June 5, 2019

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 Subsurface Investigation
South of Reed and Houghland State Cleanup Sites
Franklin, Indiana

Dear Mayor Barnett and City Attorney Gray:

In an effort to evaluate potential groundwater impacts from manufacturing sites located on Eastview Drive, northwest of Needham and Webb Elementary schools, the city of Franklin (City) retained EnviroForensics to conduct a focused investigation. Two properties, identified as the RCO-Reed Corporation (Reed) and the former Houghland Cannery (Houghland), are located north-northwest of the schools and both are sites of known contaminant releases of volatile organic compounds (VOCs), notably tetrachloroethene (PCE) and trichloroethene (TCE), in the Indiana Department of Environmental Management's (IDEM) State Cleanup Program. Groundwater flow direction in this area has been reportedly influenced by the former Webb Wellfield, which was located to the east-northeast of these sites. Subsurface investigations have been conducted in the area between the former wellfield and the Reed and Houghland properties, but an investigation had not been conducted south-southeast of these properties, in the likely natural groundwater flow direction toward Hurricane Creek. 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 from April 11 through April 15, 2019 and consisted of advancing five (5) soil borings for the collection of groundwater samples and installing piezometers to evaluate groundwater flow direction. The soil boring locations (designated as EV-DP-1 through EV-DP-5) are depicted on **Figure 1**.

**EnviroForensics, LLC**
**825 N. Capitol Avenue**
**Indianapolis, IN 46204**
**Phone: 317-972-7870**
**Fax: 317-972-7875**

Sampling was performed in accordance with IDEM and U.S. Environmental Protection Agency (EPA) protocols for environmental investigations. Prior to advancing borings, Indiana 811 was contacted at least 48 hours in advance of activities to mark utilities in the work areas. Work was conducted within City right-of-ways (ROWs) in accordance with City of Franklin ROW Permit No. 2019-094 and also on private property currently utilized for agricultural purposes. 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.

**Sampling Methodology**

The direct push soil borings were advanced by Midway Services, under contract to EnviroForensics. A Geoprobe® Direct-Push Dual Tube Sampling System (Geoprobe®) was used to advance each boring. Continuous soil sampling was performed to maximum depths ranging from 24 to 33 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 VOCs using a photoionization detector (PID). Boring logs from direct push borings EV-DP-1 through EV-DP-5 are provided as **Appendix A**. A soil sample was collected from each boring using 5035 Methodology.

Groundwater was generally encountered at a depth of approximately 3 feet bgs to 8 feet bgs in the direct push borings. Grab groundwater samples were collected from various depths throughout the saturated zone in order to vertically profile a potential groundwater contaminant plume. 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 intervals. 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 soil and groundwater samples were analyzed for VOCs using SW-846 Method 8260.

**Piezometer Construction and Groundwater Elevation Measurements**

Following the grab groundwater sampling activities at each location, a piezometer was installed at each boring location intersecting the top three (3) feet of the groundwater table. The piezometers were constructed using 1-inch inner-diameter (ID) schedule 40 PVC casings and 1-inch ID, 5-foot long, 0.01-inch, factory slotted, schedule 40 poly-vinyl chloride (PVC) screens. The filter pack for the piezometer consisted of #5 washed quartz sand and was installed from the bottom of the screen to 2 feet (ft) above the top of the screen. Medium bentonite chips were used to seal the borehole to within 1-ft to the ground surface. Each piezometer location was capped with a flush-mount, traffic-approved protective cover.

On April 15, 2019, the top-of-casing were calculated by conducting a relative survey of the piezometer locations using a benchmark with an assigned elevation of 100.00. The benchmark is the top of sanitary sewer manhole 180730. Following surveying activities, static water level measurements were collected using an electronic water level indicator. The piezometers were allowed to equilibrate to atmospheric pressure by removing the lid and expandable locking caps a minimum of 15 minutes before collecting measurements. The depth-to-water was measured at the top of the casing and recorded to the nearest 0.01-foot. The piezometers were decommissioned on May 17, 2019 by removing the PVC casings and sealing the boreholes with hydrated bentonite.

## 2.0 INVESTIGATION RESULTS

The soils encountered in direct push boring locations consisted primarily of unsaturated silt units overlaying saturated sand units ranging from 3 to 8 feet bgs. Water-saturated units ranged from 8.5 to 19 feet thick. Generally underlying the saturated sand unit is a silty clay with limited moisture. Borings were not advanced deeper than 32 feet bgs. Direct push boring logs are provided as **Appendix A.**

The analytical laboratory report is provided as **Appendix B**. The analytical results were compared to the IDEM RCG 2019 residential screening levels, designed to be protective of human health and the environment.

**Groundwater Flow Interpretation**

The depth-to-groundwater information and the surveyed top-of-casing elevation for the piezometer network was used to evaluate the groundwater flow direction south of the Reed and Houghland sites. The depth-to-groundwater measurements collected from the piezometers are summarized on **Table 1**. A potentiometric surface contour map showing groundwater flow

direction is presented on **Figure 2**. Groundwater flow direction in this area is to the southeast, towards Hurricane Creek.

**Sample Analytical Results**

VOCs were not detected above laboratory reporting limits in any groundwater or soil samples collected during this investigation. The groundwater and soil laboratory analytical reports are provided as **Attachment B**.

## 3.0 DISCUSSION OF RESULTS

Although groundwater flow in the vicinity of the Reed and Houghland sites has reportedly been influenced historically by the Webb Wellfield, current groundwater flow to the south of these sites appears to flow to the south-southeast toward Hurricane Creek. Groundwater and soil samples collected to the south and southeast of the Reed and Houghland sites, in the direction of suspected natural groundwater flow, did not contain concentrations of VOCs that exceeded laboratory reporting limits or IDEM established screening levels. Based on the data collected during this investigation, known groundwater contamination emanating from the Reed and Houghland sites does not appear to be traveling through the investigation area to the south-southeast toward Hurricane Creek or the Needham and Webb Elementary schools.

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,

Casey McFall, CHMM
Director of Field Services

Stephen Henshaw, LPG
CEO

Attachments

| | |
|---|---|
| Table 1 | Groundwater Elevation – Piezometers |
| Figure 1 | Site Boring Locations |
| Figure 2 | Potentiometric Surface Map – April 15, 2019 |
| Appendix A | Direct Push Boring Logs |
| Appendix B | Laboratory Analytical Reports |

