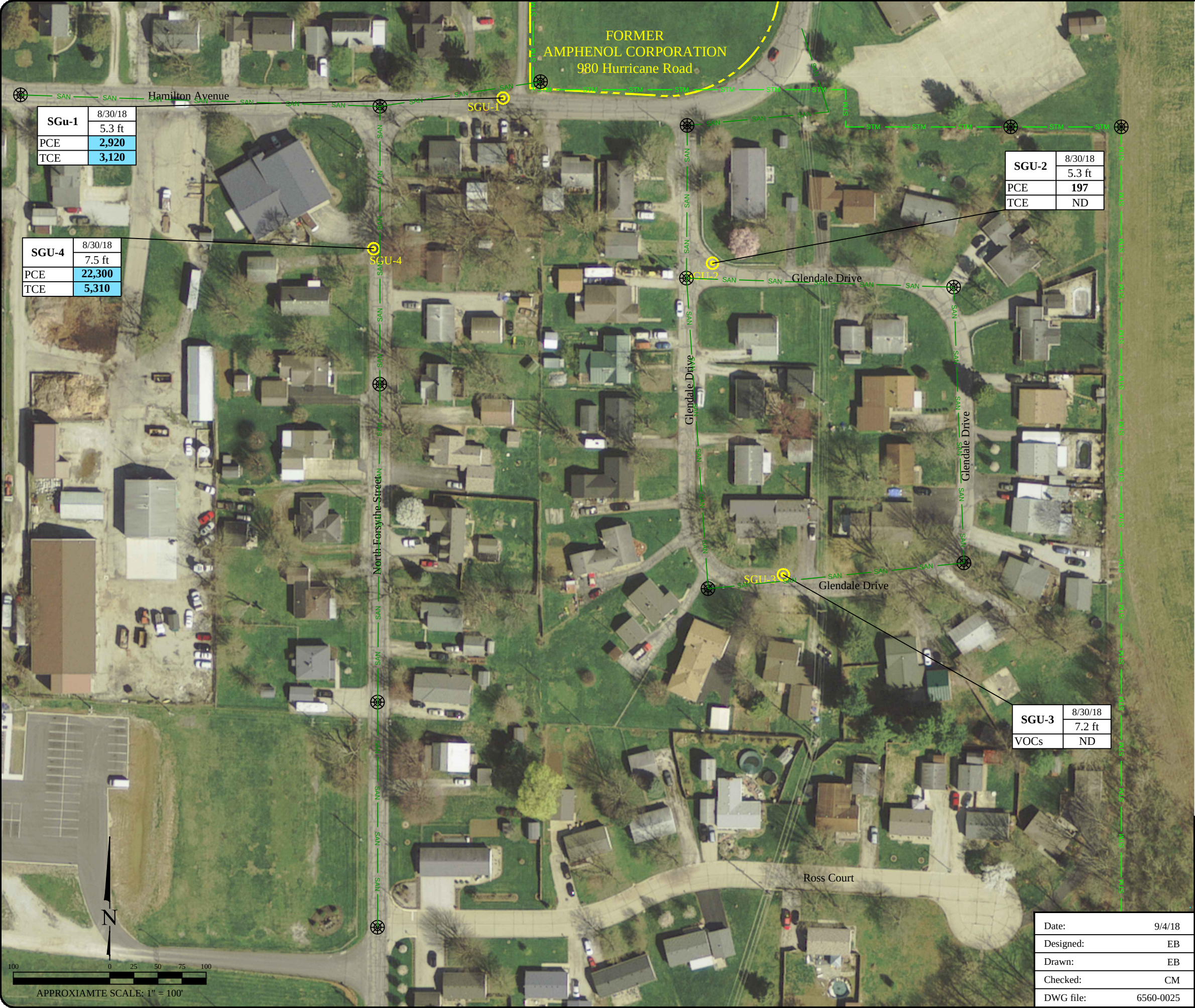
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Figure

1

Project

6560



Legend

- Property boundary
- Underground storm utility line
- Underground sanitary utility line
- Manhole
- Soil Gas sample

| Analytes | Residential Soil Gas Screening Level |
|----------|--------------------------------------|
|          | Shallow                              |
| PCE      | 420                                  |
| TCE      | 21                                   |

- Notes:
- Bold shaded blue concentrations exceed the applicable residential screening level
  - Bold concentrations exceed laboratory reporting limits
  - Results reported in micrograms per meter cubed =  $\mu\text{g}/\text{m}^3$
  - Vapor screening levels derived using the most recent attenuation factor of 0.1 for shallow soil gas from IDEM's Remediation Closure Guide
  - PCE = Tetrachloroethene
  - TCE = Trichloroethene
  - VOCs = Volatile Organic Compounds
  - ND = Not detected

SOIL GAS SAMPLE ANALYTICAL RESULTS

Franklin, Indiana

|       |         |
|-------|---------|
| SGU-3 | 8/30/18 |
|       | 7.2 ft  |
| VOCs  | ND      |

|       |         |
|-------|---------|
| SGU-2 | 8/30/18 |
|       | 5.3 ft  |
| PCE   | 197     |
| TCE   | ND      |

|       |         |
|-------|---------|
| SGU-1 | 8/30/18 |
|       | 5.3 ft  |
| PCE   | 2,920   |
| TCE   | 3,120   |

|       |         |
|-------|---------|
| SGU-4 | 8/30/18 |
|       | 7.5 ft  |
| PCE   | 22,300  |
| TCE   | 5,310   |

|           |           |
|-----------|-----------|
| Date:     | 9/4/18    |
| Designed: | EB        |
| Drawn:    | EB        |
| Checked:  | CM        |
| DWG file: | 6560-0025 |



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Figure

2

Project

6560

**Appendix A**  
Direct Push Boring Logs

# Boring Log

|                                      |                          |  |                                          |                            |  |
|--------------------------------------|--------------------------|--|------------------------------------------|----------------------------|--|
| Project Number: 6560                 |                          |  | Boring No.: DP-1                         |                            |  |
| Project Name: City of Franklin       |                          |  | Location: Franklin, IN                   |                            |  |
| Drilling Contractor: Midway Services |                          |  | Logged by: Terrell, Matt                 |                            |  |
| Drilling Method: Direct Push         | Date Started: 08/29/18   |  | Total Depth (ft bgs): 20                 | Depth to Water (ft bgs): 9 |  |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 |  | Surface Elevation (ft MSL): Not Measured |                            |  |
| Remarks:                             |                          |  |                                          |                            |  |

| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log | USCS Code | Material Description                                                             | Water Level | PID Reading (ppm) | Backfill |
|------------|------------|-------------|------------|-------------|-----------|----------------------------------------------------------------------------------|-------------|-------------------|----------|
| 1          |            |             |            |             | N/A       | (0'-0.5') TOPSOIL (N/A): TOPSOIL.                                                |             | 5.3               |          |
| 2          |            |             | 30         |             | ML/SC     | (0.5'-5') CLS (ML/SC): Brown; sandy CLAY, low plasticity; trace gravel.          |             | 7.8               |          |
| 3          |            |             |            |             |           |                                                                                  |             | 8.4               |          |
| 4          |            |             |            |             |           |                                                                                  |             | 6.7               |          |
| 5          |            |             | 60         |             | SW        | (5'-8') SW (SW): Light Brown; fine SAND, well-graded; some gravel; moist.        |             | 6.4               |          |
| 6          |            |             |            |             |           |                                                                                  |             | 5.0               |          |
| 7          |            |             |            |             |           | Color changes to orange brown from 7' bgs to 8' bgs.                             |             |                   |          |
| 8          |            |             |            |             | GW        | (8'-9') GW (GW): Light grey; fine to coarse GRAVEL; trace silt; dry.             |             | 6.4               |          |
| 9          |            |             | 30         |             | SW        | (9'-10') SW (SW): Brown; fine to coarse SAND, well-graded; trace silt; wet.      |             | 5.6               |          |
| 10         |            |             |            |             | CL        | (10'-12') CL (CL): Grey; CLAY, low plasticity; some sand; trace silt and gravel. |             | 9.0               |          |
| 11         | Water      |             |            |             |           |                                                                                  |             |                   |          |
| 12         |            |             |            |             | SW        | (12'-13') SW (SW): Grey; fine to coarse SAND, well-graded; some gravel; wet.     |             | 7.7               |          |
| 13         |            |             | 60         |             |           | (13'-20') CL (CL): Grey; CLAY, low plasticity; some sand; trace gravel .         |             | 5.8               |          |
| 14         |            |             |            |             |           |                                                                                  |             | 5.3               |          |
| 15         |            |             |            |             |           | Plant roots present at 15' bgs.                                                  |             |                   |          |
| 16         |            |             |            |             | CL        |                                                                                  |             | 10.3              |          |
| 17         |            |             | 100        |             |           |                                                                                  |             |                   |          |
| 18         |            |             |            |             |           | Black streaking present from 18' bgs to 20' bgs.                                 |             | 8.7               |          |
| 19         |            |             |            |             |           |                                                                                  |             |                   |          |
| 20         |            |             |            |             |           |                                                                                  |             |                   |          |
| 21         |            |             |            |             |           |                                                                                  |             |                   |          |
| 22         |            |             |            |             |           |                                                                                  |             |                   |          |
| 23         |            |             |            |             |           |                                                                                  |             |                   |          |
| 24         |            |             |            |             |           |                                                                                  |             |                   |          |
| 25         |            |             |            |             |           |                                                                                  |             |                   |          |
| 26         |            |             |            |             |           |                                                                                  |             |                   |          |
| 27         |            |             |            |             |           |                                                                                  |             |                   |          |

# Boring Log

|                                      |                          |                                          |                             |
|--------------------------------------|--------------------------|------------------------------------------|-----------------------------|
| Project Number: 6560                 |                          | Boring No.: DP-2                         |                             |
| Project Name: City of Franklin       |                          | Location: Franklin, IN                   |                             |
| Drilling Contractor: Midway Services |                          | Logged by: Terrell, Matt                 |                             |
| Drilling Method: Direct Push         | Date Started: 08/29/18   | Total Depth (ft bgs): 20                 | Depth to Water (ft bgs): 14 |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 | Surface Elevation (ft MSL): Not Measured |                             |
| Remarks:                             |                          |                                          |                             |

| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log | USCS Code | Material Description                                                                               | Water Level | PID Reading (ppm) | Backfill |
|------------|------------|-------------|------------|-------------|-----------|----------------------------------------------------------------------------------------------------|-------------|-------------------|----------|
| 1          |            |             |            |             | N/A       | (0'-0.5') <b>Asphalt (N/A):</b> Asphalt.                                                           |             | 2.4               |          |
| 2          |            |             | 40         |             | SW        | (0.5'-2') <b>SW (SW):</b> Brown; fine to coarse SAND, well-graded; trace silt; moist.              |             | 3.0               |          |
| 3          |            |             |            |             |           | (2'-8') <b>CLS (ML/SC):</b> Brown; sandy CLAY, low plasticity; some silt; trace gravel.            |             | 5.0               |          |
| 4          |            |             |            |             |           |                                                                                                    |             |                   |          |
| 5          |            |             | 5          |             | ML/SC     |                                                                                                    |             | 5.6               |          |
| 6          |            |             |            |             |           |                                                                                                    |             |                   |          |
| 7          |            |             |            |             |           |                                                                                                    |             |                   |          |
| 8          |            |             |            |             | SW        | (8'-9') <b>SW (SW):</b> Brown; fine SAND, well-graded; moist.                                      |             | 5.0               |          |
| 9          |            |             | 15         |             |           | (9'-13') <b>SAND (Fill):</b> Brown; Sand, well-graded; trace silt.                                 |             | 9.5               |          |
| 10         |            |             |            |             | SW        |                                                                                                    |             | 5.6               |          |
| 11         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 12         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 13         |            |             | 30         |             | ML/SC     | (13'-14') <b>CLS (ML/SC):</b> Orange brown with black streaks; sandy CLAY, low plasticity; odor.   |             | 10.0              |          |
| 14         |            |             |            |             | SW        | (14-16) <b>SW (SW):</b> Orange brown; fine to coarse SAND, well-graded; some clay and gravel; wet. |             | 9.1               |          |
| 15         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 16         | Water      |             |            |             | SP        | (16'-18') <b>SP (SP):</b> Grey; medium to coarse SAND, poorly-graded; Saturated.                   |             | 9.2               |          |
| 17         |            |             | 80         |             |           | (18'-20') <b>CLS (ML/SC):</b> Grey; sandy CLAY, low plasticity; trace gravel.                      |             | 7.9               |          |
| 18         |            |             |            |             | ML/SC     | Black streaking present at 19' bgs.                                                                |             |                   |          |
| 19         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 20         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 21         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 22         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 23         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 24         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 25         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 26         |            |             |            |             |           |                                                                                                    |             |                   |          |
| 27         |            |             |            |             |           |                                                                                                    |             |                   |          |

# Boring Log

|                                      |                          |  |                                          |                               |  |
|--------------------------------------|--------------------------|--|------------------------------------------|-------------------------------|--|
| Project Number: 6560                 |                          |  | Boring No.: DP-3                         |                               |  |
| Project Name: City of Franklin       |                          |  | Location: Franklin, IN                   |                               |  |
| Drilling Contractor: Midway Services |                          |  | Logged by: Terrell, Matt                 |                               |  |
| Drilling Method: Direct Push         | Date Started: 08/29/18   |  | Total Depth (ft bgs): 16                 | Depth to Water (ft bgs): 10.5 |  |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 |  | Surface Elevation (ft MSL): Not Measured |                               |  |
| Remarks:                             |                          |  |                                          |                               |  |

| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log                                                                         | USCS Code | Material Description                                                                      | Water Level                                                                           | PID Reading (ppm) | Backfill                                                                             |
|------------|------------|-------------|------------|-------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------|
| 1          | WATER      |             | 50         |    | N/A       | (0'-0.5') TOPSOIL (N/A): TOPSOIL; fine to medium organics.                                |  | 4.9               |  |
| 2          |            |             |            |    | ML/SC     | (0.5'-4') CLS (ML/SC): Brown; sandy CLAY, low plasticity.                                 |                                                                                       | 5.6               |                                                                                      |
| 3          |            |             | 60         |    | SC        | (4'-6') SC (SC): Brown; clayey SAND, well-graded; trace silt; moist.                      |                                                                                       | 7.0               |                                                                                      |
| 4          |            |             |            |    | SC        |                                                                                           |                                                                                       | 7.2               |                                                                                      |
| 5          |            |             |            |    | SW        | (6'-8') SW (SW): Light brown; SAND, well-graded; trace gravel and silt; moist.            |                                                                                       | 5.4               |                                                                                      |
| 6          |            |             |            |   | SW        |                                                                                           |                                                                                       | 5.4               |                                                                                      |
| 7          |            |             | 80         |  | ML/SC     | (8'-10.5') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.        |                                                                                       | 5.2               |                                                                                      |
| 8          |            |             |            |  | ML/SC     |                                                                                           |                                                                                       | 6.5               |                                                                                      |
| 9          |            |             |            |  | SW        | 10.5'-11.5') SW (SW): Grey; fine to coarse SAND, well-graded; trace silt and gravel; wet. |                                                                                       | 10.1              |                                                                                      |
| 10         |            |             |            |  | SW        |                                                                                           |                                                                                       | 10.1              |                                                                                      |
| 11         |            |             | 80         |  | CL        | (11.5'-16') CL (CL): Grey; CLAY, low plasticity; some sand; trace silt and gravel.        |                                                                                       | 9.7               |                                                                                      |
| 12         |            |             |            |  | CL        |                                                                                           |                                                                                       | 9.7               |                                                                                      |
| 13         |            |             |            |  | CL        |                                                                                           |                                                                                       | 8.6               |                                                                                      |
| 14         |            |             |            |  | CL        |                                                                                           |                                                                                       | 8.6               |                                                                                      |
| 15         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 16         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 17         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 18         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 19         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 20         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 21         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 22         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 23         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 24         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 25         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 26         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |
| 27         |            |             |            |                                                                                     |           |                                                                                           |                                                                                       |                   |                                                                                      |

