Pilot Trench Performance Monitoring Report

GM – Bedford Casting Operations
Bedford, Indiana
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→ The Power of Commitment

Contents

List of Acronyms and Terms iv

1. Introduction 1

1.1 Pilot Trench PMP Goals and Objectives 1

1.2 Multiple Lines of Evidence Evaluation 2

1.3 Summary of Report Layout 3

2. Conceptual Site Model – Pilot Trench Area 3

2.1 Physical Setting 3

2.2 Geologic Conditions 4

2.2.1 Geologic Materials 4

2.2.2 Bedrock Structure 6

2.2.3 Karst 6

2.2.4 Facility Bedrock Topography 7

2.3 Groundwater Movement 8

2.4 Contaminant Transport 10

2.5 Summary 12

3. Pilot Trench Construction 13

3.1 Pilot Trench Location and Description 13

3.2 Pilot Trench Components 13

3.3 Groundwater Treatment Plant (GWTP) 15

4. Spring/Seep Reconnaissance 15

4.1 Background 15

4.2 Goal 15

4.3 Methodology 16

4.4 Results 16

5. Hydraulic Monitoring 17

5.1 Goal/Background 17

5.2 Methodology 17

5.3 Evaluation of Hydraulic Gradients 17

5.4 Results 18

6. Dye Trace 19

6.1 Previous Studies 19

6.2 Goal/Background 19

6.3 Near Field Results 21

6.4 Far Field Results 23

6.5 Comparison to Previous Dye Trace Studies 24

6.6 Conclusions 24

7. Groundwater and Surface Water Monitoring for PCBs 25

7.1 Goal/Background 25
7.2 PCB Sampling as a Line of Evidence for Pilot Trench Performance 26
7.3 Methodology 27
7.3.1 August 2022 Monitoring Event 27
7.3.2 November 2022 Development 27
7.3.3 January 2023 Monitoring Event 28
7.3.4 March 2024 Monitoring Event 28
7.3.5 May 2024 Monitoring Event 28
7.4 Data Validation 28
7.5 Summary of Results 29
7.5.1 August 2022 29
7.5.2 January 2023 29
7.5.3 March 2024 30
7.5.4 May 2024 30
7.5.5 Effect of Additional Well Development 30
7.6 Conclusions 32
8. Groundwater Treatment Plant Monitoring 32
8.1 Goal/Background 32
8.2 Methodology 33
8.3 Results 33
9. Summary and Conclusions 35
9.1 Multiple Lines of Evidence Summary 35
9.1.1 Conceptual Site Model 35
9.1.1.1 Bedrock Topography 35
9.1.1.2 Groundwater Movement 36
9.1.1.3 Contaminant Transport 36
9.1.2 Pilot Trench Construction 37
9.1.3 Spring/Seep Reconnaissance 38
9.1.4 Hydraulic Monitoring 38
9.1.5 Dye Trace 38
9.1.6 Groundwater and Surface Water Monitoring for PCBs 39
9.1.7 Groundwater Treatment Plant Monitoring 40
9.2 Data Gap Evaluation 40
9.3 Conclusion 40
9.4 Groundwater Monitoring Plan 41
10. References 41

Table index

Table 5.1 Hydraulic Monitoring Locations
Table 6.1 Near Field Study Sampling Plan
Table 6.2 Far Field Study Sampling Plan
Table 7.1 PCB Sampling Locations

Table 7.2 PMP PCB Sampling Results
Table 7.3 November 2022 Well Development Summary
Table 8.1 Wet Well 3 and Wet Well 4 Sampling Results

Figure index

Figure 1.1 Facility Location
Figure 1.2 Perimeter Groundwater Trench Collection System Layout
Figure 2.1 Top of Bedrock Contour Map
Figure 2.2 Shallow Groundwater Potentiometric Surface 4Q 2022 - November 2022
Figure 2.3 Triangular Elements Near Pilot Trench
Figure 2.4 Triangular Elements in Northern Bedrock Valley
Figure 2.5 Shallow Groundwater Potentiometric Surface Within the Northern Bedrock Valley
Figure 2.6 Cross Section Location Map
Figure 2.7 Cross Section A – A'
Figure 2.8 Cross Section B – B'
Figure 2.9 North Portion of East Plant Area PCB in Groundwater Summary (2012 through 2024)
Figure 2.10 Conceptual Site Model of Trench
Figure 3.1 Pilot Trench East Side Schematic
Figure 3.2 Pilot Trench West Side Schematic
Figure 3.3 Piezometer Locations Within Pilot Trench
Figure 3.4 Groundwater Treatment Plant Layout
Figure 4.1 2004 and 2019 Thermal Anomaly Locations
Figure 5.1 Pilot Trench Monitoring Network and Hydraulic Control Monitoring Locations
Figure 5.2a Hydrographs - Northern Bedrock Valley Wells - Inside East Cover System
Figure 5.2b Hydrographs - Northern Bedrock Valley Wells - Outside East Cover System
Figure 5.3a Hydrographs - Pilot Trench Area Wells - Inside East Cover System
Figure 5.3b Hydrographs - Pilot Trench Area Wells - Outside East Cover System
Figure 6.1 On-Site Dye Trace Summary
Figure 7.1 PMP PCB Sampling Results

Appendices

Appendix A New Monitoring Well Installation and Logs
Appendix B Far-Field/Near-Field Dye Trace Report from Hydrogeology Inc.
Appendix C Field Sampling Forms
Appendix D PCB Laboratory Reports and Data Validation Memoranda

List of Acronyms and Terms

AMSL	Above mean sea level
AOC	GM Administrative Order on Consent
AOI	Area of Interest
BCO	Bedford Casting Operations
CA	Corrective Action
CSM	Conceptual Site Model
Cover System	East Plant Area Final Cover System
DNAPL	Dense non-aqueous phase liquid
DQOs	Data Quality Objectives
East Plant Area	Portion of the Facility located East of GM Drive
Facility	Property owned by GM and constituting GM's Casting Operations (formerly known either as Powertrain or Castings, Engines, and Transmissions or Global Propulsion Systems) in Bedford, Indiana
GAC	Granular activated carbon
GM	General Motors LLC
GPR	Ground penetrating radar
GUS	Groundwater Underdrain System
GWTP	Groundwater Treatment Plant
HDPE	High density polyethylene
IM	Interim Measure
IM Alternatives Report	Interim Measures Alternatives Review Report
IR	Infra-red
IWTP	GM Casting Operations Bedford Facility Industrial Water Treatment Plant
LCS	Leachate Collection System
LDS	Leak Detection System
MCL	Maximum contaminant level
MDL	Method detection limit
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
NPDES	National Pollutant Discharge Elimination System
OMM	Operation, Maintenance, and Monitoring
OMMP	Operation, Maintenance, and Monitoring Plan
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated biphenyls
PGCS	Perimeter Groundwater Control System
Pilot Trench PMP	Pilot Trench Performance Monitoring Plan
Pilot Trench PMR	Pilot Trench Performance Monitoring Report
RA	Removal Action
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RFI Report	RCRA Facility Investigation Report
RFI Addendum	RCRA Facility Investigation Report Addendum
RFI Work Plan	RCRA Facility Investigation Work Plan
SSC	Site Source Control
Tributary 3	A tributary to Bailey’s Branch in the north section of the East Plant Area
TSCA	Toxic Substances Control Act
TSCA Vault	East Plant Area TSCA-Permitted Vault
UAV	Unmanned aerial vehicle
U.S.	United States

U.S. EPA	United States Environmental Protection Agency
West Plant Area	Portion of the Facility located West of GM Drive
WW3	Wet Well 3
WW4	Wet Well 4

1. Introduction

This Pilot Trench Performance Monitoring Report (PMR) has been prepared by GHD to summarize and evaluate data collected during testing of the Pilot Perimeter Groundwater Control System (Pilot Trench) constructed at the General Motors LLC (GM) Bedford Casting Operations (BCO) Facility (Facility), located in Bedford, Indiana (Figure 1.1). The Pilot Trench was installed as part of the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) activities being conducted under the Administrative Order on Consent (AOC) (effective date August 4, 2014) between United States Environmental Protection Agency (U.S. EPA) and GM LLC for the Facility (Docket No. RCRA-005-2014-0011). The performance monitoring of the Pilot Trench was proposed in the September 24, 2019, Pilot Trench Performance Monitoring Plan (PMP) (GHD, 2019a).

The Pilot Trench is one component of the Perimeter Groundwater Control System (PGCS) designed to collect the shallow, polychlorinated biphenyl (PCB)-impacted groundwater beneath the East Plant Area in areas that it may migrate from the Facility. The capture and removal of groundwater by the Pilot Trench is intended to accentuate the naturally existing hydraulic gradients associated with a bedrock valley drainage feature located along a portion of the hydraulically downgradient Facility boundary.

The PGCS will be installed in two or more phases of work, with the Pilot Trench segment constructed to demonstrate installation techniques, attainment of trench depth at or below the competent/karstic bedrock interface, and to assess the effectiveness of the horizontal groundwater hydraulic collection zone. Installation and subsequent visual inspection of the Pilot Trench validated the appropriateness of the construction techniques and confirmed attainment of the required depth. The PMP, designed to establish the actual collection system performance, is the final component of the validation process for the Pilot Trench. The next phase of trench installation is the Phase II Bedrock Trench, which is designed to span a bedrock valley drainage feature located in the East Plant Area south of the Pilot Trench. The Pilot Trench and Phase II Bedrock Trench locations are shown on Figure 1.2.

The Pilot Trench monitoring activities discussed in this PMR are assessed within the context of the current Conceptual Site Model and are intended to further evaluate whether monitoring information and other lines of evidence indicate (1) overall groundwater flow in the northern portion of the East Plant Area is controlled by an east-west trending bedrock valley system that conducts groundwater towards it and the Pilot Trench, and (2) horizontal and vertical hydraulic capture of groundwater above the competent bedrock at the Pilot Trench effectively prevents potentially contaminated groundwater from migrating off-site at levels which would result in unacceptable risk to human health and the environment.

Monitoring wells located in select areas in the vicinity of the Pilot Trench, and periodically monitored throughout the various seasons, were used to help monitor and measure the hydraulic performance of the capture zone of the Pilot Trench. Additional monitoring locations (CH-61 through CH-73, Location A and Location B) were installed to augment the current monitoring network in this area.

Because groundwater flow directions cannot always be reliably inferred from hydraulic-head data collected from monitoring wells installed in karstic bedrock, two dye-trace investigations were conducted to support hydraulic-head monitoring data. The objectives of those studies were to compare flow directions inferred from the monitoring well data and assess whether the Pilot Trench was meeting the design objectives stated above. Results of these studies, along with other geologic, hydrogeologic and chemical data, were integrated into a multiple lines of evidence approach to evaluate the overall performance of the hydraulic capture of the Pilot Trench.

1.1 Pilot Trench PMP Goals and Objectives

The goal of the Pilot Trench PMP is to assess the horizontal and vertical capture of groundwater above competent bedrock in the northern portion of the East Plant by the Pilot Trench. The Data Quality Objectives (DQOs) established in the PMP are:

– Does the groundwater above the competent bedrock in the northern portion of the East Plant Area preferentially flow into the northern bedrock drainage valley and to the Pilot Trench?
– Do lines of evidence support a determination that the Pilot Trench operates as designed in capturing potentially contaminated groundwater present above competent bedrock, thereby preventing contaminated groundwater from migrating beyond the trench at levels which would result in an unacceptable risk to human health and the environment?

The study has gathered relevant data and information, employed various techniques and used a multiple lines of evidence approach (e.g., existing geologic conditions as observed through bedrock cores and trench face evaluation through visual and video observation, ground penetrating radar, packer-pressure testing, groundwater head measurements and evaluation and literature sources, PCB sampling of groundwater and spring water, dye-trace study results, etc.), to evaluate the performance of the Pilot Trench relative to the design intent of capturing the horizontal groundwater flow above competent bedrock. Each line of evidence is described below.