# Table

# TABLE 1

## Groundwater Elevations - Piezometers

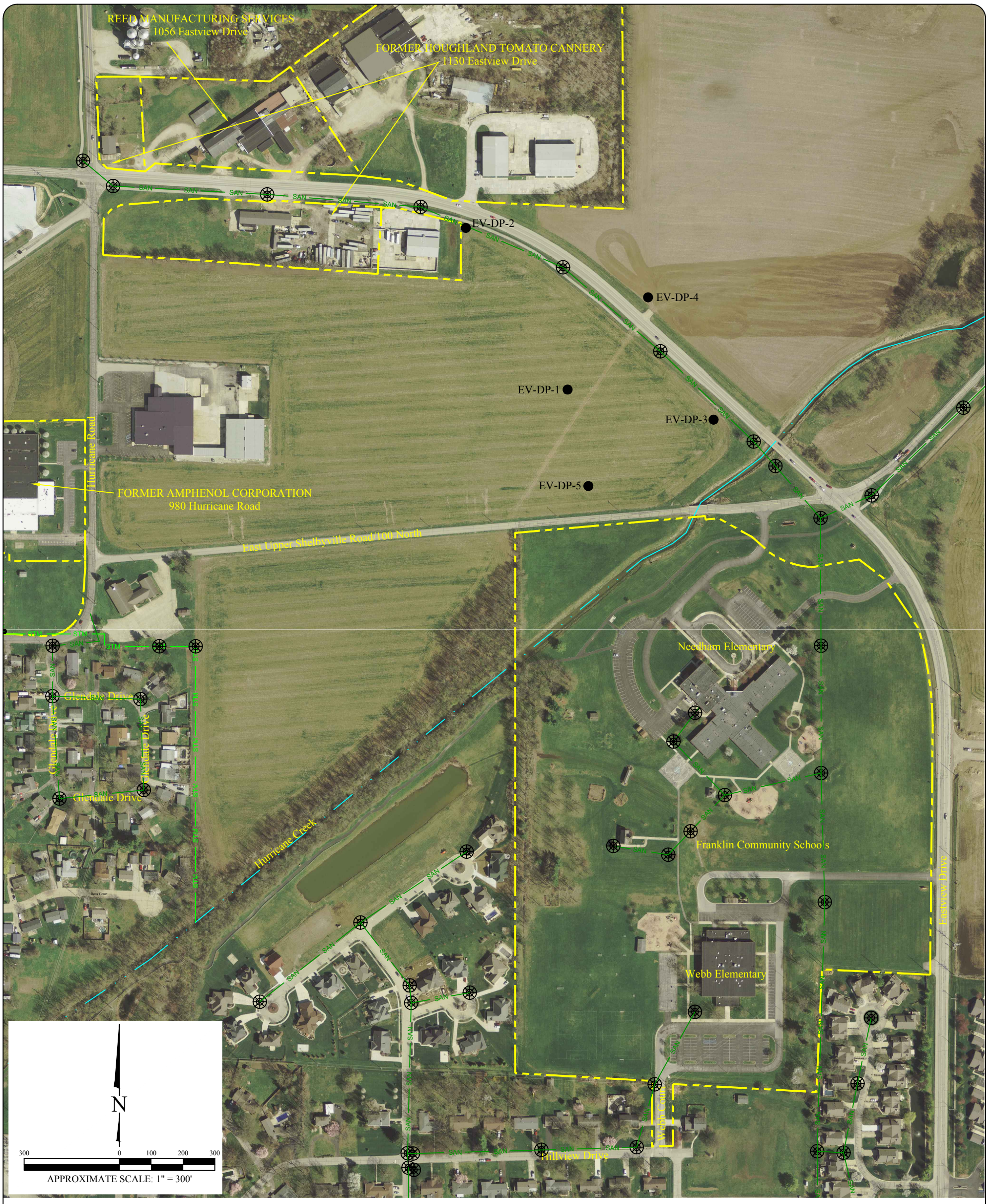
Limited Subsurface Investigation - Eastview Drive
Franklin, Indiana

| Piezometer Identification | Piezometer Casing Elevation (feet relative to benchmark) | Date | Depth to Water (feet btoc) | Relative Groundwater Elevation (feet) |
|---|---|---|---|---|
| **EV-DP-1** | 101.27 | 10/12/2017 | 7.36 | 93.91 |
| **EV-DP-2** | 101.86 | 10/12/2017 | 6.55 | 95.31 |
| **EV-DP-3** | 97.14 | 10/12/2017 | 5.03 | 92.11 |
| **EV-DP-4** | 101.11 | 10/12/2017 | 7.19 | 93.92 |
| **EV-DP-5** | 97.79 | 10/12/2017 | 5.38 | 92.41 |

**Notes:**

1. btoc = below top of casing
2. Piezometers surveyed relative to benchmark, which was assigned an arbitrary elevation of 100.00
3. Piezometers are 1-inch or 2-inch diameter PVC with 0.010 slotted screen

# Figures




## Legend

- Property boundary
- STM — Underground storm utility line
- SAN — Underground sanitary utility line
- Manhole
- EV-DP-1 ● Soil boring location

| No. | Date | Revision | Approved |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

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| | |
|---|---|
| Date: | 5/20/19 |
| Designed: | EB |
| Drawn: | EB |
| Checked: | CM |
| DWG file: | 6560-0468 |

SOIL BORING LOCATIONS

Franklin, Indiana

Figure 1

Project 6560

REED MANUFACTURING SERVICES
1056 Eastview Drive

FORMER HOUGHLAND TOMATO CANNERY
1130 Eastview Drive

EV-DP-2
95.31

BM

EV-DP-4
93.92

EV-DP-1
93.91

EV-DP-3
92.11

EV-DP-5
92.41

94.50
93.50
92.50

Hurricane Road

FORMER AMPHENOL CORPORATION
980 Hurricane Road

East Upper Shelbyville Road/100 North

Glendale Drive

Hurricane Creek

Needham Elementary

Franklin Community Schools

Webb Elementary

Eastview Drive

Webb Court

Hillview Drive

N

300 0 100 200 300

APPROXIMATE SCALE: 1" = 300'

## Legend

- Property boundary
- STM — Underground storm utility line
- SAN — Underground sanitary utility line
- Manhole
- EV-DP-1 ● Soil boring location
- 93.50 — Groundwater elevation contour
- 93.91 Groundwater elevation (Relative to benchmark assigned arbitrary elevation of 100.00 feet)
- BM ● Benchmark

| No. | Date | Revision | Approved |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

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| | |
|---|---|
| Date: | 5/20/19 |
| Designed: | EB |
| Drawn: | EB |
| Checked: | CM |
| DWG file: | 6560-0469 |

POTENTIOMETRIC SURFACE MAP
APRIL 15, 2019

Franklin, Indiana

Figure
2

Project
6560

**Appendix A**
Direct Push Boring Logs

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# Borehole No.: 6560:EV-DP-1

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** Middle of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 0 | Surface | | | | | | |
| 1 | ***(0.0'-4.0') SILT (ML):*** Brown; SILT, non-elastic; some clay; trace sand; moist. | 100 | | 0.2 | | Bentonite | 0.0 |
| 2 | Becomes light brown in color at 1 ft bgs. | | | 0.0 | | | 1.0 |
| 3 | | | | 0.0 | | | |
| 4 | | | | 0.0 | | | |
| 5 | ***(4.0'-16.5') SAND (SW):*** Brown; fine to coarse grained SAND, well-graded; trace-some gravel; trace silt and clay; moist. | | | 0.0 | | | 4.0 |
| 6 | Decrease in gravel content at 5 ft bgs. | 60 | | 0.0 | | | 5.0 |
| 7 | | | | 0.0 | | | |
| 8 | Wet at 8 ft bgs. | 60 | WATER | 0.0 | | | 8.0 |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | 0.0 | | | |
| 12 | Sand becomes poorly graded at 12 ft bgs. | 70 | WATER | 0.1 | | | 12.0 |
| 13 | | | | | | | |
| 14 | | | | 0.2 | | | |
| 15 | Increase in silt and clay content. | | | | | | 15.0 |
| 16 | | | | 0.1 | | | |
| 17 | ***(16.5'-27.5') CLAY (CL):*** Brown; silty CLAY, low-plasticity; trace to some sand; trace gravel; moist. | 80 | SOIL | 0.0 | | | 16.5 |
| 18 | | | | 0.1 | | | |
| 19 | | | | | | | |
| 20 | | | | 0.0 | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 27.5

**Depth to Water (ft bgs):** 8 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-1

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** Middle of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 21 | | 100 | | 0.0 | | | |
| 22 | | | | 0.0 | | | |
| 23 | Wet gravel and sand seam at 22.5 ft bgs. | 100 | | 0.0 | | | 22.5 |
| 24 | | | | 0.0 | | | |
| 25 | | 100 | | 0.0 | | | |
| 26 | | | | | | | |
| 27 | | 100 | | 0.0 | | | |
| 28 | End of Soil Boring | | | | | | 27.5 |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 27.5