# Boring Log

|                                      |                          |  |                                          |                              |  |
|--------------------------------------|--------------------------|--|------------------------------------------|------------------------------|--|
| Project Number: 6560                 |                          |  | Boring No.: DP-4                         |                              |  |
| Project Name: City of Franklin       |                          |  | Location: Franklin, IN                   |                              |  |
| Drilling Contractor: Midway Services |                          |  | Logged by: Terrell, Matt                 |                              |  |
| Drilling Method: Direct Push         | Date Started: 08/29/18   |  | Total Depth (ft bgs): 16                 | Depth to Water (ft bgs): 8.5 |  |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 |  | Surface Elevation (ft MSL): Not Measured |                              |  |
| Remarks:                             |                          |  |                                          |                              |  |

| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log | USCS Code | Material Description                                                                                   | Water Level | PID Reading (ppm) | Backfill |
|------------|------------|-------------|------------|-------------|-----------|--------------------------------------------------------------------------------------------------------|-------------|-------------------|----------|
| 1          |            |             |            |             | N/A       | (0'-1') <b>Asphalt (N/A):</b> Asphalt and gravel road base.                                            |             | 6.7               |          |
| 2          |            |             | 60         |             | CL/ML     | (1'-4') <b>CL/ML (CL/ML):</b> Orange with black and grey mottling; silty CLAY, low plasticity.         |             | 5.2               |          |
| 3          |            |             |            |             |           |                                                                                                        |             | 5.5               |          |
| 4          |            |             |            |             | ML/SC     | (4'-6') <b>CLS (ML/SC):</b> Brown; sandy CLAY, low plasticity; trace silt.                             |             |                   |          |
| 5          |            |             | 50         |             |           |                                                                                                        |             | 7.9               |          |
| 6          |            |             |            |             | SW        | (6'-8') <b>SW (SW):</b> Light brown; fine to coarse SAND, well-graded; some gravel; trace silt; moist. |             | 4.9               |          |
| 7          |            |             |            |             |           |                                                                                                        |             |                   |          |
| 8          |            |             |            |             | SP        | (8'-10.5') <b>SP (SP):</b> Brown; fine to medium SAND, poorly-graded; moist. Becomes wet at 8.5' bgs.  | ▽           | 4.4               |          |
| 9          |            |             | 70         |             |           |                                                                                                        |             |                   |          |
| 10         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 11         |            |             |            |             | ML/SC     | (10.5'-16') <b>CLS (ML/SC):</b> Grey; sandy CLAY, low plasticity; trace gravel and silt.               |             | 4.6               |          |
| 12         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 13         |            |             | 80         |             |           |                                                                                                        |             | 5.0               |          |
| 14         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 15         |            |             |            |             |           |                                                                                                        |             | 5.5               |          |
| 16         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 17         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 18         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 19         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 20         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 21         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 22         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 23         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 24         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 25         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 26         |            |             |            |             |           |                                                                                                        |             |                   |          |
| 27         |            |             |            |             |           |                                                                                                        |             |                   |          |

# Boring Log

|                                      |                          |                                          |                             |
|--------------------------------------|--------------------------|------------------------------------------|-----------------------------|
| Project Number: 6560                 |                          | Boring No.: DP-5                         |                             |
| Project Name: City of Franklin       |                          | Location: Franklin, IN                   |                             |
| Drilling Contractor: Midway Services |                          | Logged by: Terrell, Matt                 |                             |
| Drilling Method: Direct Push         | Date Started: 08/29/18   | Total Depth (ft bgs): 20                 | Depth to Water (ft bgs): 10 |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 | Surface Elevation (ft MSL): Not Measured |                             |
| Remarks:                             |                          |                                          |                             |

| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log | USCS Code | Material Description                                                                    | Water Level | PID Reading (ppm) | Backfill |
|------------|------------|-------------|------------|-------------|-----------|-----------------------------------------------------------------------------------------|-------------|-------------------|----------|
| 1          |            |             |            |             | N/A       | (0'-1') Asphalt (N/A): Asphalt and gravel road base.                                    |             | 27.6              |          |
| 2          |            |             | 40         |             | CL        | (1'-2') CL (CL): Brown with orange and black staining; CLAY, low plasticity; some silt. |             | 3.2               |          |
| 3          |            |             |            |             |           | (2'-6') CLS (ML/SC): Brown; sandy CLAY, low plasticity; trace silt.                     |             | 2.6               |          |
| 4          |            |             |            |             | ML/SC     |                                                                                         |             |                   |          |
| 5          |            |             |            |             |           |                                                                                         |             | 2.2               |          |
| 6          |            |             | 60         |             |           | (6'-13') SW (SW): Light brown; fine to coarse SAND, well-graded; trace gravel; moist.   |             | 1.9               |          |
| 7          |            |             |            |             |           |                                                                                         |             |                   |          |
| 8          |            |             |            |             |           |                                                                                         |             | 2.8               |          |
| 9          |            |             |            |             | SW        |                                                                                         |             |                   |          |
| 10         |            |             | 50         |             |           | Becomes saturated at 10' bgs.                                                           | ▽           | 2.3               |          |
| 11         | WATER      |             |            |             |           |                                                                                         |             |                   |          |
| 12         |            |             |            |             |           | Orange staining present at 12' bgs.                                                     |             | 2.9               |          |
| 13         |            |             |            |             |           | (13'-20') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some gravel; trace silt.       |             | 1.9               |          |
| 14         |            |             | 100        |             |           |                                                                                         |             | 2.8               |          |
| 15         |            |             |            |             |           |                                                                                         |             |                   |          |
| 16         |            |             |            |             |           |                                                                                         |             | 2.4               |          |
| 17         |            |             |            |             | ML/SC     |                                                                                         |             |                   |          |
| 18         |            |             | 100        |             |           |                                                                                         |             |                   |          |
| 19         |            |             |            |             |           |                                                                                         |             | 3.4               |          |
| 20         |            |             |            |             |           |                                                                                         |             |                   |          |
| 21         |            |             |            |             |           |                                                                                         |             |                   |          |
| 22         |            |             |            |             |           |                                                                                         |             |                   |          |
| 23         |            |             |            |             |           |                                                                                         |             |                   |          |
| 24         |            |             |            |             |           |                                                                                         |             |                   |          |
| 25         |            |             |            |             |           |                                                                                         |             |                   |          |
| 26         |            |             |            |             |           |                                                                                         |             |                   |          |
| 27         |            |             |            |             |           |                                                                                         |             |                   |          |

# Boring Log

|                                      |  |                          |                                          |  |                             |
|--------------------------------------|--|--------------------------|------------------------------------------|--|-----------------------------|
| Project Number: 6560                 |  |                          | Boring No.: DP-6                         |  |                             |
| Project Name: City of Franklin       |  |                          | Location: Franklin, IN                   |  |                             |
| Drilling Contractor: Midway Services |  |                          | Logged by: Terrell, Matt                 |  |                             |
| Drilling Method: Direct Push         |  | Date Started: 08/29/18   | Total Depth (ft bgs): 20                 |  | Depth to Water (ft bgs): 12 |
| Borehole Dia. (in): 2.25             |  | Date Completed: 08/29/18 | Surface Elevation (ft MSL): Not Measured |  |                             |
| Remarks:                             |  |                          |                                          |  |                             |

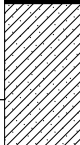
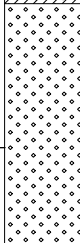
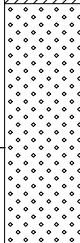
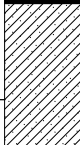
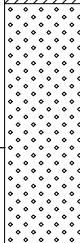
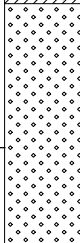
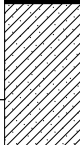
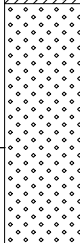
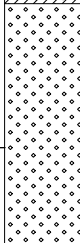
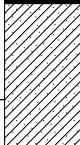
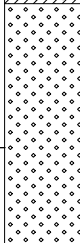
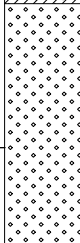
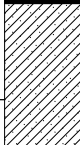
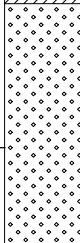
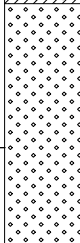
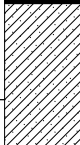
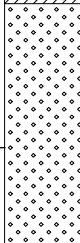
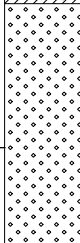
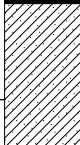
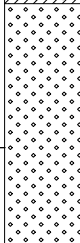
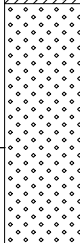
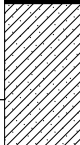
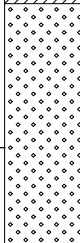
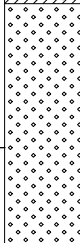
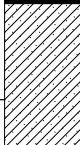
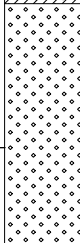
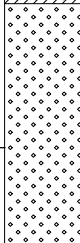
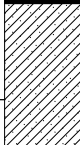
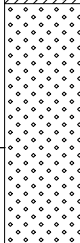
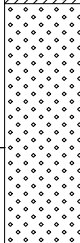
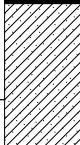
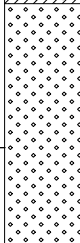
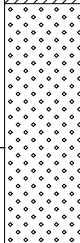
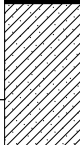
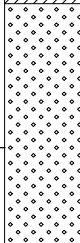
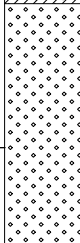
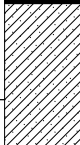
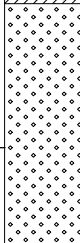
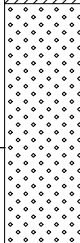
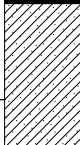
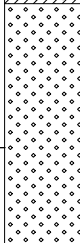
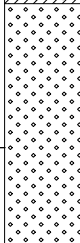
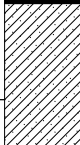
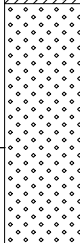
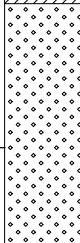
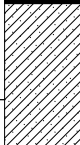
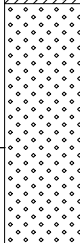
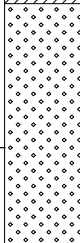
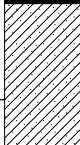
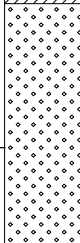
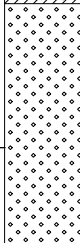
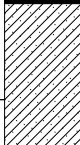
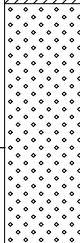
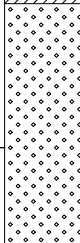
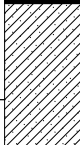
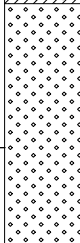
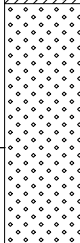
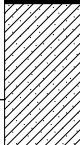
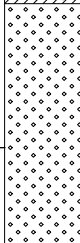
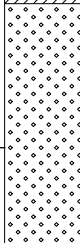
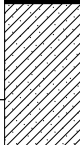
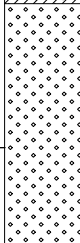
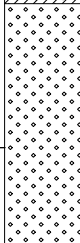
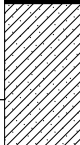
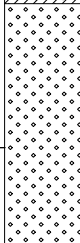
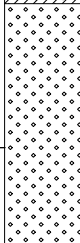
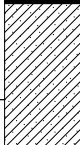
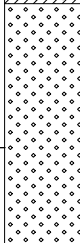
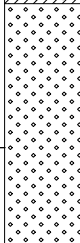
| Depth (ft) | Sample No. | Sample Type | % Recovery | Graphic Log | USCS Code | Material Description                                                                             | Water Level | PID Reading (ppm) | Backfill |
|------------|------------|-------------|------------|-------------|-----------|--------------------------------------------------------------------------------------------------|-------------|-------------------|----------|
| 1          |            |             |            |             | N/A       | (0'-2') Asphalt (N/A): Asphalt and gravel road base.                                             |             | 58.2              |          |
| 2          |            |             | 50         |             | CL/ML     | (2'-4') CL/ML (CL/ML): Brown; silty CLAY, low plasticity; trace sand and gravel.                 |             | 3.2               |          |
| 3          |            |             |            |             |           |                                                                                                  |             |                   |          |
| 4          |            |             |            |             | SC        | (4'-7') SC (SC): Red-brown; clayey SAND, poorly-graded; some silt; moist.                        |             | 6.0               |          |
| 5          |            |             | 70         |             |           |                                                                                                  |             | 7.1               |          |
| 6          |            |             |            |             |           |                                                                                                  |             |                   |          |
| 7          |            |             |            |             | SW        | (7'-12') SW (SW): Light brown; fine to coarse SAND, well-graded; some silt; trace gravel; moist. |             | 5.2               |          |
| 8          |            |             | 60         |             |           |                                                                                                  |             | 6.3               |          |
| 9          |            |             |            |             |           |                                                                                                  |             |                   |          |
| 10         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 11         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 12         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 13         |            |             |            |             |           | (12'-19.5') SP (SP): Brown; fine to medium SAND, poorly-graded; some gravel; wet.                |             | 6.0               |          |
| 14         |            |             | 50         |             |           |                                                                                                  |             | 7.0               |          |
| 15         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 16         |            |             |            |             | SP        |                                                                                                  |             | 5.2               |          |
| 17         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 18         |            |             | 70         |             |           |                                                                                                  |             | 6.6               |          |
| 19         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 20         |            |             |            |             | ML/SC     | (19.5'-20') CLS (ML/SC): Grey; sandy CLAY, low-plasticity; trace gravel.                         |             |                   |          |
| 21         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 22         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 23         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 24         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 25         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 26         |            |             |            |             |           |                                                                                                  |             |                   |          |
| 27         |            |             |            |             |           |                                                                                                  |             |                   |          |