The following lines of evidence, which result in a robust assessment, were evaluated during this study:

– Evaluation of overall geologic conditions from literature and Facility-specific assessments through installation of coreholes, visual examination of cores, packer-pressure (hydraulic conductivity) testing, downhole and surface geophysics, visual examination of trench faces, and installation of new vertical and angled coreholes. This information was used to develop and refine the Conceptual Site Model (CSM) described in the Construction Certification Report (GHD, 2019b), RCRA Facility Investigation (RFI) Report (GHD, 2020b) and RCRA Corrective Measures Proposal (GHD, 2021b).
– Hydraulic head measurements from prior and current activities. Measurements obtained pursuant to the Pilot Trench PMP were collected from a suite of monitoring wells at differing elevations that will provide the direction of groundwater flow, evaluation of hydraulic gradients, and seasonal and weather-related episodic conditions. Data was collected both manually and with pressure transducers installed in select monitoring wells.
– Dye tracer study conclusions from prior and current activities. Such studies provide information on groundwater flow from point A to point B so as to create a general picture of where groundwater may be flowing through the subsurface karst system. They can also be used, in combination with other supporting lines of evidence, to assess where groundwater may not be readily flowing (within the time constraints of the study). In addition, dye introduced in a source area that subsequently travels to a distal location is not a sole indicator that any contamination would ever have been detected at the distal location, as the dye tracer is more soluble and conservative than a migrating contaminant. Conversely, the absence of dye at a distal location does not necessarily indicate that such a sampling point have never, nor would ever receive any migrating contamination from the point of introduction.
– PCB sampling results from prior and current activities from groundwater monitoring wells, the collected Pilot Trench water, and spring and surface water, as a secondary line of evidence. PCB groundwater results in karst settings are secondary lines of evidence that require other corroboration largely due to the potential that the well intersects fractures that contain immobile sediments that are then inadvertently introduced into the sample during collection activities.

Collectively, these lines of evidence adequately define the capture performance of the Pilot Trench.

1.2 Multiple Lines of Evidence Evaluation

The Pilot Trench section of the PGCS was assessed to evaluate its collection performance and its overall control of groundwater in the northern portion of the East Plant Area. Because of the complexities of the karst setting, a multiple lines of evidence approach was used to evaluate whether the Pilot Trench is meeting its design objectives.

The following lines of evidence were used to assess Pilot Trench performance:

– Conceptual Site Model. The CSM has been built over the years of assessment at the site. The knowledge of the site gained through numerous site investigations and information from literature sources has been distilled into a working CSM of site conditions that continues to be tested and validated by ongoing work.

– Pilot Trench Construction. Inspections and construction quality assurance activities document construction characteristics of the Pilot Trench.
– Spring/Seep Reconnaissance. Thermal imaging studies, field inspections, and sampling have been completed to identify potential spring and seep locations.
– Hydraulic Monitoring. Hydraulic data collected prior to and during the testing activities is used to define groundwater flow.
– Dye Trace. Near Field and Far Field dye traces were conducted as part of the PMP. Previous dye traces are also used to further support the evaluation.
– Groundwater and Surface Water Monitoring for PCBs. Although subject to limitations (GHD, 2019a), PCB sampling was included as a "secondary line of evidence" to supplement the dye trace testing and hydraulic monitoring.
– Groundwater Treatment Plant Monitoring. Groundwater treatment plant (GWTP) monitoring activities completed during the testing completed during the PMP activities are evaluated to document the water quality of groundwater captured by the collection system.

1.3 Summary of Report Layout

This PMR is organized into the following sections:

1. **Introduction.** Section 1 provides an introduction and background information on the Pilot Trench and the pilot test activities.
2. **Conceptual Site Model.** Section 2 presents the Conceptual Site Model (CSM), including a generalized description of the local geologic and hydrogeologic conditions, groundwater movement, and contaminant transport.
3. **Pilot Trench Construction.** Section 3 provides a summary of the Pilot Trench construction.
4. **Spring/Seep Reconnaissance.** Section 4 summarizes the results of a thermal imaging study completed to identify potential spring and seep locations.
5. **Hydraulic Monitoring.** Section 5 summarizes and evaluates relevant hydraulic data collected prior to and during the testing activities.
6. **Dye Trace.** Section 6 provides a summary of the results of the Near Field and Far Field dye traces conducted as part of the PMP.
7. **Groundwater and Surface Water Monitoring for PCBs.** Section 7 summarizes the results of the PCB monitoring activities.
8. **Groundwater Treatment Plant Monitoring.** Section 8 provides a summary of the GWTP monitoring activities completed during the testing and provides an evaluation of the monitoring results.
9. **Summary and Conclusions.** Section 9 provides a summary of the key findings of the testing.
10. **References.** Section 10 provides a list of the references used in completing this report.

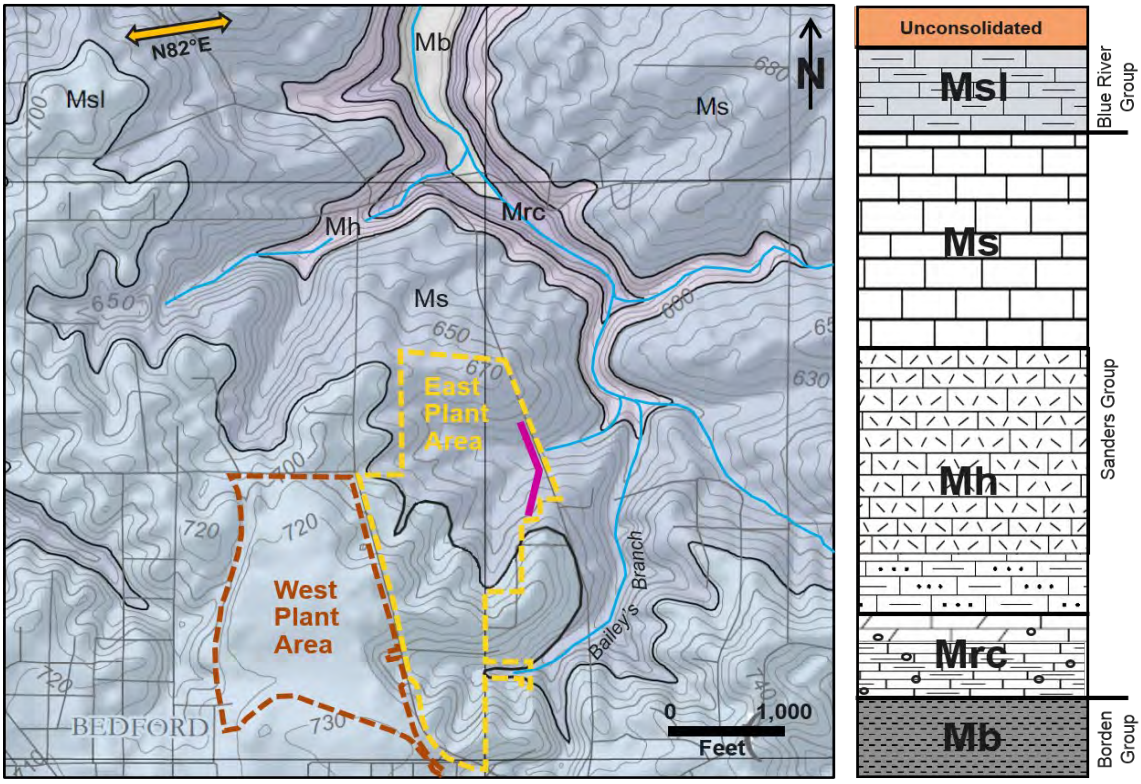
2. Conceptual Site Model – Pilot Trench Area

2.1 Physical Setting

The Facility is in the Mitchell Plateau physiographic province, a carbonate karst plateau dissected by a few major stream systems. The term karst describes a terrane underlain by soluble rocks, where openings in the rocks are widened through dissolution, creating unique networks of preferential groundwater flow and, frequently, features including caves, sinkholes, and springs. The main Facility structures are situated on a flat hilltop in the West Plant

Area (Inset 1). The land surface comprising the East Plant Area generally slopes to the east and is underlain by a veneer of recently placed fill materials situated on limestone bedrock.

The bedrock surface in the area is characterized by numerous paleo-drainage features carved into the near surface karst terrane. In the East Plant Area of the Facility there are two narrow, roughly east-west trending valleys that consolidate groundwater and preferentially convey that groundwater eastward to Bailey's Branch creek. The Pilot Trench is constructed across the northernmost of these two bedrock valleys. As described above, the Pilot Trench was designed to span the northern bedrock valley and extend to competent bedrock. Thus, the Pilot Trench, if it achieved its design objectives, would capture potentially PCB-impacted groundwater in the northern portion of the East Plant Area prior to migration off the Facility.



Inset 1. (Left) Bedrock geology map with topographic contours (after Thompson et al., 2008, with adjustments based on site-specific data); **(Right)** generalized stratigraphic column showing unit relationships. The thickness of the Blue River and Sanders Group Formations shown are relative to the approximate average thickness of formations penetrated at the site. Unit abbreviations explained in text. Yellow arrow denotes strike of regionally dominant joint set (Powell, 1976 [Plate 1]). Pilot Trench shown in magenta.

2.2 Geologic Conditions

This section provides an overview of relevant geologic conditions at and around the Facility. Details regarding geologic conditions are contained in the RFI Report (GHD, 2020b) and RFI Report Addendum (GHD, 2021a).

2.2.1 Geologic Materials

The geology of the site and surroundings consists of a thin veneer of unconsolidated clay-rich and finer grained material overlying bedrock comprised of several Mississippian geologic formations (Inset 1). In descending order (youngest to oldest), these are the St. Louis Limestone (Msl) of the Blue River Group, the Salem Limestone (Ms), the

Harrodsburg Limestone (Mh), the Ramp Creek Formation (Mrc) of the Sanders Group, and the Edwardsville Formation of the Borden Group (Mb)[1]. Karst can form in all these formations except the Borden, which is not comprised of soluble rock. Figure 2.1 depicts the current surface topography with the underlying top of bedrock surface across the Facility.

Descriptions of the unconsolidated material and bedrock formations beneath the site follow.

Unconsolidated Material

Unconsolidated, native materials overlying the bedrock at the Facility are relatively thin and consist chiefly of loess (silt deposited by wind) underlain by residuum. Residuum is mineral material that accumulated in place as the carbonate bedrock dissolved and disintegrated (chemically weathered). The residuum at the facility is described as predominantly clay with traces of silt and gravel, clayey sand, and silty sand.

Fill materials placed at the Facility consist of historically placed foundry sand, soil and sediment from the creek and other soils with varying amounts of finer-grained material and gravel. Debris such as wood, plastic, brick, limestone blocks and metal are occasionally encountered in the fill.

St. Louis Limestone

The St. Louis Limestone in Indiana is divided into two parts based on lithology: the upper St. Louis and the lower St. Louis. Only the lower St. Louis is present at the Facility. The lower St. Louis consists mostly of thin-bedded, generally micritic, limestone with thin beds of calcareous shale and silty dolostone (Carr, 1986). The average matrix (i.e., primary) porosity of samples tested from rock cores collected at the Facility was 8.6%. The St. Louis Limestone thins from the southwest to northeast across the Facility, with an average thickness of approximately 21 feet (GHD, 2020b). This formation grades into and conformably overlies the Salem Limestone.

Salem Limestone

The Salem Limestone comprises the youngest unit of the Sanders Group. The most widely known rock type of the Salem Limestone is cross-bedded calcarenite[2] that is medium to coarse grained, porous, and fairly well sorted which occurs in exceptionally thick beds. The individual grains consist of microfossils and fossil fragments cemented with calcite. Other rock types comprising the formation include biocalcirudites[3], very fine-grained argillaceous dolostone, and dense argillaceous limestone (Pinsak, 1957).