**Depth to Water (ft bgs):** 8 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-2

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** NW corner of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 0 | Surface | | | | | | |
| 0 | ***(0.0'-0.5') TOPSOIL (OL):*** TOPSOIL | | | | | | 0.0 |
| 1 | ***(0.5'-5.0') SILT (ML):*** Brown; SILT, non-elastic; some clay; trace to some sand; trace gravel; moist. | 50 | | 0.0 | | Bentonite | |
| 2 | | | | | | | |
| 3 | | | | 0.0 | | | |
| 4 | | | | | | | |
| 5 | | | | 0.0 | | | 5.0 |
| 5 | ***(5.0'-6.0') GRAVEL (GP):*** Brown; sandy GRAVEL, well graded; fine to coarse grained; trace silt and clay; moist. | 30 | | 0.0 | | | |
| 6 | ***(6.0'-18.5') SAND (SW):*** Brown; fine to coarse grained SAND, well-graded; trace silt, clay, and gravel; wet. | | | | | | 6.0 |
| 7 | | | | 0.0 | | | |
| 8 | | | WATER | | | | |
| 9 | | 80 | | 0.2 | | | |
| 10 | | | | | | | |
| 11 | | | | 0.0 | | | |
| 12 | | | WATER | | | | |
| 13 | | 90 | | 0.3 | | | |
| 14 | | | | | | | |
| 15 | | | | 0.0 | | | |
| 16 | | | WATER | | | | |
| 17 | | | | 0.0 | | | |
| 18 | | 90 | | 0.1 | | | |
| 19 | ***(18.5'-24') CLAY (CL):*** Brown; silty CLAY, low-plasticity; trace to some sand; trace gravel; moist. | | SOIL | 0.0 | | | 18.5 |
| 20 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-2

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** NW corner of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 21 | | | | | | | |
| 22 | | 90 | | 0.0 | | | |
| 23 | | | | 0.0 | | | |
| 24 | End of Soil Boring | | | | | | 24.0 |
| 25 | | | | | | | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-3

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** NE corner of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 0 | Surface | | | | | | |
| 1 | ***(0.0'-3.0') SILT (ML):*** Brown; SILT, non-elastic; some clay; trace sand and gravel; moist. | 100 | | 0.1 | | Bentonite | 0.0 |
| 2 | | | | 0.0 | | | |
| 3 | | | | 0.0 | | | |
| 4 | ***(3.0'-15.75') SAND (SW):*** Brown; fine to coarse grained SAND, well-graded; trace to some gravel; trace silt and clay; moist. | | | 0.0 | | | 3.0 |
| 5 | | | | 0.1 | | | |
| 6 | Wet at 6 ft bgs. | 70 | | 0.0 | | | 6.0 |
| 7 | | | | 0.2 | | | |
| 8 | | | WATER | | | | |
| 9 | | 60 | | 0.2 | | | |
| 10 | | | | | | | |
| 11 | Gray at 11 ft bgs. | | | 0.1 | | | 11.0 |
| 12 | | | | | | | |
| 13 | | 70 | WATER | 0.0 | | | |
| 14 | | | | | | | |
| 15 | | | | 0.0 | | | |
| 16 | ***(15.75'-21.0') CLAY (CL):*** Gray; silty CLAY, low-plasticity; trace to some sand; trace gravel; moist. | | | 0.0 | | | 15.8 |
| 17 | | 95 | | 0.0 | | | |
| 18 | | | | | | | |
| 19 | | | SOIL | 0.0 | | | |
| 20 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-3

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/11/2019 **End Date:** 4/11/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** NE corner of field NW of intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 21 | | | | 0.2 | | | |
| | ***(21.0'-21.5') SILT (ML):*** Gray; sandy SILT, non-elastic; trace gravel; wet. | 100 | | 0.0 | | | 21.0 |
| 22 | ***(21.5'-24.0') CLAY (CL):*** Gray; silty CLAY, low-plasticity; trace to some sand; trace gravel; moist. | | | 0.0 | | | |
| 23 | | 100 | | 0.0 | | | |
| 24 | End of Soil Boring | | | | | | 24.0 |
| 25 | | | | | | | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-4

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/12/2019 **End Date:** 4/12/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** ~875 ft N in the N ROW of the intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 0 | Surface | | | | | | |
| 0 | ***(0.0'-0.5') TOPSOIL (OL):*** TOPSOIL | | | | | | 0.0 |
| 1 | ***(0.5'-5.0') SILT (ML):*** Light brown; SILT, non-elastic; some sand; trace clay and gravel; moist. | 40 | | 0.0 | | Bentonite | |
| 2 | | | | | | | |
| 3 | | | | 0.0 | | | |
| 4 | | | | | | | |
| 5 | ***(5.0'-27.0') SAND (SW):*** Brown; fine to coarse grained SAND, well-graded; trace to some gravel; trace silt and clay; moist. | 50 | | 0.0 | | | 5.0 |
| 6 | | | | | | | |
| 7 | | | | 0.0 | | | |
| 8 | Wet at 8 ft bgs. | 50 | WATER | 0.0 | | | 8.0 |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | 0.0 | | | |
| 12 | | 60 | | 0.0 | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | 0.0 | | | |
| 16 | Decrease in gravel content at 16 ft bgs. | 40 | | 0.0 | | | 16.0 |
| 17 | | | | | | | |
| 18 | Increase in silt content at 18 ft bgs. | | | | | | 18.0 |
| 19 | | | | 0.0 | | | |
| 20 | | | WATER | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 33

**Depth to Water (ft bgs):** 8 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-4

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/12/2019 **End Date:** 4/12/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** ~875 ft N in the N ROW of the intersection of Eastview and 100

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 21 | | | | 0.0 | | | |
| 22 | | 50 | | | | | |
| 23 | | | | 0.0 | | | |
| 24 | | | | | | | |
| 25 | | | | 0.0 | | | |
| 26 | | 80 | | | | | |
| 27 | ***(27.0'-28.0') Gravel (GW):*** Brown; sandy fine to coarse grained GRAVEL, well graded; trace silt and clay; moist. | | | 0.0 | | | 27.0 |
| 28 | ***(28.0'-29.0') NO RECOVERY:*** NO RECOVERY | 0 | | | | | 28.0 |
| 29 | ***(29.0'-32.0') Gravel (GW):*** Brown; sandy fine to coarse grained GRAVEL, well graded; trace silt and clay; moist. | | WATER | 0.0 | | | 29.0 |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | ***(32.0'-33.0') CLAY (CL/ML):*** Gray; silty CLAY, low-plasticity; trace sand and gravel, moist. | | SOIL | 0.0 | | | 32.0 |
| 33 | End of Soil Boring | | | | | | 33.0 |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 33

**Depth to Water (ft bgs):** 8 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-5

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/12/2019 **End Date:** 4/12/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** ~750 ft W of the intersection of Eastview and 100, ~50 N into field

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 0 | Surface | | | | | | |
| 1 | ***(0.0'-2.0') SILT (ML):*** Brown; SILT, non-elastic; some clay and sand; trace gravel; moist. | 100 | | 0.0 | | Bentonite | 0.0 |
| 2 | | | | 0.0 | | | |
| 3 | ***(2.0'-14.0') SAND (SW):*** Brown; fine to coarse grained SAND, well-graded; trace gravel, silt, and clay; moist. | | | 0.0 | | | 2.0 |
| 4 | | | | 0.0 | | | |
| 5 | | | | 0.0 | | | |
| 6 | | 80 | | 0.1 | | | 6.0 |
| 7 | Wet at 6 ft bgs. | | | 0.0 | | | |
| 8 | | | WATER | | | | |
| 9 | | 80 | | 0.0 | | | |
| 10 | | | | | | | |
| 11 | | | | 0.0 | | | |
| 12 | | | WATER | | | | |
| 13 | | 90 | | 0.0 | | | |
| 14 | ***(14.0'-15.5') CLAY (CL):*** Gray; silty CLAY, low-plasticity; trace sand and gravel; moist. | | SOIL | 0.0 | | | 14.0 |
| 15 | | | | | | | |
| 16 | ***(15.5'-16.0') SILT (ML):*** Gray; sandy SILT, non-elastic; trace gravel and clay, wet. | | | 0.1 | | | 15.5 |
| 17 | ***(16.0'-16.5') SAND (SW):*** Gray; fine to coarse grained SAND, well-graded; trace gravel, silt, and clay; moist. | 100 | | 0.0 | | | |
| 18 | | | | 0.1 | | | 18.0 |
| 19 | ***(16.5'-24.0') CLAY (CL):*** Gray; silty CLAY, low-plasticity; trace sand; moist. | | | 0.1 | | | |
| 20 | Transistions to brown color and increase in sand and gravel content at 18 ft bgs. | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