WATER



# Boring Log

|                                      |                          |  |                                          |                            |  |
|--------------------------------------|--------------------------|--|------------------------------------------|----------------------------|--|
| Project Number: 6560                 |                          |  | Boring No.: DP-7                         |                            |  |
| Project Name: City of Franklin       |                          |  | Location: Franklin, IN                   |                            |  |
| Drilling Contractor: Midway Services |                          |  | Logged by: Terrell, Matt                 |                            |  |
| Drilling Method: Direct Push         | Date Started: 08/29/18   |  | Total Depth (ft bgs): 16                 | Depth to Water (ft bgs): 8 |  |
| Borehole Dia. (in): 2.25             | Date Completed: 08/29/18 |  | Surface Elevation (ft MSL): Not Measured |                            |  |
| Remarks:                             |                          |  |                                          |                            |  |

| Depth (ft) | Sample No. | Sample Type                                                                         | % Recovery | Graphic Log                                                                         | USCS Code                                                                         | Material Description                                                              | Water Level                                                                           | PID Reading (ppm)                                                                                  | Backfill                                                                             |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
|------------|------------|-------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----|
| 1          | WATER      |                                                                                     | 30         |    | N/A                                                                               | (0'-2') Asphalt (N/A): Asphalt and gravel road base.                              |  | 3.4                                                                                                |  |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 2          |            |                                                                                     |            |                                                                                     |                                                                                   | (2'-5') CL/ML (CL/ML): Brown; sandy CLAY, low plasticity; some silt trace gravel. |                                                                                       | 3.8                                                                                                |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 3          |            |                                                                                     | ML/SC      | 70                                                                                  |  |                                                                                   |                                                                                       | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                      | 4.7                                                                                 |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 4          |            |                                                                                     |            |                                                                                     |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      | SP                                                                                  | Becomes wet at 8' bgs.                                                              | 2.3                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 5          |            |                                                                                     |            |                                                                                     |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     | 20                                                                                                 |  | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.                  | 2.4                                                                               |                                                                                                    |     |
| 6          |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    | 80                                                                                |                 | 4.6 |
| 7          |            |                                                                                     | 80         |  | 1.6                                                                               |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 8          |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 4.3                                                                                 |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 9          |            |                                                                                     |            |                                                                                     |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     | SP                                                                                  | Becomes wet at 8' bgs.                                                                             | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 10         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    | 70                                                                                                 |  | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7 |
| 11         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 12         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 13         |            |                                                                                     |            |                                                                                     |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     | 80                                                                                  |                 | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 14         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                  | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel. | 2.4                                                                                                |     |
| 15         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    | 2.3 |
| 16         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 17         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    | 2.4                                                                                  |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 18         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    |                                                                                      |                                                                                     | 80                                                                                  |                 | 1.6                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 19         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    | 4.3                                                                                                |                                                                                   |                                                                                                    |     |
| 20         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    | 2.4                                                                               |                                                                                                    |     |
| 21         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 22         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 23         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.                  |                                                                                   | 2.4                                                                                                |     |
| 24         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    | 1.6                                                                               |                                                                                                    |     |
| 25         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 26         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 27         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 28         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 29         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 30         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 31         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 32         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 33         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 34         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 35         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 36         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 37         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 38         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 39         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 40         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 41         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 42         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 43         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 44         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 45         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 46         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 47         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 48         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 49         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 50         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 51         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 52         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 53         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 54         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 55         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 56         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 57         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 58         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 59         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 60         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 61         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 62         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 63         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 64         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 65         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 66         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 67         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 68         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 69         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 70         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 71         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 72         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 73         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 74         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 75         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 76         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 77         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 78         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 79         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 80         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 81         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 82         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 83         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 84         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 85         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 86         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 87         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 88         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 89         | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 90         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 91         |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 92         |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 93         | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 94         |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 95         |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 96         |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 97         | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 98         |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 99         |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 100        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 101        | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 102        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 103        |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 104        |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 105        | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 106        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 107        |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 108        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 109        | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 110        |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 111        |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 112        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 113        | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 114        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 115        |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 116        |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 117        | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 118        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 119        |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 120        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 121        | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 122        |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 123        |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 124        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 125        | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 126        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 127        |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 128        |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   |                                                                                     |                                                                                                    |                                                                                    | 2.4                                                                                                |                                                                                   |                                                                                                    |     |
| 129        | SP         | Becomes wet at 8' bgs.                                                              |            |                                                                                     |                                                                                   |                                                                                   | 2.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 130        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 70                                                                                   |                                                                                     |    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. |                                                                                    |                                                                                                    | 4.7                                                                               |                                                                                                    |     |
| 131        |            |                                                                                     | 20         |   |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.  |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 132        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 80                                                                                                 |                                                                                      |  |                                                                                     |                                                                                                    |                                                                                    | 1.6                                                                                                |                                                                                   |                                                                                                    |     |
| 133        | 80         |  |            |                                                                                     |                                                                                   |                                                                                   | 4.3                                                                                   |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 134        |            |                                                                                     |            |                                                                                     |                                                                                   | 20                                                                                |                                                                                       |                                                                                                    |    |                                                                                     | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.   | 2.4                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 135        |            |                                                                                     | SP         | Becomes wet at 8' bgs.                                                              |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 2.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 136        |            |                                                                                     |            |                                                                                     | ML/SC                                                                             |                                                                                   |                                                                                       | 70                                                                                                 |                                                                                      |    |                                                                                     |                                                                                                    |                                                                                    | (5'-10') SP (SP): Light brown; fine to coarse SAND, poorly-graded; some silt; trace gravel, moist. | 4.7                                                                               |                                                                                                    |     |
| 137        | 20         |   |            |                                                                                     |                                                                                   |                                                                                   | (10'-16') CLS (ML/SC): Grey; sandy CLAY, low plasticity; some silt; trace gravel.     |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   | 2.4                                                                                                |     |
| 138        |            |                                                                                     |            |                                                                                     |                                                                                   | ML/SC                                                                             |                                                                                       |                                                                                                    | 80                                                                                   |                                                                                     |  | 1.6                                                                                                |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |
| 139        |            |                                                                                     | 80         |  |                                                                                   |                                                                                   |                                                                                       |                                                                                                    |                                                                                      |                                                                                     |                                                                                     |                                                                                                    | 4.3                                                                                |                                                                                                    |                                                                                   |                                                                                                    |     |
| 140        |            |                                                                                     |            |                                                                                     | 20                                                                                |                                                                                   |                                                                                       |                  |                                                                                      | (10'-16') CLS (ML/                                                                  |                                                                                     |                                                                                                    |                                                                                    |                                                                                                    |                                                                                   |                                                                                                    |     |

## **Appendix B**

### Laboratory Analytical Reports



**ENVision Laboratories, Inc.**  
1439 Sadlier Circle West Drive  
Indianapolis, IN 46239  
Tel: 317.351.8632  
Fax: 317.351.8639  
[www.envisionlaboratories.com](http://www.envisionlaboratories.com)

Mr. Casey McFall  
Enviroforensics  
825 N. Capitol Ave.  
Indianapolis, IN 46204

August 30, 2018

ENVision Project Number: 2018-2345  
Client Project Name: City of Franklin

Dear Mr. McFall,

Please find the attached analytical report for the samples received August 29, 2018. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. ENVision Laboratories looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads 'David Norris'.

David Norris

Client Services Manager  
ENVision Laboratories, Inc.

PA DEP Lab Code: 68-04846 NELAP Cert: 007





# Analytical Report

**ENVision Laboratories, Inc.**  
1439 Sadlier Circle West Drive  
Indianapolis, IN 46239  
Tel: 317.351.8632  
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www.envisionlaboratories.com

**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-1 (9-13)

**Envision Sample Number:** 18-15773

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 9:35

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



# Analytical Report

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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 111%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 111%                         |                               |              |
| Toluene-d8 (surrogate)            | 99%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 82%                          |                               |              |
| Analysis Date/Time:               | 08-29-18/22:31               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



Analytical Report

**ENVision Laboratories, Inc.**  
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www.envisionlaboratories.com

**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-2 (14-18)

**Envision Sample Number:** 18-15774

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 11:10

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



# Analytical Report

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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 111%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 108%                         |                               |              |
| Toluene-d8 (surrogate)            | 95%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 85%                          |                               |              |
| Analysis Date/Time:               | 08-29-18/22:51               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



# Analytical Report

**ENVision Laboratories, Inc.**  
1439 Sadlier Circle West Drive  
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Tel: 317.351.8632  
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www.envisionlaboratories.com

**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-3 (9-13)

**Envision Sample Number:** 18-15775

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 12:30

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



# Analytical Report

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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 111%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 110%                         |                               |              |
| Toluene-d8 (surrogate)            | 97%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 87%                          |                               |              |
| Analysis Date/Time:               | 08-30-18/01:13               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



# Analytical Report

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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-4 (7.5-11.5) **Sample Collection Date/Time:** 8/29/18 13:50

**Envision Sample Number:** 18-15776 **Sample Received Date/Time:** 8/29/18 16:50

**Sample Matrix:** water

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 111%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 109%                         |                               |              |
| Toluene-d8 (surrogate)            | 96%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 84%                          |                               |              |
| Analysis Date/Time:               | 08-29-18/23:11               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



# Analytical Report

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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-5 (9-13)

**Envision Sample Number:** 18-15777

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 14:30

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 107%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 103%                         |                               |              |
| Toluene-d8 (surrogate)            | 96%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 87%                          |                               |              |
| Analysis Date/Time:               | 08-29-18/23:32               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



# Analytical Report

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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-6 (12-16)

**Envision Sample Number:** 18-15778

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 15:10

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | <b>49.6</b>                  | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | <b>31.5</b>                  | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 114%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 109%                         |                               |              |
| Toluene-d8 (surrogate)            | 98%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 84%                          |                               |              |
| Analysis Date/Time:               | 08-29-18/23:52               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



# Analytical Report

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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DP-7 (7-11)

**Envision Sample Number:** 18-15779

**Sample Matrix:** water

**Sample Collection Date/Time:** 8/29/18 16:15

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 111%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 108%                         |                               |              |
| Toluene-d8 (surrogate)            | 96%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 84%                          |                               |              |
| Analysis Date/Time:               | 08-30-18/00:12               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



Analytical Report

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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-DUP-1

**Envision Sample Number:** 18-15780

**Sample Matrix:** water

**Sample Collection Date/Time:**

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 105%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 104%                         |                               |              |
| Toluene-d8 (surrogate)            | 96%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 85%                          |                               |              |
| Analysis Date/Time:               | 08-30-18/00:33               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



Analytical Report

**ENVision Laboratories, Inc.**  
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**Client Name:** ENVIROFORENSICS

**Project ID:** CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2018-2345

**Analytical Method:** EPA 8260

**Prep Method:** EPA 5030B

**Analytical Batch:** 082918VW

**Client Sample ID:** FC-TB-1

**Envision Sample Number:** 18-15781

**Sample Matrix:** water

**Sample Collection Date/Time:**

**Sample Received Date/Time:** 8/29/18 16:50

| <u>Compounds</u>            | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------|------------------------------|-------------------------------|--------------|
| Acetone                     | < 100                        | 100                           |              |
| Acrolein                    | < 1                          | 1                             |              |
| Acrylonitrile               | < 0.45                       | 1                             | 1            |
| Benzene                     | < 5                          | 5                             |              |
| Bromobenzene                | < 5                          | 5                             |              |
| Bromochloromethane          | < 5                          | 5                             |              |
| Bromodichloromethane        | < 5                          | 5                             |              |
| Bromoform                   | < 5                          | 5                             |              |
| Bromomethane                | < 5                          | 5                             |              |
| n-Butanol                   | < 50                         | 50                            |              |
| 2-Butanone (MEK)            | < 10                         | 10                            |              |
| n-Butylbenzene              | < 5                          | 5                             |              |
| sec-Butylbenzene            | < 5                          | 5                             |              |
| tert-Butylbenzene           | < 5                          | 5                             |              |
| Carbon Disulfide            | < 5                          | 5                             |              |
| Carbon Tetrachloride        | < 5                          | 5                             |              |
| Chlorobenzene               | < 5                          | 5                             |              |
| Chloroethane                | < 5                          | 5                             |              |
| 2-Chloroethylvinylether     | < 50                         | 50                            |              |
| Chloroform                  | < 5                          | 5                             |              |
| Chloromethane               | < 5                          | 5                             |              |
| 2-Chlorotoluene             | < 5                          | 5                             |              |
| 4-Chlorotoluene             | < 5                          | 5                             |              |
| 1,2-Dibromo-3-chloropropane | < 1                          | 1                             |              |
| Dibromochloromethane        | < 5                          | 5                             |              |
| 1,2-Dibromoethane (EDB)     | < 1                          | 1                             |              |
| Dibromomethane              | < 5                          | 5                             |              |
| 1,2-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,3-Dichlorobenzene         | < 5                          | 5                             |              |
| 1,4-Dichlorobenzene         | < 5                          | 5                             |              |
| trans-1,4-Dichloro-2-butene | < 1                          | 1                             |              |
| Dichlorodifluoromethane     | < 5                          | 5                             |              |



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8260 continued...