The average thickness of the Salem limestone beneath the Facility, where overlain by the St. Louis Limestone, is approximately 61 feet. In the northeast portion of the Facility, where the St. Louis Limestone has been eroded away, the Salem Limestone thins due to weathering. The base of the Salem Limestone grades into and conformably overlies the Harrodsburg Limestone. The average matrix porosity of samples tested from rock cores collected at the Facility was 9%.

Harrodsburg Limestone

The Harrodsburg Limestone has been divided in the literature into an upper and a lower unit. The upper unit at the Facility consists of bioclastic calcarenite and calcirudite with beds of variable thickness. Occasional shale laminae and small vugs are also present (GHD, 2020b). The average matrix porosity of samples tested from rock cores of the upper unit collected at the Facility was 5.4%. The thickness of the upper unit beneath the site averaged 51 feet. The lower Harrodsburg Limestone consists predominantly of fine-grained limestone with beds of variable thickness and contains interbedded shale laminae and thicker shale beds. Small vugs occur throughout the lower unit, with small siliceous geodes present near its base. The average thickness of the lower unit is approximately 26 feet. The matrix porosity of the lower unit was not measured.

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1 The bedrock geologic map prepared by Thompson et al. (2008) does not differentiate between the three formations that comprise the Borden Group. All three are denoted by the symbol “Mb”.

2 Calcarenite is a type of limestone that is composed predominantly of sand-sized carbonate grains.

3 Biocalcirudite is a limestone formed predominantly of fossil fragments that are larger than sand (>2 millimeters).

Ramp Creek Formation

The Ramp Creek Formation beneath the site consists of very fine- to medium-grained, evenly-bedded, dolomitic limestone with occasional shale seams. Vugs and geodes are numerous throughout the formation. The average thickness of the formation beneath the Facility is approximately 20 feet. The matrix porosity of the unit averaged 26%.

Edwardsville Formation

Only a few feet of the Edwardsville Formation were penetrated by borings at the Facility and consisted of relatively soft calcareous shale. The top of this formation was observed to contain a thin layer of glauconitic shale with small crystals of pyrite, which is consistent with information provided by Nicoll and Rexroad (1975). In addition to shale, Stockdale (1931) reports that the Edwardsville Formation also contains beds of siltstone and fine-grained sandstone, and that the formation thickness ranges from 40 to 200 feet in Indiana.

2.2.2 Bedrock Structure

Regionally, all the bedrock formations dip gradually toward the southwest at about 30 to 250 feet per mile (Powell, 1976). Mapping performed as part of the RFI indicates that the dip of the strata locally is on the order of 40 to 100 feet per mile. Local dip angle and direction can vary significantly from the regional trend (Perry and Smith, 1958) due to local folding of strata.

The type, orientation, and frequency of fractures are important factors governing karst development and the movement of groundwater through the bedrock. Fractures represent a form of secondary porosity of the rock. Fractures present in the bedrock are divided into two types: bedding-plane fractures and joints.

As their name implies, bedding-plane fractures occur along bedding planes. Because the bedding-plane fractures are nearly horizontal, they are the type of fractures most-commonly intercepted by vertical borings. While bedding-plane fractures were identified in all the bedrock formations penetrated, their frequency tended to decrease with depth. Also, because bedding planes are less common in the Salem Limestone, bedding-plane fractures in this formation were also less common than in the other limestone formations.

For the purposes of this CSM, joints are defined as rock fractures that are not aligned along bedding. Powell (1976) conducted an extensive study of jointing of Mississippian rocks in southwest Indiana and their implications in terms of karst formation and groundwater movement. Powell (1976) determined the jointing was common in rocks in the region, including the Blue River and Sanders Groups. The joint system in the area consists of two sets of near-vertical joints, denoted “master” and “cross”. The joints in the master-joint set normally transect more than one bed of rock vertically, are longer than cross joints, and have a preferred orientation that, in the region, is roughly east-west. Cross-joints commonly terminate at master joints, to which they are nearly normal (intercept at right angles) and generally transect only one bed. Powell (1976) notes that the spacing of master joints in the Salem Limestone ranges from 10 to 50 feet.

2.2.3 Karst

Karst is a geologic terrain formed from the dissolution of soluble bedrock by the movement of surface water and groundwater. Such terrains often have diagnostic landforms like sinkholes and hydrologic features such as erosional drainageways, sinking streams and springs. A karst aquifer is comprised of bedrock whose permeability has been enhanced by dissolution processes which enlarge fractures, voids and other pathways within the rock. These enlarged pathways promote preferential surface water and groundwater flow through the bedrock. A karst aquifer can be present even if there are no karst landforms nearby.

Regionally, karst has been shown to form in all four of the limestone formations that underlie the site (the St. Louis, Salem, Harrodsburg, and Ramp Creek). Although it is calcite-rich, thick-bedded, and possesses the requisite secondary porosity, the Salem Limestone appears less susceptible to karstification than does the St. Louis Limestone (Thornbury, 1969).

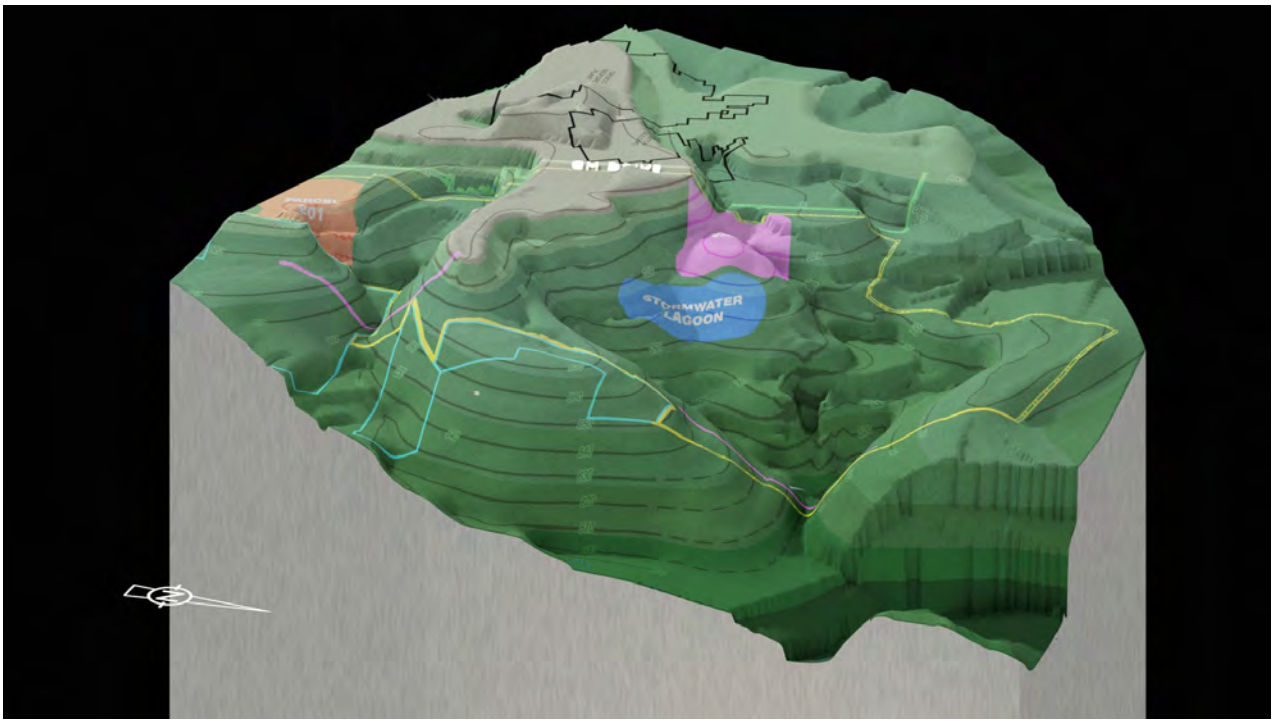
Karst aquifers represent triple-porosity systems comprised of primary (matrix), secondary (fracture), and tertiary (solution or “conduit”) porosity. Worthington, et al. (2000) examined the storage and movement of groundwater in four

well-studied karst aquifers. They found that, in all cases, more than 90% of the groundwater in the aquifers was stored in the matrix porosity and more than 90% of the flow through the aquifers occurred in the conduit porosity, with fractures playing an intermediate role. Hydraulic-head and groundwater-quality data from wells screened across conduit porosity, therefore, are most important in assessing the movement of contaminants dissolved in, or adsorbed to particulates moving with, groundwater in the bedrock.

Solution-widened pathways in karst aquifers enlarge and become integrated over time forming networks of conduits that typically have apertures in the millimeter to centimeter range (Worthington and Ford, 2009). These networks converge in the downgradient direction, focusing groundwater flow, and discharging at springs (including seeps).

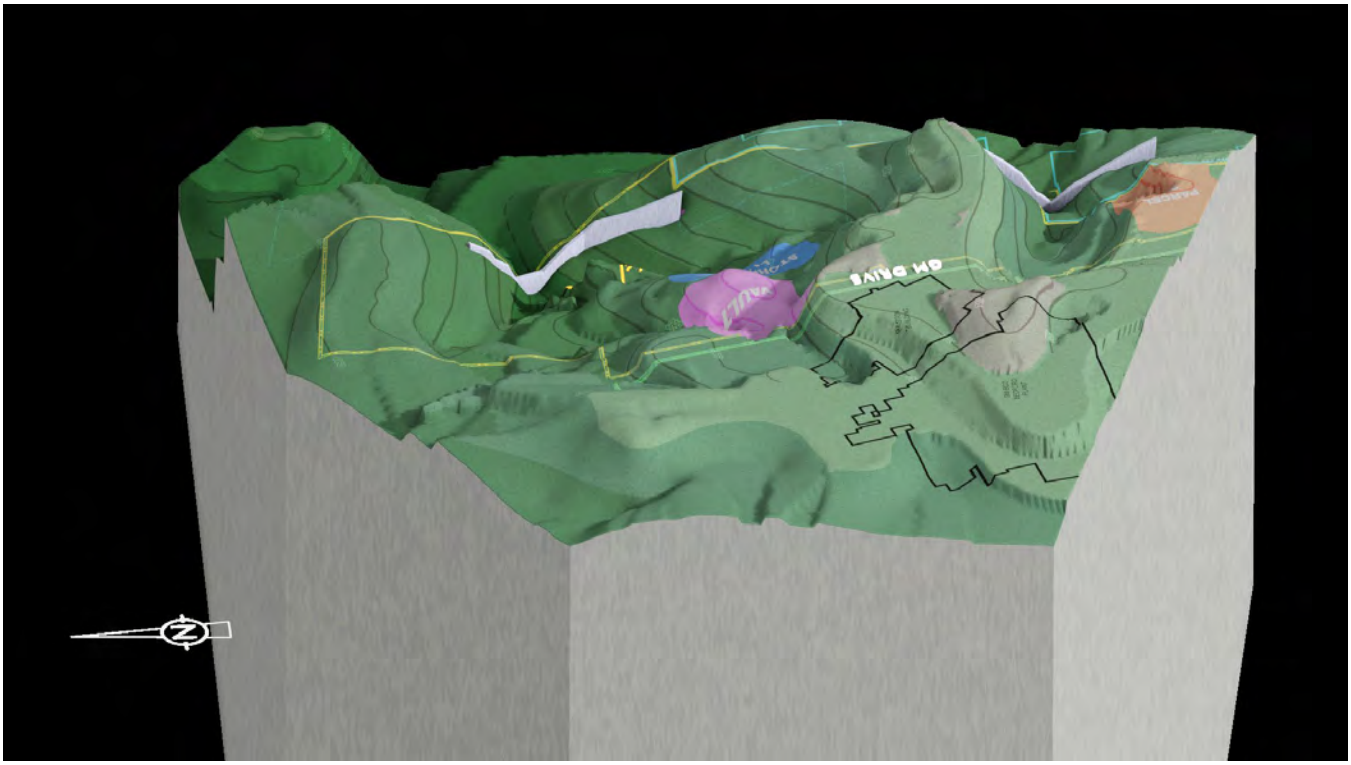
2.2.4 Facility Bedrock Topography

As shown on Inset 1, the Facility and surrounding surficial bedrock surface has been dissected with paleo-drainageways that control surface water flow and shallow groundwater flow. At the Facility, these paleo-drainageways into the bedrock are particularly developed (Inset 2) in the East Plant Area, whereas the West Plant Area appears to be impacted less significantly and preferentially only along the margins (Inset 3).