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# Borehole No.: 6560:EV-DP-5

**Project Name:** City of Franklin **Project No.:** 6560

**Logged By:** C.Spielbauer/K.Neighbors

**Start Date:** 4/12/2019 **End Date:** 4/12/2019

**Site Location:** Eastview Drive, Franklin IN

**Boring Location:** ~750 ft W of the intersection of Eastview and 100, ~50 N into field

**Remarks:**

| Depth (ft bgs) | Description | % Recovery | Sample Interval | PID (ppm) | Graphic Log | Borehole Decommission/ Well Completion Details | Depth (ft AMSL) |
|---|---|---|---|---|---|---|---|
| 21 | | | | | | | |
| 22 | | 100 | | 0.0 | | | |
| 23 | | | | 0.1 | | | |
| 24 | End of Soil Boring | | | | | | 24.0 |
| 25 | | | | | | | |
| 26 | | | | | | | |
| 27 | | | | | | | |
| 28 | | | | | | | |
| 29 | | | | | | | |
| 30 | | | | | | | |
| 31 | | | | | | | |
| 32 | | | | | | | |
| 33 | | | | | | | |
| 34 | | | | | | | |
| 35 | | | | | | | |
| 36 | | | | | | | |
| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |

**Drilling Contractor:** Midway **Drilling Method:** Direct Push

**Borehole Diameter:** 2.25 **Total Depth (ft bgs):** 24

**Depth to Water (ft bgs):** 6 **Surface Elevation (ft AMSL):** 0

***Water level observed during drilling.**
***Soil descriptions are based on field staff observations and opinions at the time of the field event.**

**Attachment B**
Laboratory Analytical Reports

**ENVision Laboratories, Inc.**
1439 Sadlier Circle West Drive
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Mr. Casey McFall
Enviroforensics
825 N. Capitol Ave.
Indianapolis, IN 46204

April 22, 2019

ENVision Project Number: 2019-852
Client Project Name: 6560 – City of Franklin

Dear Mr. McFall,

Please find the attached analytical report for the samples received April 15, 2019. 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.

The reference for the preservation technique utilized by ENVision Laboratories for Volatile Organics in soil may be found on Table A.1 (p. 42) of Method 5035A: Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples, July 2002, Draft Revision 1. All soils collected via Method 5035A are frozen at the laboratory upon receipt.

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,

David Norris

Client Services Manager
ENVision Laboratories, Inc.

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

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DP-1 (16.5-17.5) **Sample Collection Date/Time:** 4/11/19 11:30
**Envision Sample Number:** 19-5740 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.109 | 0.109 | |
| Acrolein | < 0.00018 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.054 | 0.054 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.054 | 0.054 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0018 | 0.0018 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00030 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.109 | 0.109 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 111% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 112% | | |
| Toluene-d8 (surrogate) | 87% | | |
| 4-bromofluorobenzene (surrogate) | 104% | | |
| Analysis Date/Time: | 04-17-19/03:43 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 92% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

| | | | | |
|---|---|---|---|---|
| **Client Sample ID:** | 6560-EV-DP-1 (16.5-17.5) | **Sample Collection Date/Time:** | 4/11/19 | 11:30 |
| **Envision Sample Number:** | 19-5740 | **Sample Received Date/Time:** | 4/15/19 | 10:30 |
| **Sample Matrix:** | soil | | | |

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 8.0% | | EPA 1684 |
| Percent Solids | 92.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DP-2 (18.5-19.5) **Sample Collection Date/Time:** 4/11/19 14:15
**Envision Sample Number:** 19-5741 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.109 | 0.109 | |
| Acrolein | < 0.00018 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.054 | 0.054 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.054 | 0.054 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0018 | 0.0018 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00030 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.109 | 0.109 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 103% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 104% | | |
| Toluene-d8 (surrogate) | 94% | | |
| 4-bromofluorobenzene (surrogate) | 112% | | |
| Analysis Date/Time: | 04-17-19/04:33 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 92% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

| | | | | |
|---|---|---|---|---|
| **Client Sample ID:** | 6560-EV-DP-2 (18.5-19.5) | **Sample Collection Date/Time:** | 4/11/19 | 14:15 |
| **Envision Sample Number:** | 19-5741 | **Sample Received Date/Time:** | 4/15/19 | 10:30 |
| **Sample Matrix:** | soil | | | |

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 8.0% | | EPA 1684 |
| Percent Solids | 92.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DP-3 (18.5-19.5) **Sample Collection Date/Time:** 4/11/19 16:10
**Envision Sample Number:** 19-5742 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.109 | 0.109 | |
| Acrolein | < 0.00018 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.054 | 0.054 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.054 | 0.054 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0018 | 0.0018 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00030 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.109 | 0.109 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 101% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 98% | | |
| Toluene-d8 (surrogate) | 90% | | |
| 4-bromofluorobenzene (surrogate) | 109% | | |
| Analysis Date/Time: | 04-17-19/04:49 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 92% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

| | | | | |
|---|---|---|---|---|
| **Client Sample ID:** | 6560-EV-DP-3 (18.5-19.5) | **Sample Collection Date/Time:** | 4/11/19 | 16:10 |
| **Envision Sample Number:** | 19-5742 | **Sample Received Date/Time:** | 4/15/19 | 10:30 |
| **Sample Matrix:** | soil | | | |

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 8.0% | | EPA 1684 |
| Percent Solids | 92.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DP-4 (32-33) **Sample Collection Date/Time:** 4/11/19 11:30
**Envision Sample Number:** 19-5743 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.110 | 0.110 | |
| Acrolein | < 0.00019 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.055 | 0.055 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.055 | 0.055 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0019 | 0.0019 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00031 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.110 | 0.110 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 103% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 114% | | |
| Toluene-d8 (surrogate) | 91% | | |
| 4-bromofluorobenzene (surrogate) | 112% | | |
| Analysis Date/Time: | 04-17-19/05:06 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 91% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

| | | | | |
|---|---|---|---|---|
| **Client Sample ID:** | 6560-EV-DP-4 (32-33) | **Sample Collection Date/Time:** | 4/11/19 | 11:30 |
| **Envision Sample Number:** | 19-5743 | **Sample Received Date/Time:** | 4/15/19 | 10:30 |
| **Sample Matrix:** | soil | | | |

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 9.0% | | EPA 1684 |
| Percent Solids | 91.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DP-5 (14-15) **Sample Collection Date/Time:** 4/11/19 14:20
**Envision Sample Number:** 19-5744 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.110 | 0.110 | |
| Acrolein | < 0.00019 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.055 | 0.055 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.055 | 0.055 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0019 | 0.0019 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00031 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.110 | 0.110 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 101% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 110% | | |
| Toluene-d8 (surrogate) | 89% | | |
| 4-bromofluorobenzene (surrogate) | 111% | | |
| Analysis Date/Time: | 04-17-19/05:23 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 91% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Client Sample ID:** 6560-EV-DP-5 (14-15) **Sample Collection Date/Time:** 4/11/19 14:20
**Envision Sample Number:** 19-5744 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 9.0% | | EPA 1684 |
| Percent Solids | 91.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-1 (8-12) **Sample Collection Date/Time:** 4/11/19 11:41
**Envision Sample Number:** 19-5745 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 113% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 96% | | |
| Toluene-d8 (surrogate) | 93% | | |
| 4-bromofluorobenzene (surrogate) | 89% | | |
| Analysis Date/Time: | 04-18-19/11:06 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-1 (12.5-16.5 **Sample Collection Date/Time:** 4/11/19 11:31
**Envision Sample Number:** 19-5746 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 113% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 99% | | |
| Toluene-d8 (surrogate) | 94% | | |
| 4-bromofluorobenzene (surrogate) | 91% | | |
| Analysis Date/Time: | 04-18-19/15:17 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-2 (6-10) **Sample Collection Date/Time:** 4/11/19 14:19
**Envision Sample Number:** 19-5747 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 111% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 91% | | |
| Toluene-d8 (surrogate) | 93% | | |
| 4-bromofluorobenzene (surrogate) | 92% | | |
| Analysis Date/Time: | 04-18-19/11:25 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-2 (10-14) **Sample Collection Date/Time:** 4/11/19 14:13
**Envision Sample Number:** 19-5748 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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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Analytical Report