| <u>Compounds</u>                  | <u>Sample Results (ug/L)</u> | <u>Reporting Limit (ug/L)</u> | <u>Flags</u> |
|-----------------------------------|------------------------------|-------------------------------|--------------|
| 1,1-Dichloroethane                | < 5                          | 5                             |              |
| 1,2-Dichloroethane                | < 5                          | 5                             |              |
| 1,1-Dichloroethene                | < 5                          | 5                             |              |
| cis-1,2-Dichloroethene            | < 5                          | 5                             |              |
| trans-1,2-Dichloroethene          | < 5                          | 5                             |              |
| 1,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,3-Dichloropropane               | < 5                          | 5                             |              |
| 2,2-Dichloropropane               | < 5                          | 5                             |              |
| 1,1-Dichloropropene               | < 5                          | 5                             |              |
| 1,3-Dichloropropene               | < 4.1                        | 4.1                           |              |
| Ethylbenzene                      | < 5                          | 5                             |              |
| Ethyl methacrylate                | < 100                        | 100                           |              |
| Hexachloro-1,3-butadiene          | < 2.6                        | 2.6                           |              |
| n-Hexane                          | < 10                         | 10                            |              |
| 2-Hexanone                        | < 10                         | 10                            |              |
| Iodomethane                       | < 10                         | 10                            |              |
| Isopropylbenzene (Cumene)         | < 5                          | 5                             |              |
| p-Isopropyltoluene                | < 5                          | 5                             |              |
| Methylene chloride                | < 5                          | 5                             |              |
| 4-Methyl-2-pentanone (MIBK)       | < 10                         | 10                            |              |
| Methyl-tert-butyl-ether           | < 5                          | 5                             |              |
| 1-Methylnaphthalene               | < 5                          | 5                             | N            |
| 2-Methylnaphthalene               | < 5                          | 5                             | N            |
| Naphthalene                       | < 1.4                        | 1.4                           |              |
| n-Propylbenzene                   | < 5                          | 5                             |              |
| Styrene                           | < 5                          | 5                             |              |
| 1,1,1,2-Tetrachloroethane         | < 5                          | 5                             |              |
| 1,1,2,2-Tetrachloroethane         | < 0.66                       | 1                             | 1            |
| Tetrachloroethene                 | < 5                          | 5                             |              |
| Toluene                           | < 5                          | 5                             |              |
| 1,2,3-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,2,4-Trichlorobenzene            | < 5                          | 5                             |              |
| 1,1,1-Trichloroethane             | < 5                          | 5                             |              |
| 1,1,2-Trichloroethane             | < 5                          | 5                             |              |
| Trichloroethene                   | < 5                          | 5                             |              |
| Trichlorofluoromethane            | < 5                          | 5                             |              |
| 1,2,3-Trichloropropane            | < 1                          | 1                             |              |
| 1,2,4-Trimethylbenzene            | < 5                          | 5                             |              |
| 1,3,5-Trimethylbenzene            | < 5                          | 5                             |              |
| Vinyl acetate                     | < 10                         | 10                            |              |
| Vinyl chloride                    | < 2                          | 2                             |              |
| Xylene, M&P                       | < 5                          | 5                             |              |
| Xylene, Ortho                     | < 5                          | 5                             |              |
| Xylene (Total)                    | < 10                         | 10                            |              |
| Dibromofluoromethane (surrogate)  | 110%                         |                               |              |
| 1,2-Dichloroethane-d4 (surrogate) | 112%                         |                               |              |
| Toluene-d8 (surrogate)            | 95%                          |                               |              |
| 4-bromofluorobenzene (surrogate)  | 86%                          |                               |              |
| Analysis Date/Time:               | 08-30-18/00:53               |                               |              |
| Analyst Initials                  | tjg                          |                               |              |



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## EPA 8260 Quality Control Data

**ENVision Batch Number:** 082918VW

| <u>Method Blank (MB):</u>   | <u>MB Results (ug/L)</u> | <u>Rep Lim (ug/L)</u> | <u>Flag</u> |
|-----------------------------|--------------------------|-----------------------|-------------|
| Acetone                     | < 100                    | 100                   |             |
| Acrolein                    | < 1                      | 1                     |             |
| Acrylonitrile               | < 0.45                   | 1                     | 1           |
| Benzene                     | < 5                      | 5                     |             |
| Bromobenzene                | < 5                      | 5                     |             |
| Bromochloromethane          | < 5                      | 5                     |             |
| Bromodichloromethane        | < 5                      | 5                     |             |
| Bromoform                   | < 5                      | 5                     |             |
| Bromomethane                | < 5                      | 5                     |             |
| n-Butanol                   | < 50                     | 50                    |             |
| 2-Butanone (MEK)            | < 10                     | 10                    |             |
| n-Butylbenzene              | < 5                      | 5                     |             |
| sec-Butylbenzene            | < 5                      | 5                     |             |
| tert-Butylbenzene           | < 5                      | 5                     |             |
| Carbon Disulfide            | < 5                      | 5                     |             |
| Carbon Tetrachloride        | < 5                      | 5                     |             |
| Chlorobenzene               | < 5                      | 5                     |             |
| Chloroethane                | < 5                      | 5                     |             |
| 2-Chloroethylvinylether     | < 50                     | 50                    |             |
| Chloroform                  | < 5                      | 5                     |             |
| Chloromethane               | < 5                      | 5                     |             |
| 2-Chlorotoluene             | < 5                      | 5                     |             |
| 4-Chlorotoluene             | < 5                      | 5                     |             |
| 1,2-Dibromo-3-chloropropane | < 1                      | 1                     |             |
| Dibromochloromethane        | < 5                      | 5                     |             |
| 1,2-Dibromoethane (EDB)     | < 1                      | 1                     |             |
| Dibromomethane              | < 5                      | 5                     |             |
| 1,2-Dichlorobenzene         | < 5                      | 5                     |             |
| 1,3-Dichlorobenzene         | < 5                      | 5                     |             |
| 1,4-Dichlorobenzene         | < 5                      | 5                     |             |
| trans-1,4-Dichloro-2-butene | < 1                      | 1                     |             |
| Dichlorodifluoromethane     | < 5                      | 5                     |             |
| 1,1-Dichloroethane          | < 5                      | 5                     |             |
| 1,2-Dichloroethane          | < 5                      | 5                     |             |
| 1,1-Dichloroethene          | < 5                      | 5                     |             |
| cis-1,2-Dichloroethene      | < 5                      | 5                     |             |
| trans-1,2-Dichloroethene    | < 5                      | 5                     |             |
| 1,2-Dichloropropane         | < 5                      | 5                     |             |
| 1,3-Dichloropropane         | < 5                      | 5                     |             |
| 2,2-Dichloropropane         | < 5                      | 5                     |             |
| 1,1-Dichloropropene         | < 5                      | 5                     |             |
| 1,3-Dichloropropene         | < 4.1                    | 4.1                   |             |
| Ethylbenzene                | < 5                      | 5                     |             |
| Ethyl methacrylate          | < 100                    | 100                   |             |



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**8260 QC Continued...**

| <b>Method Blank (MB):</b>         | <b>MB Results (ug/L)</b> | <b>Rep Lim (ug/L)</b> | <b>Flag</b> |
|-----------------------------------|--------------------------|-----------------------|-------------|
| Hexachloro-1,3-butadiene          | < 2.6                    | 2.6                   |             |
| 2-Hexanone                        | < 10                     | 10                    |             |
| n-Hexane                          | < 10                     | 10                    |             |
| Iodomethane                       | < 10                     | 10                    |             |
| Isopropylbenzene (Cumene)         | < 5                      | 5                     |             |
| p-Isopropyltoluene                | < 5                      | 5                     |             |
| Methylene chloride                | < 5                      | 5                     |             |
| 4-Methyl-2-pentanone (MIBK)       | < 10                     | 10                    |             |
| Methyl-tert-butyl-ether           | < 5                      | 5                     |             |
| 1-Methylnaphthalene               | < 5                      | 5                     |             |
| 2-Methylnaphthalene               | < 5                      | 5                     |             |
| Naphthalene                       | < 1.4                    | 1.4                   |             |
| n-Propylbenzene                   | < 5                      | 5                     |             |
| Styrene                           | < 5                      | 5                     |             |
| 1,1,1,2-Tetrachloroethane         | < 5                      | 5                     |             |
| 1,1,2,2-Tetrachloroethane         | < 0.66                   | 1                     | 1           |
| Tetrachloroethene                 | < 5                      | 5                     |             |
| Toluene                           | < 5                      | 5                     |             |
| 1,2,3-Trichlorobenzene            | < 5                      | 5                     |             |
| 1,2,4-Trichlorobenzene            | < 5                      | 5                     |             |
| 1,1,1-Trichloroethane             | < 5                      | 5                     |             |
| 1,1,2-Trichloroethane             | < 5                      | 5                     |             |
| Trichloroethene                   | < 5                      | 5                     |             |
| Trichlorofluoromethane            | < 5                      | 5                     |             |
| 1,2,3-Trichloropropane            | < 1                      | 1                     |             |
| 1,2,4-Trimethylbenzene            | < 5                      | 5                     |             |
| 1,3,5-Trimethylbenzene            | < 5                      | 5                     |             |
| Vinyl acetate                     | < 10                     | 10                    |             |
| Vinyl chloride                    | < 2                      | 2                     |             |
| Xylene, M&P                       | < 5                      | 5                     |             |
| Xylene, Ortho                     | < 5                      | 5                     |             |
| Xylene (total)                    | < 10                     | 10                    |             |
| Dibromofluoromethane (surrogate)  | 107%                     |                       |             |
| 1,2-Dichloroethane-d4 (surrogate) | 103%                     |                       |             |
| Toluene-d8 (surrogate)            | 95%                      |                       |             |
| 4-bromofluorobenzene (surrogate)  | 85%                      |                       |             |
| Analysis Date/Time:               | 08-29-18/22:10           |                       |             |
| Analyst Initials                  | tjg                      |                       |             |



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**8260 QC Continued...**

| <u>LCS/LCSD</u>                   | <u>LCS Results (ug/L)</u> | <u>LCS/LCSD Conc. (ug/L)</u> | <u>LCSD Result (ug/L)</u> | <u>LCS Rec.</u> | <u>LCSD Rec.</u> | <u>% D</u> | <u>Flag</u> |
|-----------------------------------|---------------------------|------------------------------|---------------------------|-----------------|------------------|------------|-------------|
| Vinyl Chloride                    | 48.1                      | 50                           | 48.1                      | 96%             | 96%              | 0.0        |             |
| 1,1-Dichloroethene                | 51.6                      | 50                           | 48.8                      | 103%            | 98%              | 5.6        |             |
| trans-1,2-Dichloroethene          | 58.5                      | 50                           | 55.2                      | 117%            | 110%             | 5.8        |             |
| Methyl-tert-butyl-ether           | 51.9                      | 50                           | 48.3                      | 104%            | 97%              | 7.2        |             |
| 1,1-Dichloroethane                | 51.1                      | 50                           | 47.8                      | 102%            | 96%              | 6.7        |             |
| cis-1,2-Dichloroethene            | 55.2                      | 50                           | 51.1                      | 110%            | 102%             | 7.7        |             |
| Chloroform                        | 56.6                      | 50                           | 52.6                      | 113%            | 105%             | 7.3        |             |
| 1,1,1-Trichloroethane             | 57.2                      | 50                           | 53.8                      | 114%            | 108%             | 6.1        |             |
| Benzene                           | 53.9                      | 50                           | 49.8                      | 108%            | 100%             | 7.9        |             |
| Trichloroethene                   | 57.9                      | 50                           | 52.9                      | 116%            | 106%             | 9.0        |             |
| Toluene                           | 58.2                      | 50                           | 53.4                      | 116%            | 107%             | 8.6        |             |
| 1,1,1,2-Tetrachloroethane         | 58.3                      | 50                           | 54.1                      | 117%            | 108%             | 7.5        |             |
| Chlorobenzene                     | 54.7                      | 50                           | 51.8                      | 109%            | 104%             | 5.4        |             |
| Ethylbenzene                      | 53.5                      | 50                           | 50.6                      | 107%            | 101%             | 5.6        |             |
| o-Xylene                          | 54.8                      | 50                           | 52.4                      | 110%            | 105%             | 4.5        |             |
| n-Propylbenzene                   | 54.2                      | 50                           | 51.5                      | 108%            | 103%             | 5.1        |             |
| Dibromofluoromethane (surrogate)  | 102%                      |                              | 103%                      |                 |                  |            |             |
| 1,2-Dichloroethane-d4 (surrogate) | 101%                      |                              | 111%                      |                 |                  |            |             |
| Toluene-d8 (surrogate)            | 106%                      |                              | 102%                      |                 |                  |            |             |
| 4-bromofluorobenzene (surrogate)  | 92%                       |                              | 91%                       |                 |                  |            |             |
| Analysis Date/Time:               | 08-29-18/20:49            |                              | 08-29-18/21:09            |                 |                  |            |             |
| Analyst Initials                  | tjg                       |                              | tjg                       |                 |                  |            |             |

| <u>Matrix Spike/Matrix Spike Dup:</u> | <u>Sample Results (ug/L)</u> | <u>MS Res (ug/L)</u> | <u>MSD Res (ug/L)</u> | <u>Spk Conc (ug/L)</u> | <u>MS Rec</u> | <u>MSD Rec</u> | <u>% D</u> | <u>Flag</u> |
|---------------------------------------|------------------------------|----------------------|-----------------------|------------------------|---------------|----------------|------------|-------------|
| Vinyl Chloride                        | 0.0                          | 55.0                 | 57.9                  | 50                     | 110%          | 116%           | 5.1        |             |
| 1,1-Dichloroethene                    | 0.0                          | 47.2                 | 48.8                  | 50                     | 94%           | 98%            | 3.3        |             |
| trans-1,2-Dichloroethene              | 0.0                          | 54.6                 | 56.3                  | 50                     | 109%          | 113%           | 3.1        |             |
| Methyl-tert-butyl-ether               | 0.0                          | 44.4                 | 48.6                  | 50                     | 89%           | 97%            | 9.0        |             |
| 1,1-Dichloroethane                    | 0.0                          | 44.2                 | 48.5                  | 50                     | 88%           | 97%            | 9.3        |             |
| cis-1,2-Dichloroethene                | 0.0                          | 44.6                 | 50.6                  | 50                     | 89%           | 101%           | 12.6       |             |
| Chloroform                            | 0.0                          | 50.7                 | 53.6                  | 50                     | 101%          | 107%           | 5.6        |             |
| 1,1,1-Trichloroethane                 | 0.0                          | 55.0                 | 55.2                  | 50                     | 110%          | 110%           | 0.4        |             |
| Benzene                               | 0.0                          | 48.2                 | 49.9                  | 50                     | 96%           | 100%           | 3.5        |             |
| Trichloroethene                       | 0.0                          | 52.3                 | 52.8                  | 50                     | 105%          | 106%           | 1.0        |             |
| Toluene                               | 0.0                          | 52.7                 | 54.3                  | 50                     | 105%          | 109%           | 3.0        |             |
| 1,1,1,2-Tetrachloroethane             | 0.0                          | 54.3                 | 56.3                  | 50                     | 109%          | 113%           | 3.6        |             |
| Chlorobenzene                         | 0.0                          | 50.1                 | 52.6                  | 50                     | 100%          | 105%           | 4.9        |             |
| Ethylbenzene                          | 0.0                          | 48.6                 | 50.6                  | 50                     | 97%           | 101%           | 4.0        |             |
| o-Xylene                              | 0.0                          | 50.2                 | 54.1                  | 50                     | 100%          | 108%           | 7.5        |             |
| n-Propylbenzene                       | 0.0                          | 48.5                 | 51.1                  | 50                     | 97%           | 102%           | 5.2        |             |
| Dibromofluoromethane (surrogate)      | 111%                         | 102%                 | 106%                  |                        |               |                |            |             |
| 1,2-Dichloroethane-d4 (surrogate)     | 110%                         | 102%                 | 104%                  |                        |               |                |            |             |
| Toluene-d8 (surrogate)                | 97%                          | 103%                 | 104%                  |                        |               |                |            |             |
| 4-bromofluorobenzene (surrogate)      | 87%                          | 91%                  | 95%                   |                        |               |                |            |             |
| Analysis Date/Time:                   | 08-30-18/01:13               | 08-30-18/01:34       | 08-30-18/01:54        |                        |               |                |            |             |
| Analyst Initials                      | tjg                          | tjg                  | tjg                   |                        |               |                |            |             |
| Original Sample Number Spiked:        | 18-15775                     |                      |                       |                        |               |                |            |             |