Inset 2. Bedrock surface of East Plant Area (looking westward) shows two well developed paleo-drainage features in the foreground, one broader system in the northern portion and a more narrowly incised feature in the southern portion. Vertical Exaggeration = 4x. Pink lines indicate the Pilot and Phase II Trench locations. Yellow and green lines indicate the East Plant Area and West Plant Area boundaries, respectively. Light blue lines indicate GM-owned residential properties.

Within the East Plant Area there are two well developed bedrock valley drainageways. One such drainageway in the northern portion of the East Plant Area consists of a generally east-west trending feature has three smaller incised bedrock valleys connecting with it from the south and another from the north. The valley axis of this system has substantial topographic relief with a base that dips strongly to the east. The valley base is up to 100 ft below the elevation of the bedrock high to the south, and up to 60 ft below the bedrock high to the north. South of the bedrock high in the midsection of the East Plant Area is the second east-west trending paleo-drainageway in bedrock. This smaller southern bedrock valley system has two minor incised valleys connecting to it from the south and also has a base that dips to the east. The southern bedrock valley axis has approximately 50 ft of relief measured from the bedrock highs to the north and west, and approximately 40 ft of relief from the south.



Inset 3. Bedrock surface in the West Plant Area in the foreground (looking eastward) that, while showing less evidence of incised paleo-drainage features, exhibits a sloping bedrock surface to the north, west and south. Vertical Exaggeration = 4x. Grey walls represent the Pilot and Phase II Trench locations. Yellow and green lines indicate the East Plant Area and West Plant Area boundaries, respectively. Light blue lines indicate GM-owned residential properties. Black lines indicate the main Facility building footprint.

Within the West Plant Area there are no strongly incised valleys apparent, but rather a bedrock high towards the midsection which slopes more gently to the north, west and south. The bedrock surface drops off to the east along the eastern margin of the West Plant Area, impinged by several of the paleo-drainage valleys that dominate the East Plant Area.

These paleo-drainage features within the bedrock in the East Plant Area have consolidated surficial surface water flow, draining water to Bailey's Branch Creek. This preferential flow of surface water leads to well-developed karst features in these bedrock features over time. When incorporated into the hydrogeological system these bedrock valleys influence shallow groundwater movement because these karst features, such as solution enlarged fractures, result in preferential groundwater flow within the shallow bedrock as described above.

2.3 Groundwater Movement

Groundwater in karstic terrain moves, on a macro scale, from areas of relatively higher to lowest pore pressure. On this macro scale water flows principally within regions of the karstic rock where the voids are larger and more densely inter-connected, thus allowing easy communication (i.e., low pressure gradient) between them. On a micro scale, groundwater in the matrix porosity, or in closed or poorly interconnected fractures, drains more slowly towards nearby inter-connected fractures and/or conduits and requires much higher pore pressure gradients to achieve such movement. In practice, groundwater within these interconnected fractures and conduits drains relatively rapidly through the bedrock and discharges either to the ground surface as seeps and springs or to seeps within surface water bodies.

In the East Plant Area, as described in the RCRA Facility Investigation Report (Section 4.4.2), these interconnected conduits are preferentially located in the upper portion of the karstic rock. This vertical fracture/void density gradient

tends to result in a strong shallow horizontal groundwater flow component in the East Plant Area. Furthermore, a comparison of groundwater elevation data from wells screened into the shallow bedrock (i.e., in the St. Louis or upper Salem Limestones) with those screened deeper in the bedrock (i.e., in the Harrodsburg Limestone or Ramp Creek Formation) demonstrates that a strong downward gradient exists. If all the limestone formations above the Edwardsville Formation represented one well-integrated karst aquifer, such a large vertical gradient would not exist. This observation is evidence that an interval of more competent rock exists at depth beneath the East Plant Area that retards downward movement of groundwater.

In the northern portion of the East Plant Area, where the Pilot Trench is located, potentiometric mapping of groundwater in the shallow bedrock via monitoring wells, along with previous dye tracer testing results, suggests that prior to trench installation groundwater flowed generally into the northerly bedrock valley system and to the east, with little vertical flow, and finally discharged to springs located along the historical and current Tributary 3.

Although more complicated in karstic systems, groundwater flow is typically characterized using water elevations to map the height of the water table. Groundwater flows generally from higher to lower elevations so the direction of groundwater flow is perpendicular to the elevation contours and towards the lowest elevation. The November 2022 groundwater flow map is shown on Figure 2.2. These potentiometric surface contours were developed using commercial software and refined by the GHD geologist using site information and professional judgement. Although groundwater elevations often change seasonally and would be expected to change after the installation of a collection system such as the Pilot Trench, the general pattern of groundwater flow in the northern portion of the East Plant Area has not changed significantly over the past 15 years or longer.

As an additional assessment of the groundwater elevations in the immediate vicinity of the Pilot Trench was performed as a confirmatory step of this methodology because of the karstic nature of the hydrogeology. GHD employed a “three-point problem” methodology to mathematically determine groundwater flow trajectories, or flow directions, at multiple discrete areas near the Pilot Trench. Applied to groundwater flow, this methodology is a technique which uses three points of groundwater elevation measurements from locations in close proximity to each other to establish a mathematic solution of the mean flow direction in the area defined by the three monitoring wells. The trajectory of groundwater flow within the cluster is directionally away from the highest measured water level elevations and towards the lowest elevation. The resulting trajectories developed using November 2022 hydraulic head measurements from adjacent well clusters, provide a more detailed representation of local groundwater flow within the specific area represented by the three data points. Multiple trajectories in the area of the Pilot Trench can also be developed from individual three well clusters in order to visually combine them into a more intricate representation of the broader flow regime adjacent to the Pilot Trench.

Four clusters within the northern bedrock valley upgradient of the trench, each cluster comprised of three monitoring wells, were utilized to further depict groundwater flow near the Pilot Trench. These groupings, include CH-49, IPT-1, and CH-22; CH-22, CH-20, and IPT-6; CH-20, IPT-6, and CH-66; and 9-4, CH-20, and CH-52. The clusters upgradient of the trench are shown on Figure 2.3 and provide flow direction within the clusters. The four clusters indicate local groundwater flow is directed toward the Pilot Trench indicating that shallow groundwater is being intercepted by the Pilot Trench.

A total of three well clusters near the ends of the trench were also evaluated to assess local groundwater flow just north and south of the Pilot Trench. These clusters include locations: MW-X261Y356D-5, CH-49, and CH-67; CH-49, CH-67 and CH-22; and CH-68, CH 70 and CH-66. The clusters near the ends of the trench are shown on Figure 2.4 and provide flow direction within the clusters. These three clusters indicate that shallow groundwater is flowing from the bedrock high areas toward the central portion of the northern bedrock valley where the shallow groundwater will be intercepted by the Pilot Trench.

Groundwater contours near the center of the trench, where constant pumping created a more complex data set, and downgradient of the trench, where the trench should have little influence on groundwater movement, were also carefully evaluated to ensure there are no subtle indications that groundwater east of the Pilot Trench is not captured. These wells included IPT-6, CH-61, CH-62, and CH-63. Specifically, IPT-6 is located on the upgradient side and within the Pilot Trench, less than 60 feet from Wet Well 4 (WW4), where groundwater is collected and pumped to the groundwater treatment system. Due to consistent pumping within the Pilot Trench, IPT-6 represents an artificial low in

the shallow groundwater system. This artificial low does not represent baseline groundwater conditions of groundwater flow within the karst system, rather it is representative of the hydraulic interconnection with the Pilot Trench and its ability to capture groundwater upgradient of the physical trench. CH-61, CH-62, and CH-63 are located downgradient of the Pilot Trench, where targeted groundwater capture does not occur because of the grouted sheet pile wall on the east side of the trench. These locations east of the trench are indicative of conditions typical of a karst system without the influence of a pumping system and are thus consistent with previous groundwater contour patterns indicative of heterogeneous flow in karst aquifers.

To better characterize groundwater movement in karst aquifers, dye tracer studies are often used to supplement hydraulic data collected from monitoring wells and therefore provide better overall confidence in the characterization of groundwater flow. The Near Field and Far Field tracer studies completed during the PMP can be used to further assess the effective zone of capture of shallow groundwater by the Pilot Trench. As described in more detail in Section 6, the dye trace studies, combined with groundwater elevation monitoring, indicates that (1) groundwater west of the East Plant Area flows easterly into the northerly bedrock valley system (2) groundwater just north of the East Plant Area flows southeasterly, into the northerly bedrock valley system, (3) groundwater in the central area of the East Plant Area, north of the bedrock high, flows north and northeasterly into the northerly bedrock valley system, (4) groundwater within the northerly bedrock valley system flows towards the Pilot Trench and (5) groundwater above the competent bedrock that is upgradient of the Pilot Trench is fully captured by the trench.

To provide increased detail around the Pilot Trench of the groundwater flow, Figure 2.5 provides a zoomed in view of horizontal groundwater flow directions near the Pilot Trench. Cross-sectional views of shallow groundwater flow near the Pilot Trench (Figure 2.6) are illustrated in two hydrogeologic cross sections near the Pilot Trench (Figures 2.7 and 2.8). One cross section (Figure 2.7) is oriented north to south (roughly paralleling the Pilot Trench) and the second cross section (Figure 2.8) is oriented perpendicular to the Pilot Trench. The two cross sections illustrate the groundwater flow based on measured water levels around the trench and how the Pilot Trench intercepts shallow groundwater flow. The bedrock aquifer is recharged by infiltration of precipitation and in karst terranes where recharge during precipitation events can be rapid, well connected conduit systems can result in localized flow reversals. However, it is noted that rapid responses occur at greater magnitude at this site at wells that are not under the cover system materials while those wells located under the cover system show more muted responses to these events (Section 6 of this PMR provides a summary of hydraulic monitoring).

2.4 Contaminant Transport

Prior to the RCRA Corrective Action activities, the East Plant Area was used for the disposal of wastes, including PCB-impacted storm water, soil, and debris. The historical storm water pond had been removed from service, the area cleaned, and the unit replaced with a new storm water retention pond constructed with a liner system. Extensive soil sampling was conducted to assess the nature of the fill material throughout the East Plant Area. The East Plant Area Interim Measure (IM) resulted in the removal and on-site containment of PCB material ≥ 50 mg/kg in the landfill vault, and the placement of additional <50 mg/kg floodplain soil and sediment as grading material prior to installation of a multi-component cover system. During this work in the northern portion of the East Plant Area, as well as subsequent monitoring, there was no evidence of DNAPL.

Except for groundwater testing within the Groundwater Underdrain System (GUS), PCBs have not been consistently detected in coreholes upgradient of the Pilot Trench within the northern portion of the East Plant Area (Figure 2.9). PCBs have been rarely detected (detected in 6 of 61 samples collected between 2016 and January 2023), and only at low concentrations (maximum total PCB concentration of 0.3 ug/L) in samples of the Pilot Trench effluent (WW4), indicating that PCBs have not been potentially migrating appreciably in the groundwater collected by the trench. Several locations, such as CH-20, CH-22, CH-23 and 9-4 have shown concentrations of PCBs in groundwater during some sampling events, but the consistency of detections is not apparent. For example, CH-20 has shown two detections of PCBs over 17 events, CH-22 has shown no detections, and 9-4 has had four detections over 18 events, over a period spanning 2012 to 2022. Fill soils in the East Plant Area of the Facility have lower levels of PCBs, typically much less than 50 mg/kg. Such levels typically do not lead to appreciable levels of dissolved PCBs in groundwater because PCBs have low solubility and a high affinity to adhere to soil particles. Groundwater just

upgradient of the Pilot Trench, including that issuing from select former seeps and springs, which are consolidated and collected within Wet Well 3 (WW3), has been shown to contain PCBs prior to the installation of site source controls and the Pilot Trench (GHD, 2020b) in either the total or dissolved fraction. Specifically, these areas would include Springs A through H, Spring N, Spring East of Storm Pond, Spring East of Storm Pond-2, Eastern Seep Area 01, and Eastern Seep Area 02. These spring collection systems, which also receive groundwater migrating from the GUS, were consolidated into the Wet Well 3 collection system in 2005. WW3 data is shown on Figure 2.9.