***8260 continued...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 120% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 99% | | |
| Toluene-d8 (surrogate) | 97% | | |
| 4-bromofluorobenzene (surrogate) | 87% | | |
| Analysis Date/Time: | 04-18-19/11:44 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-2 (14.5-18.5 **Sample Collection Date/Time:** 4/11/19 14:03
**Envision Sample Number:** 19-5749 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 114% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 95% | | |
| Toluene-d8 (surrogate) | 91% | | |
| 4-bromofluorobenzene (surrogate) | 88% | | |
| Analysis Date/Time: | 04-18-19/12:04 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-3 (6-10) **Sample Collection Date/Time:** 4/11/19 16:28
**Envision Sample Number:** 19-5750 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 117% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 95% | | |
| Toluene-d8 (surrogate) | 96% | | |
| 4-bromofluorobenzene (surrogate) | 88% | | |
| Analysis Date/Time: | 04-18-19/12:23 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-3 (12-16) **Sample Collection Date/Time:** 4/11/19 16:20
**Envision Sample Number:** 19-5751 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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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Analytical Report

***8260 continued...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 122% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 94% | | |
| Toluene-d8 (surrogate) | 98% | | |
| 4-bromofluorobenzene (surrogate) | 90% | | |
| Analysis Date/Time: | 04-18-19/12:42 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-4 (8-12) **Sample Collection Date/Time:** 4/11/19 12:02
**Envision Sample Number:** 19-5752 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 120% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 97% | | |
| Toluene-d8 (surrogate) | 95% | | |
| 4-bromofluorobenzene (surrogate) | 90% | | |
| Analysis Date/Time: | 04-18-19/13:01 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-4 (18-22) **Sample Collection Date/Time:** 4/11/19 11:54
**Envision Sample Number:** 19-5753 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 108% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 97% | | |
| Toluene-d8 (surrogate) | 100% | | |
| 4-bromofluorobenzene (surrogate) | 90% | | |
| Analysis Date/Time: | 04-18-19/13:21 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-4 (28-32) **Sample Collection Date/Time:** 4/11/19 11:45
**Envision Sample Number:** 19-5754 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 110% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 102% | | |
| Toluene-d8 (surrogate) | 98% | | |
| 4-bromofluorobenzene (surrogate) | 90% | | |
| Analysis Date/Time: | 04-18-19/13:40 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-5 (6-10) **Sample Collection Date/Time:** 4/11/19 14:35
**Envision Sample Number:** 19-5755 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 110% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 96% | | |
| Toluene-d8 (surrogate) | 95% | | |
| 4-bromofluorobenzene (surrogate) | 92% | | |
| Analysis Date/Time: | 04-18-19/13:59 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DP-5 (10-14) **Sample Collection Date/Time:** 4/11/19 14:44
**Envision Sample Number:** 19-5756 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** water

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 110% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 103% | | |
| Toluene-d8 (surrogate) | 100% | | |
| 4-bromofluorobenzene (surrogate) | 90% | | |
| Analysis Date/Time: | 04-18-19/14:19 | | |
| Analyst Initials | tjg | | |

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5035A
**Analytical Batch:** 041719VS

**Client Sample ID:** 6560-EV-DUP-1 **Sample Collection Date/Time:** 4/11/19
**Envision Sample Number:** 19-5757 **Sample Received Date/Time:** 4/15/19 10:30
**Sample Matrix:** soil

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| Acetone | < 0.110 | 0.110 | |
| Acrolein | < 0.00019 | 0.001 | 1 |
| Acrylonitrile | < 0.002 | 0.002 | |
| Benzene | < 0.005 | 0.005 | |
| Bromobenzene | < 0.005 | 0.005 | |
| Bromochloromethane | < 0.005 | 0.005 | |
| Bromodichloromethane | < 0.005 | 0.005 | |
| Bromoform | < 0.005 | 0.005 | |
| Bromomethane | < 0.005 | 0.005 | |
| n-Butanol | < 0.055 | 0.055 | |
| 2-Butanone (MEK) | < 0.011 | 0.011 | |
| n-Butylbenzene | < 0.005 | 0.005 | |
| sec-Butylbenzene | < 0.005 | 0.005 | |
| tert-Butylbenzene | < 0.005 | 0.005 | |
| Carbon Disulfide | < 0.005 | 0.005 | |
| Carbon Tetrachloride | < 0.005 | 0.005 | |
| Chlorobenzene | < 0.005 | 0.005 | |
| Chloroethane | < 0.005 | 0.005 | |
| 2-Chloroethylvinylether | < 0.055 | 0.055 | |
| Chloroform | < 0.005 | 0.005 | |
| Chloromethane | < 0.005 | 0.005 | |
| 2-Chlorotoluene | < 0.005 | 0.005 | |
| 4-Chlorotoluene | < 0.005 | 0.005 | |
| 1,2-Dibromo-3-chloropropane | < 0.0019 | 0.0019 | |
| Dibromochloromethane | < 0.005 | 0.005 | |
| 1,2-Dibromoethane (EDB) | < 0.00031 | 0.001 | 1 |
| Dibromomethane | < 0.005 | 0.005 | |
| 1,2-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,3-Dichlorobenzene | < 0.005 | 0.005 | |
| 1,4-Dichlorobenzene | < 0.005 | 0.005 | |
| trans-1,4-Dichloro-2-butene | < 0.005 | 0.005 | |
| Dichlorodifluoromethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethane | < 0.005 | 0.005 | |
| 1,2-Dichloroethane | < 0.005 | 0.005 | |
| 1,1-Dichloroethene | < 0.005 | 0.005 | |

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***8260 continued...***

| Compounds | Sample Results (mg/kg) | Rep. Limit (mg/kg) | Flags |
|---|---|---|---|
| cis-1,2-Dichloroethene | < 0.005 | 0.005 | |
| trans-1,2-Dichloroethene | < 0.005 | 0.005 | |
| 1,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,3-Dichloropropane | < 0.005 | 0.005 | |
| 2,2-Dichloropropane | < 0.005 | 0.005 | |
| 1,1-Dichloropropene | < 0.005 | 0.005 | |
| 1,3-Dichloropropene | < 0.005 | 0.005 | |
| Ethylbenzene | < 0.005 | 0.005 | |
| Ethyl methacrylate | < 0.110 | 0.110 | |
| Hexachloro-1,3-butadiene | < 0.005 | 0.005 | |
| n-Hexane | < 0.011 | 0.011 | |
| 2-Hexanone | < 0.011 | 0.011 | |
| Iodomethane | < 0.011 | 0.011 | |
| Isopropylbenzene (Cumene) | < 0.005 | 0.005 | |
| p-Isopropyltoluene | < 0.005 | 0.005 | |
| Methylene chloride | < 0.022 | 0.022 | |
| 4-Methyl-2-pentanone (MIBK) | < 0.011 | 0.011 | |
| Methyl-tert-butyl-ether | < 0.005 | 0.005 | |
| 1-Methylnaphthalene | < 0.005 | 0.005 | |
| 2-Methylnaphthalene | < 0.005 | 0.005 | |
| Naphthalene | < 0.005 | 0.005 | |
| n-Propylbenzene | < 0.005 | 0.005 | |
| Styrene | < 0.005 | 0.005 | |
| 1,1,1,2-Tetrachloroethane | < 0.005 | 0.005 | |
| 1,1,2,2-Tetrachloroethane | < 0.005 | 0.005 | |
| Tetrachloroethene | < 0.005 | 0.005 | |
| Toluene | < 0.005 | 0.005 | |
| 1,2,3-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,2,4-Trichlorobenzene | < 0.005 | 0.005 | |
| 1,1,1-Trichloroethane | < 0.005 | 0.005 | |
| 1,1,2-Trichloroethane | < 0.005 | 0.005 | |
| Trichloroethene | < 0.005 | 0.005 | |
| Trichlorofluoromethane | < 0.005 | 0.005 | |
| 1,2,3-Trichloropropane | < 0.005 | 0.005 | |
| 1,2,4-Trimethylbenzene | < 0.005 | 0.005 | |
| 1,3,5-Trimethylbenzene | < 0.005 | 0.005 | |
| Vinyl acetate | < 0.011 | 0.011 | |
| Vinyl chloride | < 0.002 | 0.002 | |
| Xylene, M&P | < 0.005 | 0.005 | |
| Xylene, 0rtho | < 0.005 | 0.005 | |
| Xylene, Total | < 0.011 | 0.011 | |
| Dibromofluoromethane (surrogate) | 112% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 117% | | |
| Toluene-d8 (surrogate) | 84% | | |
| 4-bromofluorobenzene (surrogate) | 97% | | |
| Analysis Date/Time: | 04-17-19/05:39 | | |
| Analyst Initials | gjd | | |
| Percent Solids: | 91% | | |

All results reported on dry weight basis.