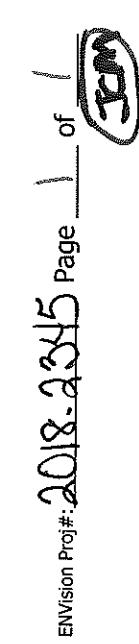


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**Flag Number**

**Comments**

|   |                                                                |
|---|----------------------------------------------------------------|
| N | Analyte is not included in our NELAC accreditation.            |
| 1 | Reported value is below the reporting limit but above the MDL. |



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|                            |                           |         |       |                    |
|----------------------------|---------------------------|---------|-------|--------------------|
| Comments: * 24 h- rush TAT | PM will enroll PO# 9/4/18 |         |       |                    |
|                            | Relinquished by:          | Date    | Time  | Received by:       |
|                            | <i>[Signature]</i>        | 8-29-18 | 16:26 | <i>[Signature]</i> |
|                            | <i>[Signature]</i>        | 8-29-18 | 16:50 | <i>[Signature]</i> |
|                            |                           |         |       | Date               |
|                            |                           |         |       | Time               |



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Mr. Casey McFall  
Enviroforensics  
825 N. Capitol Ave.  
Indianapolis, IN 46204

September 4, 2018

EnvisionAir Project Number: 2018-551  
Client Project Name: Franklin

Dear Mr. McFall,

Please find the attached analytical report for the samples received August 30, 2018. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads "Stanley A. Hunnicutt".

Stan Hunnicutt

Project Manager  
EnvisionAir, LLC



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**Client Name:** ENVIROFORENSICS  
**Project ID:** FRANKLIN  
**Client Project Manager:** CASEY MCFALL  
**EnvisionAir Project Number:** 2018-551

### Sample Summary

#### *Canister Pressure / Vacuum*

| <u>Laboratory Sample Number:</u> | <u>Sample Description:</u> | <u>Matrix:</u> | <u>START</u>      | <u>START</u>      | <u>End Date</u> | <u>End Time</u> | <u>Date</u> | <u>Time</u> | <u>Initial Field</u> | <u>Final Field</u> | <u>Lab</u>      |
|----------------------------------|----------------------------|----------------|-------------------|-------------------|-----------------|-----------------|-------------|-------------|----------------------|--------------------|-----------------|
|                                  |                            |                | <u>Collected:</u> | <u>Collected:</u> |                 |                 |             |             |                      |                    | <u>Received</u> |
| 18-2222                          | FC-SGU-1                   | A              | 8/30/18           | 13:57             | 8/30/18         | 14:02           | 8/30/18     | 16:30       | -30                  | -4                 | -4              |
| 18-2223                          | FC-SGU-2                   | A              | 8/30/18           | 13:23             | 8/30/18         | 13:27           | 8/30/18     | 16:30       | -30                  | -4                 | -4              |
| 18-2224                          | FC-SGU-3                   | A              | 8/30/18           | 14:30             | 8/30/18         | 14:34           | 8/30/18     | 16:30       | -29.5                | -4                 | -4              |
| 18-2225                          | FC-SGU-4                   | A              | 8/30/18           | 15:33             | 8/30/18         | 15:37           | 8/30/18     | 16:30       | -29.5                | -4                 | -4              |



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**Client Name:** ENVIROFORENSICS

**Project ID:** FRANKLIN

**Client Project Manager:** CASEY MCFALL

**EnvisionAir Project Number:** 2018-551

**Analytical Method:** TO-15  
**Analytical Batch:** 083118AIR

**Client Sample ID:** FC-SGU-1

**EnvisionAir Sample Number:** 18-2222  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 8/30/18 13:57  
**Sample Collection END Date/Time:** 8/30/18 14:02  
**Sample Received Date/Time:** 8/30/18 16:30

| <u>Compounds</u>            | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|-----------------------------|----------------------------------------|-----------------------------------------|-------------|
| 4-Ethyltoluene              | < 4920                                 | 4920                                    |             |
| 4-Methyl-2-pentanone (MIBK) | < 20500                                | 20500                                   |             |
| 1,1,1-Trichloroethane       | < 5460                                 | 5460                                    |             |
| 1,1,2,2-Tetrachloroethane   | < 3.36                                 | 3.36                                    | 1           |
| 1,1,2-Trichloroethane       | < 2.10                                 | 2.10                                    | 1           |
| 1,1-Dichloroethane          | < 40.5                                 | 40.5                                    |             |
| 1,1-Dichloroethene          | < 1980                                 | 1980                                    |             |
| 1,2,4-Trichlorobenzene      | < 7.42                                 | 7.42                                    |             |
| 1,2,4-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,2-dibromoethane (EDB)     | < 0.32                                 | 0.32                                    | 1           |
| 1,2-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,2-Dichloroethane          | < 4.05                                 | 4.05                                    |             |
| 1,2-Dichloropropane         | < 4.62                                 | 4.62                                    |             |
| 1,3,5-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,3-Butadiene               | < 2.21                                 | 2.21                                    |             |
| 1,3-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,4-Dichlorobenzene         | < 6.01                                 | 6.01                                    |             |
| 1,4-Dioxane                 | < 18.0                                 | 18.0                                    |             |
| 2-Butanone (MEK)            | < 29500                                | 29500                                   |             |
| 2-Hexanone                  | < 205                                  | 205                                     |             |
| Acetone                     | < 23800                                | 23800                                   |             |
| Benzene                     | < 16.0                                 | 16.0                                    |             |
| Benzyl Chloride             | < 4.14                                 | 4.14                                    | 1           |
| Bromodichloromethane        | < 5.36                                 | 5.36                                    | 1           |
| Bromoform                   | < 103                                  | 103                                     |             |
| Bromomethane                | < 38.8                                 | 38.8                                    |             |
| Carbon Disulfide            | < 3110                                 | 3110                                    |             |
| Carbon Tetrachloride        | < 6.29                                 | 6.29                                    |             |
| Chlorobenzene               | < 230                                  | 230                                     |             |
| Chloroethane                | < 132                                  | 132                                     |             |



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| <u>Compounds</u>                 | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|----------------------------------|----------------------------------------|-----------------------------------------|-------------|
| Chloroform                       | < 8.30                                 | 8.30                                    |             |
| Chloromethane                    | < 206                                  | 206                                     |             |
| cis-1,2-Dichloroethene           | < 198                                  | 198                                     |             |
| cis-1,3-Dichloropropene          | < 45.4                                 | 45.4                                    |             |
| Cyclohexane                      | < 55100                                | 55100                                   |             |
| Dibromochloromethane             | < 8.52                                 | 8.52                                    |             |
| Dichlorodifluoromethane          | < 495                                  | 495                                     |             |
| Ethyl Acetate                    | < 541                                  | 541                                     |             |
| Ethylbenzene                     | < 86.8                                 | 86.8                                    |             |
| Hexachloro-1,3-butadiene         | < 10.7                                 | 10.7                                    |             |
| Isooctane                        | < 4670                                 | 4670                                    |             |
| m,p-Xylene                       | < 434                                  | 434                                     |             |
| Methylene Chloride               | < 417                                  | 417                                     |             |
| Methyl-tert-butyl ether          | < 361                                  | 361                                     |             |
| N-Heptane                        | < 4100                                 | 4100                                    |             |
| N-Hexane                         | < 1760                                 | 1760                                    |             |
| o-Xylene                         | < 434                                  | 434                                     |             |
| Propylene                        | < 1720                                 | 1720                                    |             |
| Styrene                          | < 4260                                 | 4260                                    |             |
| Tetrachloroethene                | <b>2,920</b>                           | 128                                     | 2           |
| Tetrahydrofuran                  | < 2950                                 | 2950                                    |             |
| Toluene                          | < 37700                                | 37700                                   |             |
| trans-1,2-Dichloroethene         | < 396                                  | 396                                     |             |
| trans-1,3-Dichloropropene        | < 45.4                                 | 45.4                                    |             |
| Trichloroethene                  | <b>3,120</b>                           | 43.0                                    | 2           |
| Trichlorofluoromethane           | < 5620                                 | 5620                                    |             |
| Vinyl Acetate                    | < 1760                                 | 1760                                    |             |
| Vinyl Bromide                    | < 4.37                                 | 4.37                                    |             |
| Vinyl Chloride                   | < 12.8                                 | 12.8                                    |             |
| 4-bromofluorobenzene (surrogate) | 92%                                    |                                         |             |
| Analysis Date/Time:              | 08-31-18/00:59                         |                                         |             |
| Analyst Initials                 | tjg                                    |                                         |             |



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**Client Name:** ENVIROFORENSICS

**Project ID:** FRANKLIN

**Client Project Manager:** CASEY MCFALL

**EnvisionAir Project Number:** 2018-551

**Analytical Method:** TO-15  
**Analytical Batch:** 083118AIR

**Client Sample ID:** FC-SGU-2

**EnvisionAir Sample Number:** 18-2223  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 8/30/18 13:23  
**Sample Collection END Date/Time:** 8/30/18 13:27  
**Sample Received Date/Time:** 8/30/18 16:30

| <u>Compounds</u>            | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|-----------------------------|----------------------------------------|-----------------------------------------|-------------|
| 4-Ethyltoluene              | < 4920                                 | 4920                                    |             |
| 4-Methyl-2-pentanone (MIBK) | < 20500                                | 20500                                   |             |
| 1,1,1-Trichloroethane       | < 5460                                 | 5460                                    |             |
| 1,1,2,2-Tetrachloroethane   | < 3.36                                 | 3.36                                    | 1           |
| 1,1,2-Trichloroethane       | < 2.10                                 | 2.10                                    | 1           |
| 1,1-Dichloroethane          | < 40.5                                 | 40.5                                    |             |
| 1,1-Dichloroethene          | < 1980                                 | 1980                                    |             |
| 1,2,4-Trichlorobenzene      | < 7.42                                 | 7.42                                    |             |
| 1,2,4-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,2-dibromoethane (EDB)     | < 0.32                                 | 0.32                                    | 1           |
| 1,2-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,2-Dichloroethane          | < 4.05                                 | 4.05                                    |             |
| 1,2-Dichloropropane         | < 4.62                                 | 4.62                                    |             |
| 1,3,5-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,3-Butadiene               | < 2.21                                 | 2.21                                    |             |
| 1,3-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,4-Dichlorobenzene         | < 6.01                                 | 6.01                                    |             |
| 1,4-Dioxane                 | < 18.0                                 | 18.0                                    |             |
| 2-Butanone (MEK)            | < 29500                                | 29500                                   |             |
| 2-Hexanone                  | < 205                                  | 205                                     |             |
| Acetone                     | < 23800                                | 23800                                   |             |
| Benzene                     | < 16.0                                 | 16.0                                    |             |
| Benzyl Chloride             | < 4.14                                 | 4.14                                    | 1           |
| Bromodichloromethane        | < 5.36                                 | 5.36                                    | 1           |
| Bromoform                   | < 103                                  | 103                                     |             |
| Bromomethane                | < 38.8                                 | 38.8                                    |             |
| Carbon Disulfide            | < 3110                                 | 3110                                    |             |
| Carbon Tetrachloride        | < 6.29                                 | 6.29                                    |             |
| Chlorobenzene               | < 230                                  | 230                                     |             |
| Chloroethane                | < 132                                  | 132                                     |             |



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| <u>Compounds</u>                 | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|----------------------------------|----------------------------------------|-----------------------------------------|-------------|
| Chloroform                       | < 8.30                                 | 8.30                                    |             |
| Chloromethane                    | < 206                                  | 206                                     |             |
| cis-1,2-Dichloroethene           | < 198                                  | 198                                     |             |
| cis-1,3-Dichloropropene          | < 45.4                                 | 45.4                                    |             |
| Cyclohexane                      | < 55100                                | 55100                                   |             |
| Dibromochloromethane             | < 8.52                                 | 8.52                                    |             |
| Dichlorodifluoromethane          | < 495                                  | 495                                     |             |
| Ethyl Acetate                    | < 541                                  | 541                                     |             |
| Ethylbenzene                     | < 86.8                                 | 86.8                                    |             |
| Hexachloro-1,3-butadiene         | < 10.7                                 | 10.7                                    |             |
| Isooctane                        | < 4670                                 | 4670                                    |             |
| m,p-Xylene                       | < 434                                  | 434                                     |             |
| Methylene Chloride               | < 417                                  | 417                                     |             |
| Methyl-tert-butyl ether          | < 361                                  | 361                                     |             |
| N-Heptane                        | < 4100                                 | 4100                                    |             |
| N-Hexane                         | < 1760                                 | 1760                                    |             |
| o-Xylene                         | < 434                                  | 434                                     |             |
| Propylene                        | < 1720                                 | 1720                                    |             |
| Styrene                          | < 4260                                 | 4260                                    |             |
| Tetrachloroethene                | <b>197</b>                             | 31.9                                    |             |
| Tetrahydrofuran                  | < 2950                                 | 2950                                    |             |
| Toluene                          | < 37700                                | 37700                                   |             |
| trans-1,2-Dichloroethene         | < 396                                  | 396                                     |             |
| trans-1,3-Dichloropropene        | < 45.4                                 | 45.4                                    |             |
| Trichloroethene                  | < 10.7                                 | 10.7                                    |             |
| Trichlorofluoromethane           | < 5620                                 | 5620                                    |             |
| Vinyl Acetate                    | < 1760                                 | 1760                                    |             |
| Vinyl Bromide                    | < 4.37                                 | 4.37                                    |             |
| Vinyl Chloride                   | < 12.8                                 | 12.8                                    |             |
| 4-bromofluorobenzene (surrogate) | 93%                                    |                                         |             |
| Analysis Date/Time:              | 08-31-18/01:38                         |                                         |             |
| Analyst Initials                 | tjg                                    |                                         |             |