The presence of PCB detections in groundwater samples located beyond the Pilot Trench as a sole line of evidence is insufficient in determining the effectiveness of the Pilot Trench because PCBs have low solubility and a high affinity to adhere to soil particles. Positive detections of PCBs in groundwater downgradient of the Pilot Trench could be remnant artifacts of historic deposition or migration that have become entrained on soil particles and retained within a void or fracture. If that void or fracture is intersected by an installed monitoring well these materials can be inadvertently introduced into the groundwater sample collection process or they may become intermittently mobile in the fracture network of karstic terrain. Therefore, PCB detections are considered a secondary line of evidence to be used with caution and in support of other corroborating lines of evidence in this assessment of the trench effectiveness.

Site Source Control (SSC) systems were installed in the northern portion of the East Plant Area as interim measures based on the detection of PCBs during spring sampling activities. These systems are connected to WW3, and this collected water has been routed to a water treatment system instead of allowing it to migrate into the Pilot Trench system (i.e., WW4). As noted in the previous section, springs represent discharge points for conduit networks. These springs result from natural conduit networks that are convergent and drain nearly all the local groundwater moving through the bedrock. Groundwater in the primary porosity and non-weathered fractures moves slowly toward, and discharges into, the conduit networks. The presence of springs upgradient of the Pilot Trench indicates that one-or-more local conduit networks exist in the area and are collecting and transporting impacted groundwater to the SSC systems. Based on this information, it is possible that the impacted groundwater upgradient of the Pilot Trench in this area is being collected by these SSC systems, which would explain the relatively rare detection of PCBs in water pumped from the Pilot Trench.

If a deeper conduit network in the bedrock exists beneath the base of the Pilot Trench, and impacted groundwater has reached such a network, the impacted groundwater would migrate through the network and would be expected to discharge to one-or-more springs located along Tributary 3 downstream of the Pilot Trench or along Bailey's Branch. While no such network has previously been identified, the dye trace studies in the PMP would reveal any such conduit if it did exist.

PCB concentrations in groundwater migrating through fractures toward conduit networks will be significantly attenuated by matrix diffusion, as noted by Dr. Kueper in Appendix J.2 of the RFI Report (GHD, 2020b). Additionally, due to the converging nature of karst conduit networks, contaminant concentrations in groundwater flowing through such networks are commonly reduced with distance downgradient, as tributary conduits containing clean groundwater join the flow system. Seepage of clean groundwater into the network from the rock matrix and unweathered fractures would also play a role in reducing concentrations (i.e., through dilution).

Based on the above discussion, and the length of time since the release of the contaminants, it is likely that the maximum extent of groundwater impacts due to sources in the northern portion of the East Plant Area has been attained; in other words, the distribution and migration of contaminants in this area is at a quasi-steady state. Under this condition, contaminant concentrations will gradually decline over time. Short term fluctuations in contaminant concentrations detected in samples collected from monitoring wells and springs can be expected. Storm events of a certain magnitude may create ephemeral, turbulent-flow conditions. Such "threshold" storms may temporarily mobilize stored contaminants, potentially including contaminants sorbed to aquifer sediments. This condition would be more accentuated for locations outside of the cover system and may not be applicable to those locations under the cover system.

2.5 Summary

Bedrock in the Facility area consists of four limestone formations deposited atop the Borden Group, a thick sequence of insoluble rocks – predominantly shales, siltstones, and fine-grained sandstones. The area around the Facility is characterized by karst terrane and the bedrock geology in the East Plant Area of the Facility is dominated by two incised paleo-drainage features, or bedrock valleys, separated by a bedrock high. The Pilot Trench is constructed across the northernmost of those two bedrock valleys in the north-eastern portion of the East Plant Area and extends down into competent bedrock.

In karst terrane certain pathways in the rock are enlarged by dissolution caused by the flow of surface water and groundwater. This would be particularly pronounced within the paleo-drainageways. Groundwater in this karstic terrain moves primarily through these enlarged pathways within the conduit network from areas of relatively higher to lowest pore pressure. These pathways converge downgradient within the hydrogeologic flow regime, forming an enhanced drainage network in the rock, and discharge at springs.

In the East Plant Area, these interconnected conduits are preferentially located in the upper portion of the karstic rock, which tends to result in a strong shallow horizontal groundwater flow component. The relatively competent rock below the karstic rock tends to retard downward movement of groundwater. In the northern portion of the Facility where the Pilot Trench is located, potentiometric mapping of groundwater in the shallow bedrock, supported by dye tracer testing, suggests that prior to trench installation shallow groundwater flowed generally into the northerly bedrock valley system and to the east towards the Facility boundary within the bedrock valley, finally discharging to springs located along Tributary 3 and Bailey's Branch Creek.

Groundwater samples collected from monitoring wells that are well connected to the network represent the quality of groundwater moving through the site. However, as the bedrock dissolves, crevices are enlarged, and cavities are formed. While mitigated as a result of the installation of a cover system, unconsolidated material can move into enlarged crevices and cavities in the rock and can be intermittently transported through the conduit network. This makes interpretation of groundwater results challenging. In addition, storm events may cause a temporary reversal of flow – from the conduits into narrower fractures and other openings in the rock. This process can form a "halo" of contaminants outside the conduits.

Characterizing the movement of groundwater and contaminants in karst aquifers is made challenging by their extreme heterogeneity and anisotropy (i.e., unpredictability). Characterization approaches that work definitively in most other settings do not work as well in karst aquifers. Data collected from monitoring wells, while a necessary part of a characterization effort, must usually be supplemented with other data, including those collected from tracer studies.

Samples from springs represent the average quality of the water drained by the conduit network feeding them. Such data are useful for assessing potential exposure risks posed by the spring water as well as for detecting potential changes in contaminant-transport conditions over time.

Given the nature of the karst aquifer at the Facility and the length of time since the release of the contaminants, the maximum extent of groundwater impacts due to sources in the northern portion of the East Plant Area is interpreted to have been attained. Under this condition, groundwater contaminant concentrations will gradually decline over time. Figure 2.10 presents the Conceptual Site Model for the construction of the Pilot Trench (Section 3). This block diagram attempts to conceptually illustrate some of the groundwater movement and potential contaminant migration mechanisms discussed above.

3. Pilot Trench Construction

3.1 Pilot Trench Location and Description

The Pilot Trench is approximately 750 feet in length and was installed at the northeast corner of the East Plant Area along the downgradient extent of the groundwater table beneath the property. The surface expression of the Pilot Trench alignment is perpendicular to, and spans, the geomorphic bedrock valley feature defined by a paleo-drainage channel referred to as Tributary 3. Tributary 3 is the surface expression of a subsurface ravine incised into bedrock. The Pilot Trench was designed to span the width of the bedrock valley and be seated in competent bedrock so potentially impacted groundwater would not flow around or beneath the trench.

Groundwater flow in karstic shallow bedrock regimes, such as present beneath the Facility, are typically highly influenced by bedrock topography. Figure 2.1 shows the top of bedrock contours beneath the East Plant Area, with the Pilot Trench shown in the northeast corner. The approximate current and historical bedrock drainage channels are indicated by large arrows directed to the northeast.

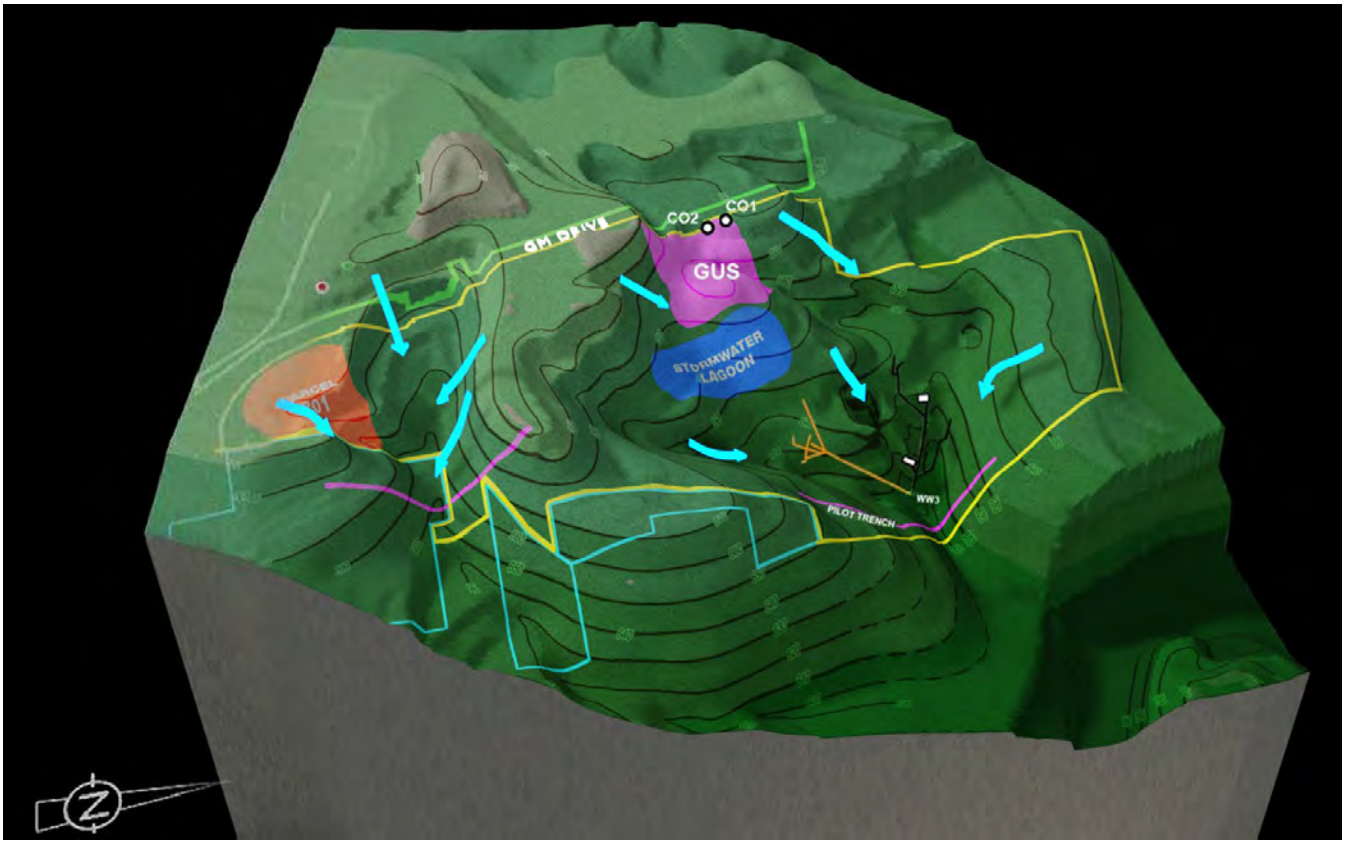
The location and alignment of the Pilot Trench was designed to work in conjunction with the local geology/hydrogeology and other East Plant Area Interim Measures (IMs) to provide horizontal control of groundwater migration in the northern portion of the East Plant Area. The Pilot Trench exploits the intrinsic control of groundwater flow by the bedrock topography, which includes the northeasterly trending bedrock valley that consolidates the shallow bedrock groundwater flow as well as surface water flow along the topographic and bedrock valley axis. The Pilot Trench transects, and is oriented roughly perpendicular to, this bedrock valley. In addition, the East Plant Area Final Cover System (Cover System) has reduced overall local groundwater recharge, thereby moderating and/or reducing the flow of groundwater through the karstic rock and into the Pilot Trench.