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**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

| | | | | |
|---|---|---|---|---|
| **Client Sample ID:** | 6560-EV-DUP-1 | **Sample Collection Date/Time:** | 4/11/19 | |
| **Envision Sample Number:** | 19-5757 | **Sample Received Date/Time:** | 4/15/19 | 10:30 |
| **Sample Matrix:** | soil | | | |

| Analyte | Sample Results | Flags | Method |
|---|---|---|---|
| Percent Moisture | 9.0% | | EPA 1684 |
| Percent Solids | 91.0% | | EPA 1684 |
| Analysis Date: | 4/22/19 | | |
| Analyst Initials | jc | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-EV-DUP-2
**Envision Sample Number:** 19-5758
**Sample Matrix:** water

**Sample Collection Date/Time:** 4/11/19
**Sample Received Date/Time:** 4/15/19 10:30

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 115% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 96% | | |
| Toluene-d8 (surrogate) | 97% | | |
| 4-bromofluorobenzene (surrogate) | 91% | | |
| Analysis Date/Time: | 04-18-19/14:57 | | |
| Analyst Initials | tjg | | |

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Analytical Report

**Client Name:** ENVIROFORENSICS

**Project ID:** 6560 CITY OF FRANKLIN

**Client Project Manager:** CASEY MCFALL

**ENVision Project Number:** 2019-852

**Analytical Method:** EPA 8260
**Prep Method:** EPA 5030B
**Analytical Batch:** 041819VW

**Client Sample ID:** 6560-TRIP BLANK
**Envision Sample Number:** 19-5759
**Sample Matrix:** water

**Sample Collection Date/Time:** 4/11/19
**Sample Received Date/Time:** 4/15/19 10:30

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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...***

| Compounds | Sample Results (ug/L) | Reporting Limit (ug/L) | Flags |
|---|---|---|---|
| 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 | |
| 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, 0rtho | < 5 | 5 | |
| Xylene (Total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 120% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 97% | | |
| Toluene-d8 (surrogate) | 99% | | |
| 4-bromofluorobenzene (surrogate) | 93% | | |
| Analysis Date/Time: | 04-18-19/10:46 | | |
| Analyst Initials | tjg | | |

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# EPA 8260 Quality Control Data

**ENVision Batch Number:** 041619VS

| Method Blank (MB): | MB Results (ug/kg) | Rep Lim (ug/kg) | Flag |
|---|---|---|---|
| Acetone | < 100 | 100 | |
| Acrolein | < 0.17 | 1 | 1 |
| Acrylonitrile | < 2 | 2 | |
| 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 | < 1.7 | 1.7 | |
| Dibromochloromethane | < 5 | 5 | |
| 1,2-Dibromoethane (EDB) | < 0.28 | 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 | < 5 | 5 | |
| 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 | < 5 | 5 | |
| Ethylbenzene | < 5 | 5 | |
| Ethyl methacrylate | < 100 | 100 | |

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***8260 QC Continued…***

| Method Blank (MB) | MB Results (ug/kg) | Rep Lim (ug/kg) | Flag |
|---|---|---|---|
| Hexachloro-1,3-butadiene | < 5 | 5 | |
| 2-Hexanone | < 10 | 10 | |
| n-Hexane | < 10 | 10 | |
| Iodomethane | < 10 | 10 | |
| Isopropylbenzene (Cumene) | < 5 | 5 | |
| p-Isopropyltoluene | < 5 | 5 | |
| Methylene chloride | < 20 | 20 | |
| 4-Methyl-2-pentanone (MIBK) | < 10 | 10 | |
| Methyl-tert-butyl-ether | < 5 | 5 | |
| 1-Methylnaphthalene | < 5 | 5 | |
| 2-Methylnaphthalene | < 5 | 5 | |
| Naphthalene | < 5 | 5 | |
| n-Propylbenzene | < 5 | 5 | |
| Styrene | < 5 | 5 | |
| 1,1,1,2-Tetrachloroethane | < 5 | 5 | |
| 1,1,2,2-Tetrachloroethane | < 5 | 5 | |
| 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 | < 5 | 5 | |
| 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, 0rtho | < 5 | 5 | |
| Xylenes, Total | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 117% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 113% | | |
| Toluene-d8 (surrogate) | 110% | | |
| 4-bromofluorobenzene (surrogate) | 100% | | |
| Analysis Date/Time: | 4-17-19/00:07 | | |
| Analyst Initials | gjd | | |

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***8260 QC Continued…***

| LCS/LCSD: | LCS Results (ug/kg) | LCS/LCSD Conc. (ug/kg) | LCSD Result (ug/kg) | LCS Rec. | LCSD Rec. | % D | Flag |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 56.8 | 50 | 58.1 | 114% | 116% | 2.3 | |
| 1,1-Dichloroethene | 52.9 | 50 | 53.2 | 106% | 106% | 0.6 | |
| trans-1,2-Dichloroethene | 48.5 | 50 | 52.7 | 97% | 105% | 8.3 | |
| Methyl-tert-butyl ether | 55.0 | 50 | 53.4 | 110% | 107% | 3.0 | |
| 1,1-Dichloroethane | 50.1 | 50 | 51.1 | 100% | 102% | 2.0 | |
| cis-1,2-Dichloroethene | 47.6 | 50 | 48.0 | 95% | 96% | 0.8 | |
| Chloroform | 49.2 | 50 | 48.4 | 98% | 97% | 1.6 | |
| 1,1,1-Trichloroethane | 51.7 | 50 | 52.0 | 103% | 104% | 0.6 | |
| Benzene | 50.3 | 50 | 50.8 | 101% | 102% | 1.0 | |
| Trichloroethene | 51.4 | 50 | 54.1 | 103% | 108% | 5.1 | |
| Toluene | 53.9 | 50 | 54.4 | 108% | 109% | 0.9 | |
| 1,1,1,2-Tetrachloroethane | 51.2 | 50 | 49.8 | 102% | 100% | 2.8 | |
| Chlorobenzene | 48.8 | 50 | 48.6 | 98% | 97% | 0.4 | |
| Ethylbenzene | 50.4 | 50 | 50.7 | 101% | 101% | 0.6 | |
| o-Xylene | 51.0 | 50 | 49.7 | 102% | 99% | 2.6 | |
| n-Propylbenzene | 49.7 | 50 | 51.9 | 99% | 104% | 4.3 | |
| Dibromofluoromethane (surrogate) | 108% | | 106% | | | | |
| 1,2-Dichloroethane-d4 (surrogate) | 106% | | 102% | | | | |
| Toluene-d8 (surrogate) | 103% | | 106% | | | | |
| 4-bromofluorobenzene (surrogate) | 107% | | 108% | | | | |
| Analysis Date/Time: | 4-16-19/23:33 | | 4-16-19/23:50 | | | | |
| Analyst Initials | gjd | | gjd | | | | |