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**Client Name:** ENVIROFORENSICS

**Project ID:** FRANKLIN

**Client Project Manager:** CASEY MCFALL

**EnvisionAir Project Number:** 2018-551

**Analytical Method:** TO-15  
**Analytical Batch:** 083118AIR

**Client Sample ID:** FC-SGU-3

**EnvisionAir Sample Number:** 18-2224  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 8/30/18 14:30  
**Sample Collection END Date/Time:** 8/30/18 14:34  
**Sample Received Date/Time:** 8/30/18 16:30

| <u>Compounds</u>            | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|-----------------------------|----------------------------------------|-----------------------------------------|-------------|
| 4-Ethyltoluene              | < 4920                                 | 4920                                    |             |
| 4-Methyl-2-pentanone (MIBK) | < 20500                                | 20500                                   |             |
| 1,1,1-Trichloroethane       | < 5460                                 | 5460                                    |             |
| 1,1,2,2-Tetrachloroethane   | < 3.36                                 | 3.36                                    | 1           |
| 1,1,2-Trichloroethane       | < 2.10                                 | 2.10                                    | 1           |
| 1,1-Dichloroethane          | < 40.5                                 | 40.5                                    |             |
| 1,1-Dichloroethene          | < 1980                                 | 1980                                    |             |
| 1,2,4-Trichlorobenzene      | < 7.42                                 | 7.42                                    |             |
| 1,2,4-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,2-dibromoethane (EDB)     | < 0.32                                 | 0.32                                    | 1           |
| 1,2-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,2-Dichloroethane          | < 4.05                                 | 4.05                                    |             |
| 1,2-Dichloropropane         | < 4.62                                 | 4.62                                    |             |
| 1,3,5-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,3-Butadiene               | < 2.21                                 | 2.21                                    |             |
| 1,3-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,4-Dichlorobenzene         | < 6.01                                 | 6.01                                    |             |
| 1,4-Dioxane                 | < 18.0                                 | 18.0                                    |             |
| 2-Butanone (MEK)            | < 29500                                | 29500                                   |             |
| 2-Hexanone                  | < 205                                  | 205                                     |             |
| Acetone                     | < 23800                                | 23800                                   |             |
| Benzene                     | < 16.0                                 | 16.0                                    |             |
| Benzyl Chloride             | < 4.14                                 | 4.14                                    | 1           |
| Bromodichloromethane        | < 5.36                                 | 5.36                                    | 1           |
| Bromoform                   | < 103                                  | 103                                     |             |
| Bromomethane                | < 38.8                                 | 38.8                                    |             |
| Carbon Disulfide            | < 3110                                 | 3110                                    |             |
| Carbon Tetrachloride        | < 6.29                                 | 6.29                                    |             |
| Chlorobenzene               | < 230                                  | 230                                     |             |
| Chloroethane                | < 132                                  | 132                                     |             |



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| <b><u>Compounds</u></b>          | <b><u>Sample Results ug/m<sup>3</sup></u></b> | <b><u>Reporting Limit ug/m<sup>3</sup></u></b> | <b><u>Flag</u></b> |
|----------------------------------|-----------------------------------------------|------------------------------------------------|--------------------|
| Chloroform                       | < 8.30                                        | 8.30                                           |                    |
| Chloromethane                    | < 206                                         | 206                                            |                    |
| cis-1,2-Dichloroethene           | < 198                                         | 198                                            |                    |
| cis-1,3-Dichloropropene          | < 45.4                                        | 45.4                                           |                    |
| Cyclohexane                      | < 55100                                       | 55100                                          |                    |
| Dibromochloromethane             | < 8.52                                        | 8.52                                           |                    |
| Dichlorodifluoromethane          | < 495                                         | 495                                            |                    |
| Ethyl Acetate                    | < 541                                         | 541                                            |                    |
| Ethylbenzene                     | < 86.8                                        | 86.8                                           |                    |
| Hexachloro-1,3-butadiene         | < 10.7                                        | 10.7                                           |                    |
| Isooctane                        | < 4670                                        | 4670                                           |                    |
| m,p-Xylene                       | < 434                                         | 434                                            |                    |
| Methylene Chloride               | < 417                                         | 417                                            |                    |
| Methyl-tert-butyl ether          | < 361                                         | 361                                            |                    |
| N-Heptane                        | < 4100                                        | 4100                                           |                    |
| N-Hexane                         | < 1760                                        | 1760                                           |                    |
| o-Xylene                         | < 434                                         | 434                                            |                    |
| Propylene                        | < 1720                                        | 1720                                           |                    |
| Styrene                          | < 4260                                        | 4260                                           |                    |
| Tetrachloroethene                | < 31.9                                        | 31.9                                           |                    |
| Tetrahydrofuran                  | < 2950                                        | 2950                                           |                    |
| Toluene                          | < 37700                                       | 37700                                          |                    |
| trans-1,2-Dichloroethene         | < 396                                         | 396                                            |                    |
| trans-1,3-Dichloropropene        | < 45.4                                        | 45.4                                           |                    |
| Trichloroethene                  | < 10.7                                        | 10.7                                           |                    |
| Trichlorofluoromethane           | < 5620                                        | 5620                                           |                    |
| Vinyl Acetate                    | < 1760                                        | 1760                                           |                    |
| Vinyl Bromide                    | < 4.37                                        | 4.37                                           |                    |
| Vinyl Chloride                   | < 12.8                                        | 12.8                                           |                    |
| 4-bromofluorobenzene (surrogate) | 87%                                           |                                                |                    |
| Analysis Date/Time:              | 08-31-18/02:16                                |                                                |                    |
| Analyst Initials                 | tjg                                           |                                                |                    |



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**Client Name:** ENVIROFORENSICS

**Project ID:** FRANKLIN

**Client Project Manager:** CASEY MCFALL

**EnvisionAir Project Number:** 2018-551

**Analytical Method:** TO-15  
**Analytical Batch:** 083118AIR

**Client Sample ID:** FC-SGU-4

**EnvisionAir Sample Number:** 18-2225  
**Sample Matrix:** AIR

**Sample Collection START Date/Time:** 8/30/18 15:33  
**Sample Collection END Date/Time:** 8/30/18 15:37  
**Sample Received Date/Time:** 8/30/18 16:30

| <u>Compounds</u>            | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|-----------------------------|----------------------------------------|-----------------------------------------|-------------|
| 4-Ethyltoluene              | < 4920                                 | 4920                                    |             |
| 4-Methyl-2-pentanone (MIBK) | < 20500                                | 20500                                   |             |
| 1,1,1-Trichloroethane       | < 5460                                 | 5460                                    |             |
| 1,1,2,2-Tetrachloroethane   | < 3.36                                 | 3.36                                    | 1           |
| 1,1,2-Trichloroethane       | < 2.10                                 | 2.10                                    | 1           |
| 1,1-Dichloroethane          | < 40.5                                 | 40.5                                    |             |
| 1,1-Dichloroethene          | < 1980                                 | 1980                                    |             |
| 1,2,4-Trichlorobenzene      | < 7.42                                 | 7.42                                    |             |
| 1,2,4-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,2-dibromoethane (EDB)     | < 0.32                                 | 0.32                                    | 1           |
| 1,2-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,2-Dichloroethane          | < 4.05                                 | 4.05                                    |             |
| 1,2-Dichloropropane         | < 4.62                                 | 4.62                                    |             |
| 1,3,5-Trimethylbenzene      | < 49.2                                 | 49.2                                    |             |
| 1,3-Butadiene               | < 2.21                                 | 2.21                                    |             |
| 1,3-Dichlorobenzene         | < 601                                  | 601                                     |             |
| 1,4-Dichlorobenzene         | < 6.01                                 | 6.01                                    |             |
| 1,4-Dioxane                 | < 18.0                                 | 18.0                                    |             |
| 2-Butanone (MEK)            | < 29500                                | 29500                                   |             |
| 2-Hexanone                  | < 205                                  | 205                                     |             |
| Acetone                     | < 23800                                | 23800                                   |             |
| Benzene                     | < 16.0                                 | 16.0                                    |             |
| Benzyl Chloride             | < 4.14                                 | 4.14                                    | 1           |
| Bromodichloromethane        | < 5.36                                 | 5.36                                    | 1           |
| Bromoform                   | < 103                                  | 103                                     |             |
| Bromomethane                | < 38.8                                 | 38.8                                    |             |
| Carbon Disulfide            | < 3110                                 | 3110                                    |             |
| Carbon Tetrachloride        | < 6.29                                 | 6.29                                    |             |
| Chlorobenzene               | < 230                                  | 230                                     |             |
| Chloroethane                | < 132                                  | 132                                     |             |



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| <u>Compounds</u>                 | <u>Sample Results ug/m<sup>3</sup></u> | <u>Reporting Limit ug/m<sup>3</sup></u> | <u>Flag</u> |
|----------------------------------|----------------------------------------|-----------------------------------------|-------------|
| Chloroform                       | <b>14.6</b>                            | 8.30                                    |             |
| Chloromethane                    | < 206                                  | 206                                     |             |
| cis-1,2-Dichloroethene           | < 198                                  | 198                                     |             |
| cis-1,3-Dichloropropene          | < 45.4                                 | 45.4                                    |             |
| Cyclohexane                      | < 55100                                | 55100                                   |             |
| Dibromochloromethane             | < 8.52                                 | 8.52                                    |             |
| Dichlorodifluoromethane          | < 495                                  | 495                                     |             |
| Ethyl Acetate                    | < 541                                  | 541                                     |             |
| Ethylbenzene                     | < 86.8                                 | 86.8                                    |             |
| Hexachloro-1,3-butadiene         | < 10.7                                 | 10.7                                    |             |
| Isooctane                        | < 4670                                 | 4670                                    |             |
| m,p-Xylene                       | <b>462</b>                             | 434                                     |             |
| Methylene Chloride               | < 417                                  | 417                                     |             |
| Methyl-tert-butyl ether          | < 361                                  | 361                                     |             |
| N-Heptane                        | < 4100                                 | 4100                                    |             |
| N-Hexane                         | < 1760                                 | 1760                                    |             |
| o-Xylene                         | < 434                                  | 434                                     |             |
| Propylene                        | < 1720                                 | 1720                                    |             |
| Styrene                          | < 4260                                 | 4260                                    |             |
| Tetrachloroethene                | <b>22,300</b>                          | 638                                     | 3           |
| Tetrahydrofuran                  | < 2950                                 | 2950                                    |             |
| Toluene                          | < 37700                                | 37700                                   |             |
| trans-1,2-Dichloroethene         | < 396                                  | 396                                     |             |
| trans-1,3-Dichloropropene        | < 45.4                                 | 45.4                                    |             |
| Trichloroethene                  | <b>5,310</b>                           | 215                                     | 3           |
| Trichlorofluoromethane           | < 5620                                 | 5620                                    |             |
| Vinyl Acetate                    | < 1760                                 | 1760                                    |             |
| Vinyl Bromide                    | < 4.37                                 | 4.37                                    |             |
| Vinyl Chloride                   | < 12.8                                 | 12.8                                    |             |
| 4-bromofluorobenzene (surrogate) | 96%                                    |                                         |             |
| Analysis Date/Time:              | 08-31-18/02:55                         |                                         |             |
| Analyst Initials                 | tjg                                    |                                         |             |

**TO-15 Quality Control Data**
**EnvisionAir Batch Number:** 083118AIR

| <b><u>Method Blank (MB):</u></b> | <b><u>MB Results (ppbv)</u></b> | <b><u>Reporting Limit (ppbv)</u></b> | <b><u>Flags</u></b> |
|----------------------------------|---------------------------------|--------------------------------------|---------------------|
| 4-Ethyltoluene                   | < 100                           | 100                                  |                     |
| 4-Methyl-2-pentanone (MIBK)      | < 500                           | 500                                  |                     |
| 1,1,1-Trichloroethane            | < 100                           | 100                                  |                     |
| 1,1,2,2-Tetrachloroethane        | < 0.049                         | 0.049                                | 1                   |
| 1,1,2-Trichloroethane            | < 0.038                         | 0.038                                | 1                   |
| 1,1-Dichloroethane               | < 1                             | 1                                    |                     |
| 1,1-Dichloroethene               | < 50                            | 50                                   |                     |
| 1,2,4-Trichlorobenzene           | < 0.1                           | 0.1                                  |                     |
| 1,2,4-Trimethylbenzene           | < 1                             | 1                                    |                     |
| 1,2-dibromoethane (EDB)          | < 0.0041                        | 0.0041                               | 1                   |
| 1,2-Dichlorobenzene              | < 10                            | 10                                   |                     |
| 1,2-Dichloroethane               | < 0.1                           | 0.1                                  |                     |
| 1,2-Dichloropropane              | < 0.1                           | 0.1                                  |                     |
| 1,3,5-Trimethylbenzene           | < 1                             | 1                                    |                     |
| 1,3-Butadiene                    | < 0.1                           | 0.1                                  |                     |
| 1,3-Dichlorobenzene              | < 10                            | 10                                   |                     |
| 1,4-Dichlorobenzene              | < 0.1                           | 0.1                                  |                     |
| 1,4-Dioxane                      | < 0.5                           | 0.5                                  |                     |
| 2-Butanone (MEK)                 | < 1000                          | 1000                                 |                     |
| 2-Hexanone                       | < 5                             | 5                                    |                     |
| Acetone                          | < 1000                          | 1000                                 |                     |
| Benzene                          | < 0.5                           | 0.5                                  |                     |
| Benzyl Chloride                  | < 0.08                          | 0.08                                 | 1                   |
| Bromodichloromethane             | < 0.08                          | 0.08                                 | 1                   |
| Bromoform                        | < 1                             | 1                                    |                     |
| Bromomethane                     | < 1                             | 1                                    |                     |
| Carbon Disulfide                 | < 100                           | 100                                  |                     |
| Carbon Tetrachloride             | < 0.1                           | 0.1                                  |                     |
| Chlorobenzene                    | < 5                             | 5                                    |                     |
| Chloroethane                     | < 5                             | 5                                    |                     |
| Chloroform                       | < 0.17                          | 0.17                                 |                     |
| Chloromethane                    | < 10                            | 10                                   |                     |
| cis-1,2-Dichloroethene           | < 5                             | 5                                    |                     |
| cis-1,3-Dichloropropene          | < 1                             | 1                                    |                     |
| Cyclohexane                      | < 1600                          | 1600                                 |                     |
| Dibromochloromethane             | < 0.1                           | 0.1                                  |                     |
| Dichlorodifluoromethane          | < 10                            | 10                                   |                     |
| Ethyl Acetate                    | < 15                            | 15                                   |                     |
| Ethylbenzene                     | < 2                             | 2                                    |                     |
| Hexachloro-1,3-butadiene         | < 0.1                           | 0.1                                  |                     |
| Isooctane                        | < 100                           | 100                                  |                     |
| m,p-Xylene                       | < 10                            | 10                                   |                     |
| Methylene Chloride               | < 12                            | 12                                   |                     |
| Methyl-tert-butyl ether          | < 10                            | 10                                   |                     |
| N-Heptane                        | < 100                           | 100                                  |                     |
| N-Hexane                         | < 50                            | 50                                   |                     |
| o-Xylene                         | < 10                            | 10                                   |                     |
| Propylene                        | < 100                           | 100                                  |                     |
| Styrene                          | < 100                           | 100                                  |                     |
| Tetrachloroethene                | < 0.47                          | 0.47                                 |                     |
| Tetrahydrofuran                  | < 100                           | 100                                  |                     |