3.2 Pilot Trench Components

Construction of the Pilot Trench consisted of removal of the overlying overburden soil, excavation of a bedrock trench, installation of collection system components, backfilling of the trench, and re-construction of the engineered cover system. The bottom design elevation of the Pilot Trench was determined based on direct observation of bedrock cores collected during pre-design drilling activities, and further verified by geophysical testing performed after removal of the overburden and prior to excavating the bedrock. The Pilot Trench design depth based on corehole data was corroborated by the ground penetrating radar (GPR) survey and video inspection (GHD, 2019b). The base of the excavated trench was positioned just below the bottom of identified transmissive fractures (both vertical and horizontal) in the epi- or upper karst features in the erosional bedrock surface. These fracture features are the main conduits for shallow bedrock groundwater movement in a karstic environment. The general hydraulic gradient along the Pilot Trench was designed to allow collected groundwater to naturally fall via gravity to a water collection sump, which then would pump the water to the groundwater treatment system, located to the south.

The Pilot Trench (2 feet wide, with variable depth) was cut into bedrock using a Trencor 1660 rock trenching machine. The rock cuttings were removed from the trench to allow for visual inspection of the trench walls and floor, along with obtaining survey data, to determine if an acceptable depth had been achieved. After the trench depth was confirmed by field survey and cleaned (i.e., rock removed), the collection system was installed.

The Pilot Trench was installed approximately 750 feet in operation length, installed at the northeast corner of the East Plant Area Cover System, along the downgradient extent of the property. The horizontal alignment is approximately perpendicular to the karst valley feature defined by a drainage channel known as Tributary 3. Depth below grade reaches approximately 38 feet below ground surface at the south end and approximately 28 feet below ground surface at the north end with the shallowest depth below grade occurring near the mid-point with a depth of approximately 8 feet below ground surface. The horizontal extent is shown in the block diagram below.



Inset 4. Bedrock surface of East Plant Area in foreground showing location of Pilot Trench, Site Source Controls (SSCs) associated with WW3, and direction of groundwater flow (blue arrows) based on hydraulic head measures collected after construction of the Pilot Trench. Vertical Exaggeration = 4x.

A physical barrier of vinyl sheet piling was installed on the east (back or downgradient) wall of the trench. The purpose of the vinyl sheet piling was to reduce the potential for groundwater entering the trench from the upgradient area to the west from passing through the downgradient trench wall. A cement-bentonite grout mixture was then poured on the trench floor to a depth of 6 inches up the sheet piling. The grout provided a low permeability seal to prevent water entering the trench from going beneath the bottom of the vinyl sheet piling, as well as to reduce the potential for downward migration.

A 6-inch diameter perforated High Density Polyethylene (HDPE) drainpipe was placed on top of the hardened grout to facilitate conveyance of collected groundwater via gravity drainage towards WW4.

The WW4 chamber was constructed to house two dual vertical 2-foot diameter HDPE sumps at the low point within the Pilot Trench. Each sump was designed to accept a single extraction pump and to permit the free flow of groundwater into WW4 from the 6-inch diameter HDPE drainpipe. Water collected in WW4 is transferred to the GWTP for filtration and granular activated carbon (GAC) treatment prior to discharge at Outfall 004 under the National Pollutant Discharge Elimination System (NPDES) Permit No. IN0064424.

The excavated rock trench was backfilled around the HDPE drainpipe and to the top of the bedrock with clean imported granular material. Piezometers were installed along the east (downgradient) wall within the Pilot Trench, both along the upgradient and downgradient sides of the sheet piling. Above the granular backfill, a geotextile layer was placed to act as a filtration control to separate the granular backfill from the overlying soil. In the area where the trench extends beneath the Cover System, a sand component was added over the geotextile layer to create a vertical extension of the Pilot Trench. This extension creates a downward pathway into the trench for overburden groundwater that has been in contact with the cover system grading soils. Schematics of the Pilot Trench have been included as Figure 3.1 through Figure 3.3.

For the portion of the Pilot Trench located within the limits of the East Plant Area Cover System, the area was restored consistent with the previously installed cover system design. In areas outside of the cover system, common fill was used to return the topography to pre-construction elevations.

A full description of the Pilot Trench construction can be found in the Pilot Trench Construction Certification Report (GHD, 2019b).

3.3 Groundwater Treatment Plant (GWTP)

A GWTP was designed and constructed for treating PCB-impacted groundwater collected from the Pilot Trench (WW4), SCC Wet Wells 1, 2, and 3 (WW1, WW2, and WW3), Vault collection systems [GUS, leak detection system (LDS), and leachate collection system (LCS)] and any other collection system installed in the future, with the treated water being discharged to Bailey's Branch Creek (Creek) via Tributary 3 under a NPDES permit. The treatment processes include an equalization tank, Orival™ filtration, and GAC. Construction of the GWTP occurred concurrent with the Pilot Trench construction. A full description of the GWTP construction can be found in the Operation, Maintenance and Monitoring (OM&M) Manual (GHD, 2016). The layout of the GWTP has been included as Figure 3.4. Since July 2016, the constructed GWTP has treated and discharged approximately 43 million gallons of groundwater in accordance with the requirements of NPDES Permit No. IN0064424.

4. Spring/Seep Reconnaissance

Prior to initiation of the media sampling and dye trace study components of the PMP, an aerial reconnaissance was conducted in the Bailey's Branch Creek system, including its tributaries and surrounding floodplain near the Facility. The survey was conducted to identify any groundwater discharges, such as seeps or springs, that may be discharging into the creek directly or within its floodplain. Karst terrain is often characterized by springs which, when combined with dye trace studies, can be used to indicate or rule out specific groundwater source areas.

4.1 Background

An earlier aerial reconnaissance had been completed in 2004 (EagleView Industries, 2004). However, since the time of the 2004 aerial reconnaissance, much of Bailey's Branch (including tributaries) were remediated by physically removing soil and sediment contaminated with PCBs. Remedial measures also consisted of installation a physical barrier (concrete lining) along the sides and bottom of a short segment of the creek east of the Facility to limit the amount of surface water that infiltrates into the karstic groundwater system via swallets located within the limestone unit(s). The extensive sampling of springs and seeps along the creek system at that time did not identify any potential PCB migration in groundwater from the Facility to off-site springs and seeps (CRA, 2007 and CRA, 2009).

In preparation for implementing the Pilot Trench PMP, it was necessary to define the current extent of potential springs and groundwater seeps that remained along Bailey' Branch, Tributary 3, and the Northern Tributary. The 2004 (EagleView Industries, 2004) and 2019 survey results (GHD, 2020a) were combined to provide a thorough characterization of potential springs and groundwater seep locations.

4.2 Goal

The goal of the surveys was to identify points of groundwater discharge into the creek system that could represent potential groundwater flow from the Facility. If discharges of groundwater from the Facility were identified from the dye trace testing, they would be sampled to determine if the groundwater discharges are PCB-impacted.

4.3 Methodology

The reconnaissance was conducted in the early spring (March 20 to 22, 2019) using an unmanned aerial vehicle (UAV) equipped with an infra-red (IR) imaging camera to detect water emanating from the ground onto the surface or discharging from the ground into the creek. Groundwater is typically present at a depth sufficiently below ground surface to remain at a relatively constant temperature throughout the year. Annual ground and surface water temperatures vary throughout the year, with colder conditions present during the winter months and warmer during the summer months. It is the temperature differential between the ground, surface water and groundwater that can be measured most efficiently during the winter and summer months. The temperature contrast is measured via the IR light spectrum with specialized cameras.

In the 2004 survey, the IR spectrum was mapped from the air using an IR camera affixed to a helicopter. This survey of approximately six square miles was conducted on March 20 through 21, 2004 (the 2004 survey report is Appendix Q of the RFI Report [GHD, 2020b]).

The locations identified during the 2019 survey were combined with those from a 2004 aerial survey and were visually inspected during a field survey. The surveys resulted in the identification of 23 locations within the area of coverage using the UAV and 39 locations from the 2004 helicopter survey. Finally, these locations were assessed for the possibility of representing groundwater discharges from the Facility. Those locations that could not be ruled out (e.g., a spring location topographically higher than the elevation of the Facility would not be expected to represent groundwater discharge from the Facility) were further considered for inclusion into the dye trace study and PCB sampling program.

4.4 Results

The surveys resulted in the identification of 23 locations within the area of coverage using the UAV and 39 locations from the 2004 helicopter survey that were considered for use in the dye trace study and PCB sampling program. The anomaly locations and associated PCB sampling results are shown on Figure 4.1. On November 5, 2020, HGI visually inspected the thermal anomalies where property access had been granted. The findings of this ground reconnaissance are summarized below.

– BDFD A, B, C – These locations were checked for flow for the duration of PMP dye trace sampling. No flow was observed at these locations. BDFD B could possibly be the same location designated as Spring 021-004 which was sampled for duration of the PMP dye traces.
– BDFD D – This location likely is the same location as Spring 021-002, which was sampled for the duration of the PMP dye traces.
– BDFD E – Property access to this location was requested but not granted by the property owner. Possible discharge from this location was addressed by sampling downstream at BB-9.
– BDFD F – Property access to this location was requested but not granted by the property owner. Possible discharge from this location was addressed by sampling downstream at NT-2.
– BDFD G – This location likely corresponds to Spring 009, which was sampled for the duration of the PMP dye traces.
– BDFD H – This location was checked for flow for the duration of PMP dye trace sampling. No flow was observed from BDFD H.
– BDFD I – BDFD I was checked for flow and sampled when flow was observed for the duration of the PMP dye traces. BDFD I was typically dry.
– BDFD J, K, L – Property access to these locations was requested but not granted by the property owner. Possible discharge from these locations was addressed by sampling downstream at NT-2.
– BDFD M, N - Property access to these locations was requested but not granted by the property owner. Possible discharge from these locations was addressed by sampling downstream at BB-11.

– BDFD O, P – Property access to these locations was requested but not granted by the property owner. Possible discharge from these locations was addressed by sampling downstream at BB-12.
– BDFD Q, R, S, T, U, V - Property access to these locations was requested but not granted by the property owner. Possible discharge from these locations was addressed by sampling downstream at BB-14.

5. Hydraulic Monitoring

The hydraulic monitoring locations used to assess performance of the Pilot Trench are shown on Figure 5.1 and listed in Table 5.1. The hydraulic monitoring locations include previously existing monitoring wells and piezometers, newly installed monitoring well locations, and a surface water staff gauge located on Tributary 3. Table 5.1 also summarizes the hydraulic monitoring schedule, methods, and rationale for each location. A description of the construction methods and the well logs for the newly installed monitoring wells are provided in Appendix A.

5.1 Goal/Background

The hydraulic monitoring was conducted to confirm the inferred horizontal flow patterns are consistent with historical monitoring, both temporally and seasonally, and show flow towards the Pilot Trench. The Pilot Trench was constructed across the northernmost of the two bedrock valleys in the East Plant Area. The bedrock valleys are karstic, comprised and underlain by soluble bedrock. Groundwater in karstic terrain moves on a macro scale, from areas of relatively higher to lowest pore pressure. On a micro scale, groundwater drains more slowly toward inter-connected fractures and/or conduits and requires much higher pore pressure gradients to achieve movement. In the northern portion of the East Plant Area, the bedrock aquifer is recharged by precipitation. Hydraulic monitoring of groundwater in northern bedrock valley system is important to understand groundwater flow upgradient to the Pilot Trench.