| Matrix Spike/Matrix Spike Dup: | Sample Res (ug/kg) | MS Res (ug/kg) | MSD Res (ug/kg) | Spk Conc (ug/kg) | MS Rec | MSD Rec | % D | Flag |
|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 0 | 57.1 | 59.5 | 50 | 114% | 119% | 4.1 | |
| 1,1-Dichloroethene | 0 | 50.7 | 50.7 | 50 | 101% | 101% | 0.0 | |
| trans-1,2-Dichloroethene | 0 | 50.9 | 48.9 | 50 | 102% | 98% | 4.0 | |
| Methyl-tert-butyl ether | 0 | 52.1 | 53.3 | 50 | 104% | 107% | 2.3 | |
| 1,1-Dichloroethane | 0 | 51.6 | 51.6 | 50 | 103% | 103% | 0.0 | |
| cis-1,2-Dichloroethene | 0 | 45.7 | 47.8 | 50 | 91% | 96% | 4.5 | |
| Chloroform | 0 | 48.7 | 49.6 | 50 | 97% | 99% | 1.8 | |
| 1,1,1-Trichloroethane | 0 | 50.3 | 49 | 50 | 101% | 98% | 2.6 | |
| Benzene | 0 | 45.3 | 46.7 | 50 | 91% | 93% | 3.0 | |
| Trichloroethene | 0 | 43 | 44.3 | 50 | 86% | 89% | 3.0 | |
| Toluene | 0 | 45.4 | 46.2 | 50 | 91% | 92% | 1.7 | |
| 1,1,1,2-Tetrachloroethane | 0 | 53.4 | 54.4 | 50 | 107% | 109% | 1.9 | |
| Chlorobenzene | 0 | 45.9 | 45.9 | 50 | 92% | 92% | 0.0 | |
| Ethylbenzene | 0 | 47.6 | 47.3 | 50 | 95% | 95% | 0.6 | |
| o-Xylene | 0 | 47.7 | 50 | 50 | 95% | 100% | 4.7 | |
| n-Propylbenzene | 0 | 42.5 | 43.8 | 50 | 85% | 88% | 3.0 | |
| Dibromofluoromethane (surrogate) | 111% | 104% | 100% | | | | | |
| 1,2-Dichloroethane-d4 (surrogate) | 112% | 103% | 107% | | | | | |
| Toluene-d8 (surrogate) | 87% | 106% | 93% | | | | | |
| 4-bromofluorobenzene (surrogate) | 104% | 114% | 100% | | | | | |
| Analysis Date/Time: | 04-17-19/03:43 | 04-17-19/03:59 | 04-17-19/04:16 | | | | | |
| Analyst Initials | gjd | gjd | gjd | | | | | |
| Original Sample Number Spiked: | 19-5740 | | | | | | | |

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# EPA 8260 Quality Control Data

**ENVision Batch Number:** 041819VW

| Method Blank (MB): | MB Results (ug/L) | Rep Lim (ug/L) | Flag |
|---|---|---|---|
| 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…***

| Method Blank (MB): | MB Results (ug/L) | Rep Lim (ug/L) | Flag |
|---|---|---|---|
| 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, 0rtho | < 5 | 5 | |
| Xylene (total) | < 10 | 10 | |
| Dibromofluoromethane (surrogate) | 118% | | |
| 1,2-Dichloroethane-d4 (surrogate) | 95% | | |
| Toluene-d8 (surrogate) | 98% | | |
| 4-bromofluorobenzene (surrogate) | 92% | | |
| Analysis Date/Time: | 04-18-19/10:27 | | |
| Analyst Initials | tjg | | |

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***8260 QC Continued…***

| LCS/LCSD | LCS Results (ug/L) | LCS/LCSD Conc. (ug/L) | LCSD Result (ug/L) | LCS Rec. | LCSD Rec. | % D | Flag |
|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 51.0 | 50 | 51.9 | 102% | 104% | 1.7 | |
| 1,1-Dichloroethene | 51.6 | 50 | 54.2 | 103% | 108% | 4.9 | |
| trans-1,2-Dichloroethene | 54.8 | 50 | 56.5 | 110% | 113% | 3.1 | |
| Methyl-tert-butyl-ether | 54.7 | 50 | 52.8 | 109% | 106% | 3.5 | |
| 1,1-Dichloroethane | 55.6 | 50 | 57.8 | 111% | 116% | 3.9 | |
| cis-1,2-Dichloroethene | 55.3 | 50 | 58.7 | 111% | 117% | 6.0 | |
| Chloroform | 53.5 | 50 | 53.4 | 107% | 107% | 0.2 | |
| 1,1,1-Trichloroethane | 53.2 | 50 | 52.4 | 106% | 105% | 1.5 | |
| Benzene | 52.7 | 50 | 53.8 | 105% | 108% | 2.1 | |
| Trichloroethene | 53.8 | 50 | 54.5 | 108% | 109% | 1.3 | |
| Toluene | 53.1 | 50 | 53.9 | 106% | 108% | 1.5 | |
| 1,1,1,2-Tetracholorethane | 50.2 | 50 | 49.5 | 100% | 99% | 1.4 | |
| Chlorobenzene | 51.6 | 50 | 52.9 | 103% | 106% | 2.5 | |
| Ethylbenzene | 52.1 | 50 | 52.8 | 104% | 106% | 1.3 | |
| o-Xylene | 50.2 | 50 | 48.2 | 100% | 96% | 4.1 | |
| n-Propylbenzene | 51.3 | 50 | 52.3 | 103% | 105% | 1.9 | |
| Dibromofluoromethane (surrogate) | 104% | | 107% | | | | |
| 1,2-Dichloroethane-d4 (surrogate) | 105% | | 94% | | | | |
| Toluene-d8 (surrogate) | 102% | | 105% | | | | |
| 4-bromofluorobenzene (surrogate) | 101% | | 98% | | | | |
| Analysis Date/Time: | 04-18-19/09:10 | | 04-18-19/21:29 | | | | |
| Analyst Initials | tjg | | tjg | | | | |

| Matrix Spike/Matrix Spike Dup: | Sample Results (ug/L) | MS Res (ug/L) | MSD Res (ug/L) | Spk Conc (ug/L) | MS Rec | MSD Rec | % D | Flag |
|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | 0.0 | 49.7 | 50.0 | 50 | 99% | 100% | 0.6 | |
| 1,1-Dichloroethene | 0.0 | 53.6 | 52.5 | 50 | 107% | 105% | 2.1 | |
| trans-1,2-Dichloroethene | 0.0 | 59.9 | 58.3 | 50 | 120% | 117% | 2.7 | |
| Methyl-tert-butyl-ether | 0.0 | 47.9 | 49.5 | 50 | 96% | 99% | 3.3 | |
| 1,1-Dichloroethane | 0.0 | 59.1 | 56.3 | 50 | 118% | 113% | 4.9 | |
| cis-1,2-Dichloroethene | 0.0 | 55.7 | 59.6 | 50 | 111% | 119% | 6.8 | |
| Chloroform | 0.0 | 55.6 | 57.5 | 50 | 111% | 115% | 3.4 | |
| 1,1,1-Trichloroethane | 0.0 | 54.8 | 53.5 | 50 | 110% | 107% | 2.4 | |
| Benzene | 0.0 | 53.2 | 55.7 | 50 | 106% | 111% | 4.6 | |
| Trichloroethene | 0.0 | 50.9 | 53.9 | 50 | 102% | 108% | 5.7 | |
| Toluene | 0.0 | 52.4 | 52.7 | 50 | 105% | 105% | 0.6 | |
| 1,1,1,2-Tetracholorethane | 0.0 | 47.6 | 50.4 | 50 | 95% | 101% | 5.7 | |
| Chlorobenzene | 0.0 | 50.3 | 51.9 | 50 | 101% | 104% | 3.1 | |
| Ethylbenzene | 0.0 | 51.1 | 52.8 | 50 | 102% | 106% | 3.3 | |
| o-Xylene | 0.0 | 55.4 | 58.6 | 50 | 111% | 117% | 5.6 | |
| n-Propylbenzene | 0.0 | 50.0 | 52.1 | 50 | 100% | 104% | 4.1 | |
| Dibromofluoromethane (surrogate) | 113% | 116% | 113% | | | | | |
| 1,2-Dichloroethane-d4 (surrogate) | 99% | 110% | 114% | | | | | |
| Toluene-d8 (surrogate) | 94% | 103% | 104% | | | | | |
| 4-bromofluorobenzene (surrogate) | 91% | 94% | 97% | | | | | |
| Analysis Date/Time: | 04-18-19/15:17 | 04-18-19/15:36 | 04-18-19/15:55 | | | | | |
| Analyst Initials | tjg | tjg | tjg | | | | | |
| Originial Sample Number Spiked: | 19-5746 | | | | | | | |