Analytical Report

| <u>Method Blank (MB):</u>        | <u>MB Results (ppbv)</u> | <u>Reporting Limit (ppbv)</u> | <u>Flags</u> |
|----------------------------------|--------------------------|-------------------------------|--------------|
| Toluene                          | < 1000                   | 1000                          |              |
| trans-1,2-Dichloroethene         | < 10                     | 10                            |              |
| trans-1,3-Dichloropropene        | < 1                      | 1                             |              |
| Trichloroethene                  | < 0.2                    | 0.2                           |              |
| Trichlorofluoromethane           | < 100                    | 100                           |              |
| Vinyl Acetate                    | < 50                     | 50                            |              |
| Vinyl Bromide                    | < 0.1                    | 0.1                           |              |
| Vinyl Chloride                   | < 0.5                    | 0.5                           |              |
| 4-bromofluorobenzene (surrogate) | 85%                      |                               |              |
| Analysis Date/Time:              | 08-30-18/11:11           |                               |              |
| Analyst Initials                 | tjg                      |                               |              |

| <u>LCS/LCSD</u>             | <u>LCS Results (ppbv)</u> | <u>LCSD Results (ppbv)</u> | <u>LCS/D</u><br><u>Conc(ppbv)</u> | <u>LCS</u><br><u>Rec.</u> | <u>LCSD</u><br><u>Rec.</u> | <u>RPD</u> | <u>Flag</u> |
|-----------------------------|---------------------------|----------------------------|-----------------------------------|---------------------------|----------------------------|------------|-------------|
| Propylene                   | 10.4                      | 10.4                       | 10                                | 104%                      | 104%                       | 0.0%       |             |
| Dichlorodifluoromethane     | 8.87                      | 8.62                       | 10                                | 89%                       | 86%                        | 2.9%       |             |
| Chloromethane               | 9.47                      | 9.78                       | 10                                | 95%                       | 98%                        | 3.2%       |             |
| Vinyl Chloride              | 11                        | 11                         | 10                                | 110%                      | 110%                       | 0.0%       |             |
| 1,3-Butadiene               | 11.9                      | 11.8                       | 10                                | 119%                      | 118%                       | 0.8%       |             |
| Bromomethane                | 10.3                      | 10.3                       | 10                                | 103%                      | 103%                       | 0.0%       |             |
| Chloroethane                | 11.6                      | 11.5                       | 10                                | 116%                      | 115%                       | 0.9%       |             |
| Vinyl Bromide               | 11.3                      | 11.3                       | 10                                | 113%                      | 113%                       | 0.0%       |             |
| Trichlorofluoromethane      | 9.05                      | 9.11                       | 10                                | 91%                       | 91%                        | 0.7%       |             |
| Acetone                     | 10.3                      | 10.2                       | 10                                | 103%                      | 102%                       | 1.0%       |             |
| 1,1-Dichloroethene          | 10.4                      | 10.5                       | 10                                | 104%                      | 105%                       | 1.0%       |             |
| Methylene Chloride          | 9.35                      | 9.51                       | 10                                | 94%                       | 95%                        | 1.7%       |             |
| Carbon Disulfide            | 10.1                      | 10.2                       | 10                                | 101%                      | 102%                       | 1.0%       |             |
| trans-1,2-Dichloroethene    | 10.1                      | 10.2                       | 10                                | 101%                      | 102%                       | 1.0%       |             |
| Methyl-tert-butyl ether     | 10.9                      | 10.9                       | 10                                | 109%                      | 109%                       | 0.0%       |             |
| 1,1-Dichloroethane          | 10.2                      | 10.2                       | 10                                | 102%                      | 102%                       | 0.0%       |             |
| Vinyl Acetate               | 11.3                      | 11                         | 10                                | 113%                      | 110%                       | 2.7%       |             |
| N-Hexane                    | 10.1                      | 10.1                       | 10                                | 101%                      | 101%                       | 0.0%       |             |
| 2-Butanone (MEK)            | 11.3                      | 10.9                       | 10                                | 113%                      | 109%                       | 3.6%       |             |
| cis-1,2-Dichloroethene      | 10.8                      | 10.5                       | 10                                | 108%                      | 105%                       | 2.8%       |             |
| Ethyl Acetate               | 10.8                      | 10.8                       | 10                                | 108%                      | 108%                       | 0.0%       |             |
| Chloroform                  | 10.4                      | 10.1                       | 10                                | 104%                      | 101%                       | 2.9%       |             |
| Tetrahydrofuran             | 11                        | 10.8                       | 10                                | 110%                      | 108%                       | 1.8%       |             |
| 1,2-Dichloroethane          | 10                        | 10                         | 10                                | 100%                      | 100%                       | 0.0%       |             |
| 1,1,1-Trichloroethane       | 9.84                      | 9.95                       | 10                                | 98%                       | 100%                       | 1.1%       |             |
| Carbon Tetrachloride        | 9.58                      | 9.91                       | 10                                | 96%                       | 99%                        | 3.4%       |             |
| Benzene                     | 9.52                      | 9.78                       | 10                                | 95%                       | 98%                        | 2.7%       |             |
| Cyclohexane                 | 10.3                      | 10.5                       | 10                                | 103%                      | 105%                       | 1.9%       |             |
| 1,2-Dichloropropane         | 9.67                      | 9.72                       | 10                                | 97%                       | 97%                        | 0.5%       |             |
| Trichloroethene             | 9.4                       | 9.63                       | 10                                | 94%                       | 96%                        | 2.4%       |             |
| Bromodichloromethane        | 9.7                       | 9.87                       | 10                                | 97%                       | 99%                        | 1.7%       |             |
| 1,4-Dioxane                 | 10.3                      | 10.1                       | 10                                | 103%                      | 101%                       | 2.0%       |             |
| Isooctane                   | 9.63                      | 9.82                       | 10                                | 96%                       | 98%                        | 2.0%       |             |
| N-Heptane                   | 10.4                      | 10.5                       | 10                                | 104%                      | 105%                       | 1.0%       |             |
| cis-1,3-Dichloropropene     | 10.8                      | 10.8                       | 10                                | 108%                      | 108%                       | 0.0%       |             |
| 4-Methyl-2-pentanone (MIBK) | 10.6                      | 10.7                       | 10                                | 106%                      | 107%                       | 0.9%       |             |
| trans-1,3-Dichloropropene   | 11.2                      | 11.4                       | 10                                | 112%                      | 114%                       | 1.8%       |             |
| 1,1,2-Trichloroethane       | 9.47                      | 9.72                       | 10                                | 95%                       | 97%                        | 2.6%       |             |
| Toluene                     | 10.1                      | 10.2                       | 10                                | 101%                      | 102%                       | 1.0%       |             |
| 2-Hexanone                  | 11.9                      | 12.2                       | 10                                | 119%                      | 122%                       | 2.5%       |             |
| Dibromochloromethane        | 9.73                      | 9.82                       | 10                                | 97%                       | 98%                        | 0.9%       |             |
| 1,2-dibromoethane (EDB)     | 9.87                      | 10.1                       | 10                                | 99%                       | 101%                       | 2.3%       |             |
| Tetrachloroethene           | 9.35                      | 9.44                       | 10                                | 94%                       | 94%                        | 1.0%       |             |
| Chlorobenzene               | 9.59                      | 9.66                       | 10                                | 96%                       | 97%                        | 0.7%       |             |
| Ethylbenzene                | 9.55                      | 9.66                       | 10                                | 96%                       | 97%                        | 1.1%       |             |
| m,p-Xylene                  | 19.7                      | 19.7                       | 20                                | 99%                       | 99%                        | 0.0%       |             |
| Bromoform                   | 10.1                      | 10.3                       | 10                                | 101%                      | 103%                       | 2.0%       |             |



Analytical Report

**EnvisionAir**  
 1441 Sadlier Circle West Drive  
 Indianapolis, IN 46239  
 Ph: 317-351-0885  
 Fax: 317-351-0882  
 www.envision-air.com

| <u>LCS/LCSD</u>                  | <u>LCS Results (ppbv)</u> | <u>LCSD Results (ppbv)</u> | <u>LCS/D</u><br><u>Conc(ppbv)</u> | <u>LCS</u><br><u>Rec.</u> | <u>LCSD</u><br><u>Rec.</u> | <u>RPD</u> | <u>Flag</u> |
|----------------------------------|---------------------------|----------------------------|-----------------------------------|---------------------------|----------------------------|------------|-------------|
| Styrene                          | 11.1                      | 11.1                       | 10                                | 111%                      | 111%                       | 0.0%       |             |
| 1,1,2,2-Tetrachloroethane        | 9.16                      | 9.2                        | 10                                | 92%                       | 92%                        | 0.4%       |             |
| o-Xylene                         | 9.81                      | 9.95                       | 10                                | 98%                       | 100%                       | 1.4%       |             |
| 4-Ethyltoluene                   | 10.6                      | 10.6                       | 10                                | 106%                      | 106%                       | 0.0%       |             |
| 1,3,5-Trimethylbenzene           | 9.41                      | 9.68                       | 10                                | 94%                       | 97%                        | 2.8%       |             |
| 1,2,4-Trimethylbenzene           | 9.89                      | 10.1                       | 10                                | 99%                       | 101%                       | 2.1%       |             |
| 1,3-Dichlorobenzene              | 11.6                      | 11.9                       | 10                                | 116%                      | 119%                       | 2.6%       |             |
| Benzyl Chloride                  | 10.6                      | 10.9                       | 10                                | 106%                      | 109%                       | 2.8%       |             |
| 1,4-Dichlorobenzene              | 11.8                      | 11.6                       | 10                                | 118%                      | 116%                       | 1.7%       |             |
| 1,2-Dichlorobenzene              | 11.5                      | 11.7                       | 10                                | 115%                      | 117%                       | 1.7%       |             |
| 1,2,4-Trichlorobenzene           | 10.7                      | 10                         | 10                                | 107%                      | 100%                       | 6.8%       |             |
| Hexachloro-1,3-butadiene         | 10.1                      | 10.2                       | 10                                | 101%                      | 102%                       | 1.0%       |             |
| 4-bromofluorobenzene (surrogate) | 100%                      | 100%                       |                                   |                           |                            |            |             |
| Analysis Date/Time:              | 08-30-18/09:57            | 08-30-18/10:36             |                                   |                           |                            |            |             |
| Analyst Initials                 | tjg                       | tjg                        |                                   |                           |                            |            |             |



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[www.envision-air.com](http://www.envision-air.com)

**Flag Number**

**Comments**

- |   |                                                      |
|---|------------------------------------------------------|
| 1 | Reporting limit is supported by MDL. TJG             |
| 2 | Reported value is from a 40x dilution. TJG 09-04-18  |
| 3 | Reported value is from a 200x dilution. TJG 09-04-18 |

## CHAIN OF CUSTODY RECORD

EnvisionAir | 1441 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-0885 | Fax: (317) 351-0882

|                                                                           |                                                                                                                    |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Client: NFO                                                               | P.O. Number: _____                                                                                                 |
| Report Address: 825 N Capital Ave<br>Indianapolis, IN                     | Project Name or Number: Franklin                                                                                   |
| Report To: C McFall                                                       | Sampled by: J Bostick/MT-J                                                                                         |
| Phone: 866-888-7911                                                       | QA/QC Required: (circle if applicable)<br>Level III Level IV                                                       |
| Invoice Address: Same                                                     | Reporting Units needed: (circle)<br>ug/m <sup>3</sup> mg/m <sup>3</sup> PPBV PPMV                                  |
| Desired TAT: (Please Circle One)<br>1 day 2 days 3 days Std (5 bus. days) | Media type:<br>1LC = 1 Liter Canister<br>6LC = 6 Liter Canister<br>TB = Tedlar Bag<br>TD = Thermal Desorption Tube |

### REQUESTED PARAMETERS



**Sampling Type:**

Soil-Gas:

**Sub-Slab:**

### Indoor-Air:

[www.envision-air.com](http://www.envision-air.com)

### Canister Pressure / Vacuum

[illegible]

Comments:

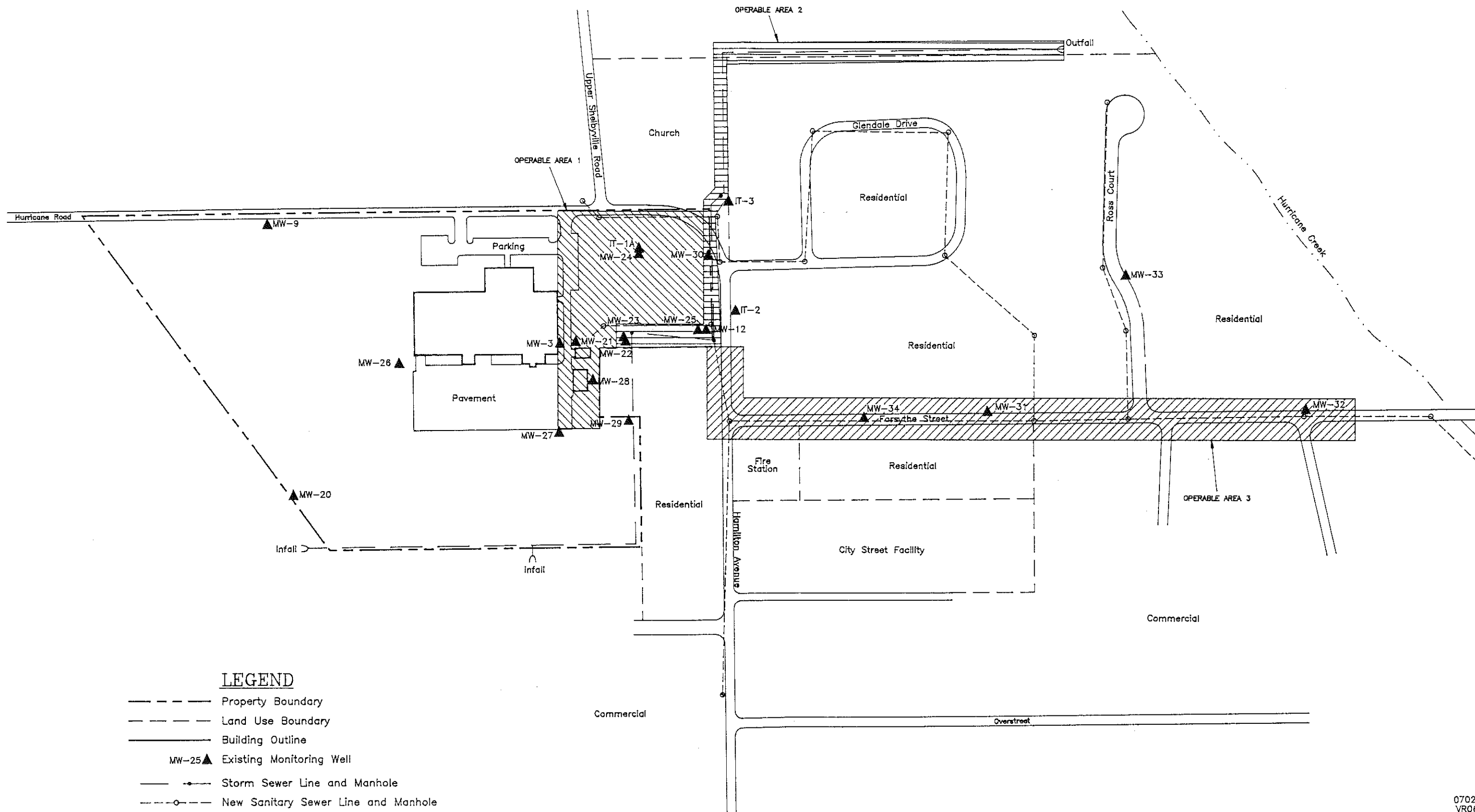
| Relinquished by: | Date    | Time | Received by: | Date    | Time |
|------------------|---------|------|--------------|---------|------|
| Matthew Hall     | 8/30/18 | 1630 | Ken Hunsick  | 8/30/18 | 1630 |
|                  |         |      |              |         |      |
|                  |         |      |              |         |      |
|                  |         |      |              |         |      |

## **Appendix C**

Excerpts from

*Report of Additional Corrective Measures Studies for the Former Amphenol  
Facility, Franklin, Indiana*

Prepared by Earth Tech, November 1996



**LEGEND**

- Property Boundary
- - - Land Use Boundary
- Building Outline
- MW-25▲ Existing Monitoring Well
- Storm Sewer Line and Manhole
- - -○- - New Sanitary Sewer Line and Manhole

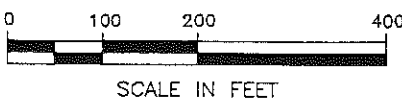
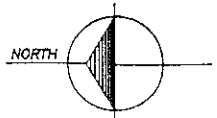


FIGURE 2.1  
**OPERABLE AREAS  
 1, 2 & 3**  
 FORMER AMPHENOL SITE  
 FRANKLIN, INDIANA

JUNE, 1996

07026.08

**Table 3.6**  
**Ground Water Analytical Data.**

| Sample Number              | MW-31  | MW-32  | MW-33  | MW-34  | MW-34D | MW-12 |
|----------------------------|--------|--------|--------|--------|--------|-------|
| Inorganics (ug/l)          |        |        |        |        |        |       |
| Aluminum                   | 219J   | 173J   | 297J   | 122J   | 198J   | NA    |
| Antimony                   | 2.1U   | 2.1U   | 2.1U   | 2.1U   | 2.1U   | NA    |
| Arsenic                    | 1.6UJ  | 1.6UJ  | 1.6U   | 1.6U   | 1.6U   | NA    |
| Barium                     | 52.4   | 44.3   | 86.7   | 58.8   | 58.2   | NA    |
| Beryllium                  | 0.30U  | 0.30U  | 0.30U  | 0.30U  | 0.30U  | NA    |
| Cadmium                    | 0.50U  | 0.50U  | 0.50U  | 0.50U  | 0.50U  | NA    |
| Calcium                    | 103000 | 85100  | 100000 | 90200  | 89000  | NA    |
| Chromium                   | 0.80U  | 0.80U  | 0.80U  | 0.80U  | 0.80U  | NA    |
| Cobalt                     | 0.90U  | 0.90U  | 0.90U  | 0.90U  | 0.90U  | NA    |
| Copper                     | 0.60U  | 0.61JB | 1.1JB  | 0.60U  | 0.79JB | NA    |
| Cyanide (amenable)         | 10.0U  | 10.0U  | 10.0U  | 10.0U  | 10.0U  | NA    |
| Cyanide (total)            | 2.0U   | 2.0U   | 2.0U   | 2.0U   | 2.0U   | NA    |
| Iron                       | 391J   | 343J   | 514J   | 329J   | 536J   | NA    |
| Lead                       | 1.3U   | 1.3UJ  | 1.3UJ  | 1.8B   | 1.3U   | NA    |
| Magnesium                  | 29500  | 25700  | 31600  | 25000  | 24700  | NA    |
| Manganese                  | 30.6   | 11.8   | 108    | 109    | 117    | NA    |
| Mercury                    | 0.10U  | 0.10U  | 0.10U  | 0.10U  | 0.10U  | NA    |
| Nickel                     | 0.89JB | 0.80U  | 1.9JB  | 1.0JB  | 1.4JB  | NA    |
| Potassium                  | 2010B  | 730B   | 1230B  | 1790B  | 1740B  | NA    |
| Selenium                   | 2.3B   | 3.2B   | 2.0U   | 3.8B   | 3.2B   | NA    |
| Silver                     | 1.2U   | 1.2U   | 1.2U   | 1.2U   | 1.2U   | NA    |
| Sodium                     | 23500  | 11900  | 8910   | 11500  | 10900  | NA    |
| Thallium                   | 0.90UJ | 0.90UJ | 0.90U  | 0.90UJ | 0.90UJ | NA    |
| Vanadium                   | 0.65U  | 0.52B  | 0.78B  | 0.50B  | 0.67B  | NA    |
| Zinc                       | 5.3U   | 5.3U   | 5.5B   | 5.3U   | 5.3U   | NA    |
| Volatile Organics (ug/l)   |        |        |        |        |        |       |
| Acetone                    | 10U    | 10U    | 10U    | 10U    | 10U    | 10U   |
| 2-Butanone                 | 10U    | 10U    | 10U    | 10U    | 10U    | 10U   |
| Carbon Tetrachloride       | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |
| 1,1-Dichloroethane         | 3J     | 5U     | 5U     | 2J     | 2J     | 26JD  |
| 1,1-Dichloroethylene       | 5U     | 5U     | 5U     | 5UJ    | 5UJ    | 5U    |
| 1,2-Dichloroethene (total) | 5U     | 5U     | 5U     | 5U     | 5U     | 2J    |
| 1,2-Dichloropropane        | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |
| Ethylbenzene               | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |
| Methylene Chloride         | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |
| Tetrachloroethene          | 15     | 1J     | 5U     | 11     | 10     | 1500D |
| Toluene                    | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |
| 1,1,1-Trichloroethane      | 70     | 2J     | 5U     | 75     | 73     | 1000D |
| Trichloroethene            | 130DJ  | 2J     | 5U     | 120DJ  | 160DJ  | 1200D |
| Xylenes                    | 5U     | 5U     | 5U     | 5U     | 5U     | 5U    |

# EARTH TECH

## Well Completion Diagram

Well No. MW-31  
 Project Curtis - Franklin  
 Time & Date: Start 4/8/96 1135  
 Completed 4/8/96 1430

Installed By A. Schrader  
 Inspected By M. Lytle

Ground Surface \_\_\_\_\_ FT. (MSL)  
 Reference Point  
 (Top of Casing) 727.72 FT. (MSL)

Note: Elevation is 0.76 feet lower than true elevation

Guard Pipe

Drilling Metho 6 1/4" HSA  
Mobile B-57

Backfill  
 Bentonite

Screen:  
 Type 4" Threaded PVC  
 Slot Size 0.010  
 Top Blank 0.03  
 Bottom Blank 0.20  
 Total Screen 4.80  
 Total Length 5.03

Stand Pipe:  
 Type 4" Threaded PVC  
 Total Length 10.01

Bentonite Seal

6.00 FT.

6.50 FT.

Granular Pack  
 #4 Quartz  
 Sand

7.84 FT.

Well Screen

12.64 FT. =  $\frac{15.04}{\text{Tot. Pipe}} - \frac{2.70}{\text{Cut Off}} - \frac{0.20}{\text{Bot. Blk.}} - \frac{-0.50}{\text{Stick}}$

Bottom of Borehole

13.75 FT.

Well-2.xls

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# EARTH TECH

## Well Completion Diagram

Well No. MW-32  
 Project Curtis - Franklin  
 Time & Date: Start 4/4/96 1400  
 Completed 4/4/96 1450

Installed By A. Schrader  
 Inspected By M. Lytle

Ground Surface \_\_\_\_\_ FT. (MSL)

Reference Point  
(Top of Casing) 721.44 FT. (MSL)

Note: Elevation is 0.76' lower than true elevation

Guard Pipe \_\_\_\_\_

Drilling Method 4 1/4" HSA  
Mobile B-57

Screen:  
 Type 2" Threaded PVC  
 Slot Size 0.01  
 Top Blank 0.10  
 Bottom Blank 0.15  
 Total Screen 4.70  
 Total Length 4.95

Backfill  
Bentonite chips

Stand Pipe:  
 Type 2" Threaded PVC  
 Total Length 10.00

\_\_\_\_\_ 2.00 FT.

Bentonite Seal \_\_\_\_\_ 3.20 FT.

Granular Pack \_\_\_\_\_ 4.95 FT.

#4 Quartz  
Sand

Well Screen \_\_\_\_\_

$$\begin{array}{r} 9.65 \text{ FT.} = \\ \hline \text{Tot. Pipe} \end{array} = \begin{array}{r} 14.95 \\ \hline \end{array} - \begin{array}{r} 5.75 \\ \hline \end{array} - \begin{array}{r} 0.15 \\ \hline \end{array} - \begin{array}{r} -0.60 \\ \hline \end{array}$$

Bottom of Borehole \_\_\_\_\_

10.50 FT.

Well-2.xls

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# EARTH TECH

## Well Completion Diagram

Well No. MW-34  
 Project Curtis - Franklin  
 Time & Date: Start 4/5/96 1245  
 Completed 4/5/96 1335

Installed By A. Schrader  
 Inspected By M. Lytle

Ground Surface \_\_\_\_\_ FT. (MSL)

Reference Point  
(Top of Casing) 728.49 FT. (MSL)

Note: Elevation is 0.76' lower than true elevation

Guard Pipe

Drilling Method 4 1/4" HSA  
Mobile B-57

Backfill  
Bentonite

Screen:  
 Type 2" Threaded PVC  
 Slot Size 0.010  
 Top Blank 0.10  
 Bottom Blank 0.15  
 Total Screen 4.77  
 Total Length 5.02

Stand Pipe:  
 Type 2" Threaded PVC  
 Total Length 10.00

Bentonite Seal 5.00 FT.

8.80 FT.

Granular Pack  
#4 Quartz  
Sand 10.95 FT.

Well Screen 15.72 FT. =  $\frac{15.02}{\text{Tot. Pipe}} - \frac{0.0}{\text{Cut Off}} - \frac{0.15}{\text{Bot. Blk.}} - \frac{-0.85}{\text{Stick}}$

Bottom of Borehole 16.0 FT.

Well-2.xls

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# EARTH TECH

## Well Completion Diagram

Well No. MW-33  
 Project Curtis - Franklin  
 Time & Date: Start 4/4/96 1615  
 Completed 4/4/96 1650

Installed By A. Schrader  
 Inspected By M. Lytle

Ground Surface \_\_\_\_\_ FT. (MSL)

Reference Point  
(Top of Casing) 723.27 FT. (MSL)

Note: Elevation is 0.76' lower than true elevation

Guard Pipe

Drilling Method 4 1/4" HSA  
Mobile B-57

Screen:  
 Type 2" Threaded PVC  
 Slot Size 0.010  
 Top Blank 0.12  
 Bottom Blank 0.15  
 Total Screen 4.83  
 Total Length 5.10

Backfill  
Bentonite chips

Stand Pipe:  
 Type 2" Threaded PVC  
 Total Length 10.00

Bentonite Seal 3.30 FT.

4.32 FT.

Granular Pack 4.92 FT.  
#4 Quartz  
Sand

Well Screen 9.75 FT. =  $\frac{15.10}{\text{Tot. Pipe}} - \frac{5.50}{\text{Cut Off}} - \frac{0.15}{\text{Bot. Blk.}} - \frac{-0.30}{\text{Stick}}$

Bottom of Borehole 10.80 FT.

Well-2.xls

5010 Stone Mill Road Bloomington, IN 47408 812 /336-0972 Fax 812/336-3991