5.2 Methodology

In order to assist with understanding of shallow groundwater flow, hydrostatic water levels were recorded from monitoring of existing coreholes/wells/piezometers and proposed monitoring wells located downgradient and upgradient of the Pilot Trench. Water level recordings from both the transducers, as well as manual readings, were used to help to evaluate the Pilot Trench performance. Pressure transducers/data loggers were set to record head readings every 15 minutes and were downloaded monthly (the back-up sump at WW4 was monitored with a pressure transducer so that the working pump did not interfere or damage the equipment). Hydraulic head measurements were recorded more frequently during the first month of monitoring, then monthly, then quarterly in order to increase the opportunity to capture rainfall events and variable pumping rates from the operation of the trench.

5.3 Evaluation of Hydraulic Gradients

Hydraulic gradients were evaluated at multiple well couplets located upgradient of the Pilot Trench and downgradient of the Pilot Trench. The first couplet upgradient of the Pilot Trench is well 9-4 and well CH-20, which are located within the northern bedrock valley. Wells 9-4 and CH-20 have approximately 664 feet in horizontal distance between the two locations. The groundwater elevation of well 9-4 was 650.58 feet AMSL and the groundwater elevation of well CH-20 was 600.96 feet AMSL (Figure 2.2). The hydraulic gradient at these two locations is 0.075 feet per foot (ft/ft). The second couplet upgradient of the Pilot Trench is well CH-45 and well CH-22, located along the northern slope of the northern bedrock valley. Wells CH-45 and CH-22 have approximately 896 feet in horizontal distance between the two locations. The groundwater elevation of well CH-45 was 630.00 feet AMSL and the groundwater elevation of well CH-22 was 606.19 feet AMSL. The hydraulic gradient at these two locations is 0.027 ft/ft. The third couplet upgradient of the Pilot Trench is well MW-X269Y201D-3 and CH-66, which is located on the southern slope of the northern bedrock valley. Wells MW-X269Y201D-3 and CH-66 have approximately 624 feet in horizontal distance between the two locations. The groundwater elevation of well MW-X269Y201D-3 was 654.90 feet AMSL and the groundwater elevation

of CH-66 was 610.73 feet AMSL. The hydraulic gradient at these two locations is 0.071 ft/ft. The average hydraulic gradient at these three locations upgradient of the Pilot Trench is 0.058 ft/ft.

Downgradient of the Pilot Trench, the hydraulic gradients between CH-70 and CH-65 and between CH-65 and CH-63 were evaluated. These locations were selected due to their location on the downgradient side (east) of the trench and to demonstrate the effect of the Pilot Trench on downgradient groundwater elevations. The groundwater elevations and gradients east of the trench are affected by the hydraulic barrier created by the Pilot Trench. Groundwater recharge and flow conditions in this area are generally controlled by the bedrock high to the south/southwest of the Pilot Trench, the hydraulic connection from groundwater to the west of the Pilot Trench has now been modified by the Pilot Trench, where groundwater flow would have occurred under natural conditions. Wells CH-70 and CH-65 have approximately 188 feet in horizontal distance between the two locations. The groundwater elevation of CH-70 was 640.44 feet AMSL and the groundwater elevation of CH-65 was 618.56 feet AMSL (Figure 2.2). The hydraulic gradient between these two locations is 0.12 ft/ft. Wells CH-65 and CH-63 have approximately 284 feet in horizontal distance between the two locations. The groundwater elevation of CH-65 was 618.56 feet AMSL and the groundwater elevation of CH-63 was 606.16 feet AMSL. The hydraulic gradient between these two locations is 0.044 ft/ft. The difference in hydraulic gradient indicates that there is a significant gradient change between CH-70 and CH-65 and CH-65 and CH-63. It is likely that this difference in gradient is due to the location of the Pilot Trench relative to CH-65 and CH-63, which intercepts groundwater flow and leads to a lower water table elevation.

5.4 Results

Potentiometric mapping of shallow bedrock groundwater performed as part of the PMP indicates similar patterns of inferred groundwater flow as prior monitoring events (e.g., groundwater flow maps submitted as part of CA750 reporting). This mapping has consistently indicated that (1) groundwater west of the East Plant Area flows easterly into the northerly bedrock valley system (2) groundwater just north of the East Plant Area flows southeasterly, into the northerly bedrock valley system, (3) groundwater in the central area of the East Plant Area, north of the bedrock high, flows north and northeasterly into the northerly bedrock valley system, (4) groundwater within the northerly bedrock valley system flows towards the Pilot Trench and (5) groundwater above the competent bedrock that is upgradient of the Pilot Trench is fully captured by the trench. Figures 2.2 through 2.8 are representative of conditions following installation of the Pilot Trench and illustrate these general inferred groundwater flow directions, which are consistent with Pilot Trench capture of potentially impacted groundwater in the northern portion of the East Plant Area.

Results from hydraulic monitoring also indicate that wells and coreholes within the East Plant Area, upgradient of the Pilot Trench have shown a general reduction in static water levels since installation of the Pilot Trench (CH-20 and CH-22). Monitoring well and corehole locations are shown on Figure 5.1. Figure 5.2a and Figure 5.2b display water levels measured upgradient of the Pilot Trench inside and outside the East Plant Cover System, respectively. Peaks represent rapid water level increases in response to storm events with increased precipitation, primarily seen in coreholes within the northern bedrock valley where groundwater generated outside the cover system area consolidates.

Several of the water level monitoring locations remote from the Pilot Trench and outside the East Plant Cover System, perhaps those intersecting solution-widened fractures, have shown rapid changes to storm events as indicated by water level peaks and valleys shown on the hydrographs. For example, Figure 5.2b shows several rapid increases followed by recovery at monitoring wells CH-45 and MW-X261Y365D-5.

Wells screened beneath the East Plant Cover System and nearest the Pilot Trench, such as the “IPT” wells show limited responses to rainfall events (Figure 5.3a and Figure 5.3b), specifically, near the center of the trench and WW4. The limited response to rainfall events is consistent with the Pilot Trench effectiveness as a barrier to shallow groundwater, slowing flow down as it is captured by the Pilot Trench, remaining stable and metered by pumping rate at WW4. Monitoring wells further upgradient of the trench under the East Plant Cover System, such as 9-4, show limited response to rainfall events (Figure 5.2a).

Additionally, recent gauging events continue to indicate that groundwater flows toward the northern bedrock valley and the Pilot Trench. These would include wells located upgradient (CH-22: 606.19 ft AMSL) of the Pilot Trench to select

wells immediately adjacent to the Pilot Trench and collection system (IPT-6: 597.34 ft AMSL). The rapid decrease in groundwater elevation immediately adjacent to the trench, approximately 8.85 feet over 220 feet in horizontal distance, indicates that the Pilot Trench is capturing groundwater as it flows within the northern bedrock valley.

6. Dye Trace

6.1 Previous Studies

On March 22, 2005, a dye trace test was conducted at the GM BCO Facility consisting of two separate injections of separate dyes near the Pilot Trench Area (AOI 4) (GHD, 2020b). The purpose of these traces was to identify groundwater flow-paths at the site. Injections were conducted in monitoring wells (bedrock and overburden). A brief description of each dye study is included below.

Dye Trace Summary for Injection Well 1: TMW-X193Y251

Formation: Overburden.

Injection Elevation: 659.5 ft to 654.5.35 ft.

Dye Used: Fluorescein

Injection Date: 3/22/05

Detections: 12 locations, See Table 1 of 2005 dye trace report.

Travel Time Range: 18.6 ft/day (SSC System F) to 1.5 ft/day (SSC System B).

Arrival Time Range: 36 days (SSC System E) to 1 year 7 months (SSC System B).

Travel Direction: Predominantly east, slight northerly component.

Dye Trace Summary for Injection Well 2: MW-X145Y245S

Injection Formation: St Louis Limestone.

Injection Elevation: 681.35 ft to 670.35 ft.

Dye Used: Rhodamine WT

Injection Date: 3/22/05

Detections: None. Inconclusive results.

Travel Time Range: NA.

Travel Direction: NA.

6.2 Goal/Background

The conclusions from past and current dye trace studies will be assessed and integrated to further evaluate groundwater flow and whether there is any groundwater/surface water off of the Facility from sources in the northern portion of the East Plant Area. The assessment will include two dye trace studies conducted in 2002 in addition to the Near Field and Far Field dye trace studies conducted as part of the Pilot Trench performance monitoring plan. In order to assist in assessing the performance of the Pilot Trench, the following goals/objectives were set:

– Enhance the understanding of the karst flow system upgradient of the Pilot Trench.
– Assist in the evaluation of the lateral and vertical extent of capture of Pilot Trench to demonstrate the effectiveness of the Pilot Trench in capturing groundwater and minimizing by-pass.

In order to enhance the data collected during hydraulic head measurements, a dye tracer test has been conducted in the area of the Pilot Trench. This area was previously dye tracer tested in 2005 with fluorescent dyes being injected in the overburden (Fluorescein), and shallow bedrock (Rhodamine WT). These two dyes are preferred when using two at one time due to the larger wavelength separation in laboratory detection techniques, in case of potential mixing of dye-injected water.

A large network of monitoring well locations, as well as surface water and spring water locations, have been monitored for the presence of dye, including a thorough dye background monitoring program prior to the final selection of dye types and prior to dye injection. The base set of surface water and spring water sampling locations were based on the previous locations sampled during the AOI4 dye tracing study, where locations are still available.

As part of the PMP (GHD, 2019a) two additional testing locations were selected based on relative distance from the Pilot Trench (Near Field and Far Field). The Near Field locations were chosen based on an injection location adjacent, but upgradient to the Pilot Trench (north end, middle and south end), to best assess the horizontal performance of the Pilot Trench in capturing any groundwater in the vicinity of the trench. Ideally, this Near Field test was designed to assess whether the horizontal and vertical extent of the Pilot Trench is sufficient to collect the shallow groundwater in close proximity of the collection system. The injection location for the second test, Far Field, was chosen by virtue of its hydrogeological upgradient position from the trench and that it is within the TSCA Vault GUS where PCB-impacted groundwater has been observed. This Far Field test was designed to assist in the understanding of the potential for groundwater well upgradient of the trench within the northern portion of the East Plant Area to be consolidated in the northern bedrock valley and be captured by the Pilot Trench.

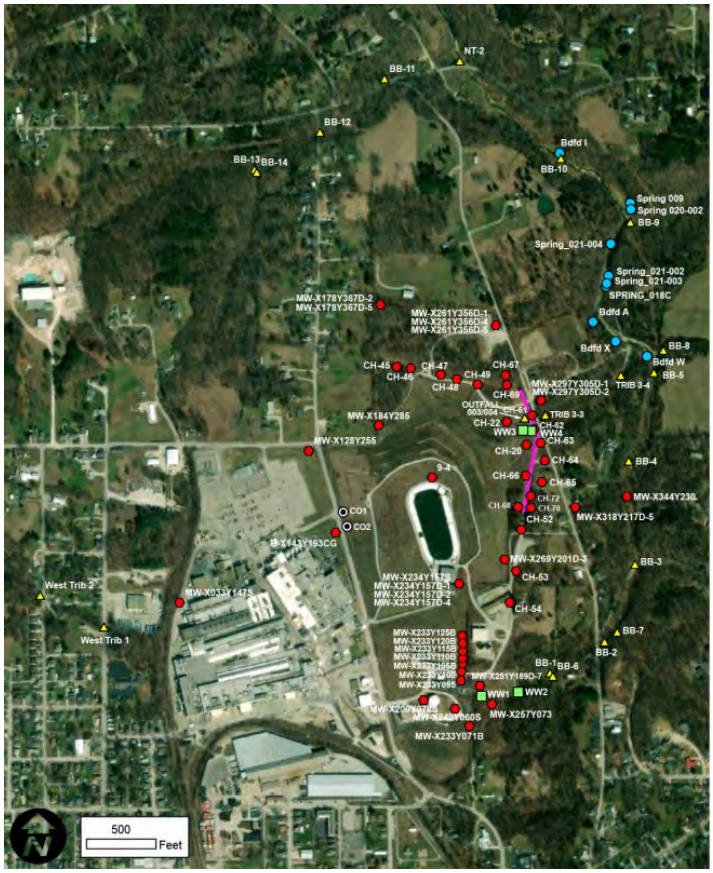


Inset 5. Injection points (black dots) and dye monitoring locations (red dots for groundwater, blue dots for springs, green boxes for wet wells and yellow triangles for surface water) locations associated with the Near Field dye trace studies.