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| Flag Number | Comments |
|---|---|
| 1 | Reported value is below the reporting limit but above the MDL. |

ENVision Proj#: 2019-852 Page 1 of 2

# CHAIN OF CUSTODY RECORD

ENVision Laboratories, Inc. | 1439 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-8632 | Fax: (317) 351-8639

| | |
|---|---|
| Client: EnviroForensics | Invoice Address: Same |
| Report Address: 825 N. Capitol Ave. Indianapolis, IN | Project Name: 65160 City of Franklin |
| Report To: CNicFall | Lab Contact: DNorris |
| Phone: 317-972-7870 | Sampled by: CSpellbauer & KNeighbors |
| Fax: 317-972-7875 | P.O. Number: |
| Desired TAT: (Please Circle One) **1-day 2-day 3-day Std (5-7 bus. days)** | QA/QC Required: (circle if applicable) **Level III Level IV** |

**REQUESTED PARAMETERS**

VOC 8260 MS/MSD

**Sample Integrity:**
Cooler Temp: 4 °C (Circle)
Samples on Ice? (Yes) No
Samples Intact? (Yes) No
Custody Seal: Yes (No)
ENVision provided bottles: (Yes) No
VOC vials free of head-space? Yes No N/A
pH checked? (Yes) No N/A
Method 5035 collection used? (Yes) No
5035 samples received within 48 hr of Collection? Yes (No)

*Please indicate number of containers per preservative below*

| Sample ID | Coll. Date | Coll. Time | Comp (C) Grab (G) | Matrix | VOC 8260 | MS/MSD | HCl | $HNO_3$ | $H_2SO_4$ | NaOH | Other | None | ENVision Sample ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65160-EV-DP-1 (16.5-17.5) | 4/11/19 | 1130 | G | soil | X | X | | | | | | 12 | 19-5740 |
| 65160-EV-DP-2 (18.5-19.5) | 4/11/19 | 1415 | G | soil | X | | | | | | | 4 | 19-5741 |
| 65160-EV-DP-3 (18.5-19.5) | 4/11/19 | 1610 | G | soil | X | | | | | | | 4 | 19-5742 |
| 65160-EV-DP-4 (32-33) | 4/12/19 | 1130 | G | soil | X | | | | | | | 4 | 19-5743 |
| 65160-EV-DP-5 (14-15) | 4/12/19 | 1420 | G | soil | X | | | | | | | 4 | 19-5744 |
| 65160-EV-DP-1 (8-12) | 4/11/19 | 1141 | G | water | X | | 3 | | | | | | 19-5745 |
| 65160-EV-DP-1 (12.5-16.5) | 4/11/19 | 1131 | G | water | X | X | 9 | | | | | | 19-5746 |
| 65160-EV-DP-2 (6-10) | 4/11/19 | 1419 | G | water | X | | 3 | | | | | | 19-5747 |
| 65160-EV-DP-2 (10-14) | 4/11/19 | 1413 | G | water | X | | 3 | | | | | | 19-5748 |
| 65160-EV-DP-2 (14.5-18.5) | 4/11/19 | 1403 | G | water | X | | 3 | | | | | | 19-5749 |
| 65160-EV-DP-3 (6-10) | 4/11/19 | 1628 | G | water | X | | 3 | | | | | | 19-5750 |
| 65160-EV-DP-3 (12-16) | 4/11/19 | 1620 | G | water | X | | 3 | | | | | | 19-5751 |

Comments: Soils were frozen within 48hrs of sample Date.

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Chris Spellbauer | 4-15-19 | 0830 | CNicFall | 4-15-19 | 0830 |
| CNicFall | 4/15/19 | 10:30 | | 4/15/19 | 10:30 |

ENVision Proj#: 2019852 Page 2 of 2

# CHAIN OF CUSTODY RECORD

ENVision Laboratories, Inc. | 1439 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-8632 | Fax: (317) 351-8639

| | |
|---|---|
| Client: EnviroForensics | Invoice Address: Same |
| Report Address: 825 N. Capitol Ave Indianapolis, IN | Project Name: 65160 City of Franklin |
| Report To: CMcFall | Lab Contact: DHarris |
| Phone: 317-972-7870 | Sampled by: CSpellbrink & KNeighbors |
| Fax: 317-972-7875 | P.O. Number: |
| Desired TAT: (Please Circle One) **1-day 2-day 3-day Std (5-7 bus. days)** | QA/QC Required: (circle if applicable) **Level III Level IV** |

**Sample Integrity:**
Cooler Temp: 4 °C
(Circle)
Samples on Ice? Yes No
Samples Intact? Yes No
Custody Seal: Yes No
ENVision provided bottles: Yes No
VOC vials free of head-space: Yes No N/A
pH checked? Yes No N/A
Method 5035 collection used? Yes No
5035 samples received within 48 hr of Collection? Yes No

**REQUESTED PARAMETERS**

*Please indicate number of containers per preservative below*

| Sample ID | Coll. Date | Coll. Time | Comp (C) Grab (G) | Matrix | VOC 8260 | HCl | $HNO_3$ | $H_2SO_4$ | NaOH | Other | None | ENVision Sample ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65160-EV-DP-4 (8-12) | 4/12/19 | 1202 | G | water | X | 3 | | | | | | 19.5752 |
| 65160-EV-DP-4 (18-22) | 4/12/19 | 1154 | G | water | X | 3 | | | | | | 19.5753 |
| 65160-EV-DP-4 (28-32) | 4/12/19 | 1145 | G | water | X | 3 | | | | | | 19.5754 |
| 65160-EV-DP-5 (6-10) | 4/12/19 | 1435 | G | water | X | 3 | | | | | | 19.5755 |
| 65160-EV-DP-5 (10-14) | 4/12/19 | 1444 | G | water | X | 3 | | | | | | 19.5756 |
| 65160-DUP-1 | — | — | G | soil | X | | | | | | 4 | 19.5757 |
| 65160-DUP-2 | — | — | G | water | X | 3 | | | | | | 19.5758 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments: Soils were frozen within 48hrs of sample date.

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Chris Spellbrink | 4-15-19 | 0830 | JCMcFall | 4-15-19 | 0830 |
| JCMcFall | 4/15/19 | 10:30 | | 4/15/19 | 10:30 |

# 5035 CHECK-IN SHEET

Client Name: ENVIROFORENSICS ENVision project#: 2019-852

Cooler Temp: 4 °C

Method 5035A used: YES X NO □

ENVision provided tared vials w/stir bars & Terra Core T-handles: YES X NO □

5035A samples were received within 48 hrs of collection: YES □ NO X

5035A samples were frozen within 48 hrs of collection by lab: YES □ NO X
If NO, did client freeze samples? YES X NO □

> 5035ATable A.1 Reference:
> Sample is extruded into an empty sealed vial and cooled to 4° ± 2°C for no more than 48 hours then frozen to < -7°C upon laboratory receipt.

Methanol was added to a vial from each sample for Medium-Level dilution within 48 hrs of collection: YES □ NO X

> 5035ATable A.1 Reference:
> Sample is extruded into an empty sealed vial and cooled to 4° ± 2°C for no more than 48 hours then preserved with methanol upon laboratory receipt.

Performed by/Date: LISA LAWSON 04-15-19