The two Near Field dye tracer studies were performed consistent with the PMP. The initial injection of Rhodamine at Location A just upgradient of the trench, and a second injection of Pyranine into CH-73 and CH-71 at either end of the Pilot Trench. These injections focused on potential pathways in the immediate upgradient area of the trench to gauge

the vertical and horizontal effectiveness of the Pilot Trench at collecting groundwater that flows within this northern bedrock valley. These studies were referred to as the Near Field test.

At the conclusion of the Near Field test, a second dye trace test, referred to as the Far Field test, injected Eosine within the GUS using two Vault cleanouts as conduits for the dye. The Far Field study was conducted to evaluate groundwater flow further upgradient of the Pilot Trench in an area hydraulically connected to the northern bedrock valley. In addition, the GUS has PCB-impacted groundwater and is hydraulically connected to the shallow bedrock groundwater flow system.



Inset 6. GUS Injection points (black dots) and dye monitoring locations (red dots for groundwater, blue dots for springs, green boxes for wet wells and yellow triangles for surface water) locations associated with the Far Field dye trace study.

Table 6.1 identifies the frequency of sampling and measurement type for the Near Field study and Table 6.2 identifies the frequency of sampling and measurement type for the Far Field study. The following sections summarize the results of each study. The full report, prepared by Hydrogeology Inc., outlining details, including methodologies of the Far Field Study and Near Field Study is included in Appendix B.

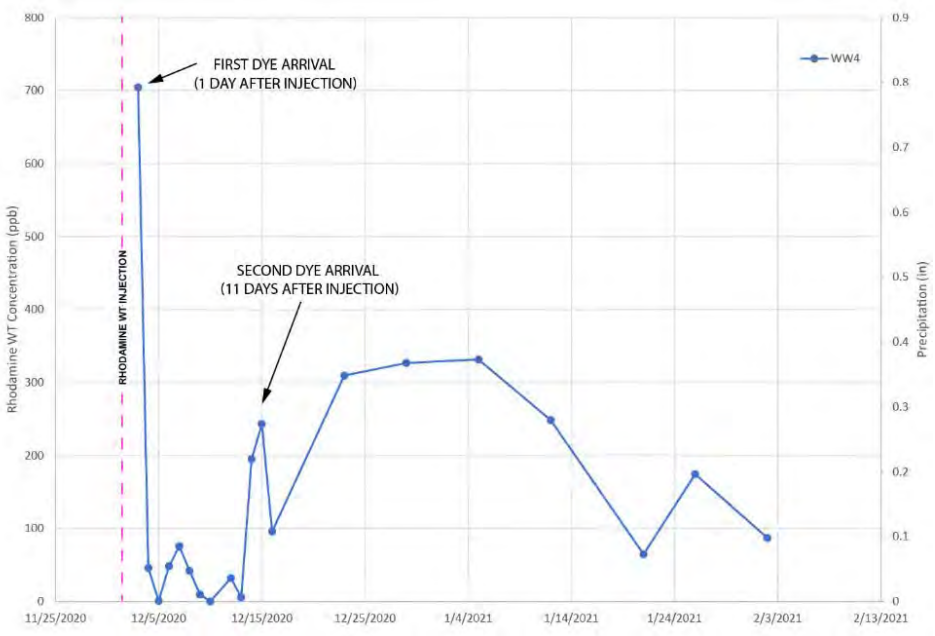
6.3 Near Field Results

Location A Dye Injection

The Near Field study was initiated on December 2, 2020. Four pounds of Rhodamine WT dye and 200 gallons of potable water were injected into Location A just upgradient of the Pilot Trench. The dye-water mixture was injected over the course of four hours with a maximum rise in water level of 3.39 feet.

The first detection of Rhodamine WT occurred on December 3, 2020, 26 hours after dye injection. The estimated dye travel rate for the first detection at WW4 was 213 ft/day. It is likely that the initial detection at WW4 was a result of upper level karst conduits being activated during the rise in water level during injection. A second peak in concentration occurred two weeks after the December 2, 2020, injection. Following the second peak in concentration,

each sample collected at WW4 was positive for Rhodamine WT through final sample collection. The following graph provides an illustrated response of Rhodamine WT concentration at WW4 over time.



Inset 7. Dye travel time graph for Near Field test after injection at Location A.

It is important to note that dyed water was observed flowing from Detention Basin 4 on December 3, 2020. The source of the dyed water was traced back to Catch Basin 3, which is situated near the injection location. Catch Basin 3 was then inspected and found to have unsealed underground pipe sections which allowed the inadvertent below-ground infiltration of dye into that catch basin. The incidental dyed water release in surface water from the detention basin resulted in a temporary detection of Rhodamine WT at Tributary 3-3, Tributary 3-4, Spring 018C, Spring 021-004, Spring 021-004, BB-10 and NT-2. In order to resolve the incidental dyed water release, temporary repairs were implemented at Catch Basin 3 in mid-December 2020 and permanent repairs completed in May 2021. Following the repairs, the last detection of Rhodamine WT at Spring 018C was 3/1/2021 and the last detection of Rhodamine WT at Tributary 3-4 was November 2021 (the last downstream detection of Rhodamine WT) while dyed groundwater continued to migrate unabated into the WW4 of the Pilot Trench into at least August of 2022 when sampling was terminated.

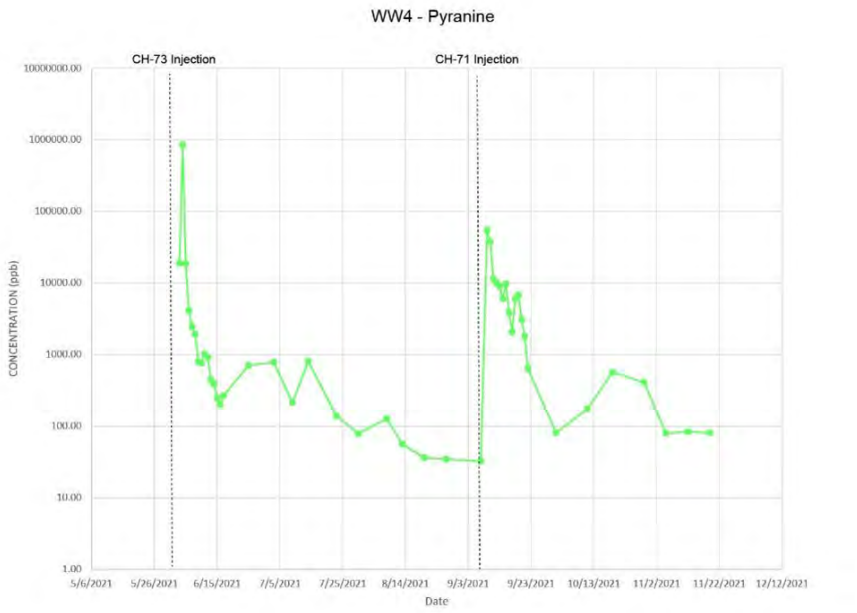
Results of the Location A dye injection indicates that dyed groundwater quickly migrated to the Pilot Trench and there was no dyed groundwater observed to flow around the trench to the north or the south, no dyed groundwater was observed to flow below the trench, no dyed groundwater was observed to go through the trench and no dyed water was observed west of the trench. No dye was detected in any springs, seeps or surface water off of the Facility (discounting the incidental release of dye to the catch basin).

CH-73 & CH-71 Dye Injection

The second portion of the Near Field study, with injections at either ends of the Pilot Trench, commenced on June 3, 2021. The dye injection at these ends was conducted in a staggered manner to provide better visibility to the travel times and pathways utilized.

The initial injection consisted of eight pounds of Pyranine dye and 400 gallons of potable water injected into CH-73. The dye-water mixture was injected over the course of five hours with a maximum rise in water level of 1.09 feet. The first detection of Pyranine in WW4 occurred on June 3, 2021, three hours after dye injection. The estimated dye travel rate for the first detection at WW4 was 2,516 ft/day. Pyranine was then detected in each sample collected from WW4 prior to the dye injection in CH-71.

The final portion of the Near Field study commenced on September 8, 2021, with 12 pounds of Pyranine dye and 410 gallons of potable water injected into CH-71. The dye-water mixture was injected over the course of six hours, with a maximum rise in water level of 1.86 feet. As shown in the graph below, the first detection of Pyranine in WW4 occurred on September 9, 2021, 26 hours after dye injection, indicated by a sharp increase in Pyranine concentration. The estimated dye travel rate for the first detection at WW4 was 417 ft/day. Pyranine was detected in each sample collected from WW4 through February 15, 2022.



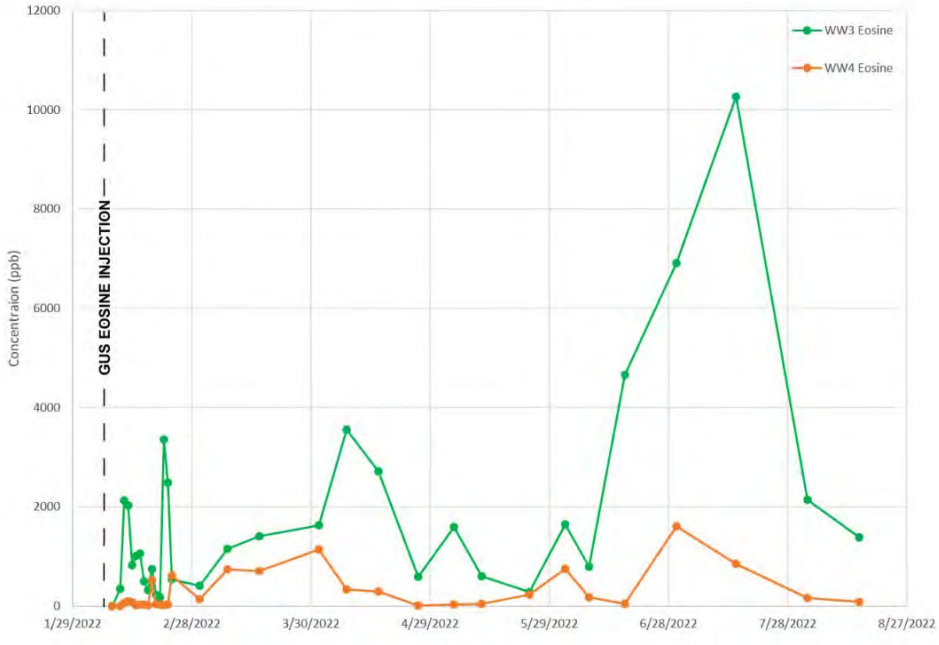
Inset 8. Dye travel time graphs for Near Field test after injection at Locations 73 and 71.

Results of the CH-73 and CH-71 dye injection indicate that there was no dyed groundwater was observed flowing around the trench to the north or to the south, no dyed groundwater was observed flowing below the trench, no dyed groundwater was observed flowing through the trench and no dyed groundwater was observed west of the trench. No dye was detected in any springs, seeps or surface water off of the Facility.

6.4 Far Field Results

GUS Dye Injection

The Far Field study was initiated on February 9, 2022, with 12 pounds of Eosine dye and 430 gallons of potable water injected into each of the GUS cleanouts (CO1 and CO2) for a total of 24 pounds of Eosine dye and 860 gallons of potable water. The first detection of Eosine occurred on February 10, 2022, in WW3, 28 hours after dye injection and Eosine was detected at WW4 on February 11, 2022, 52 hours after dye injection. The estimated dye travel rate for the first detection at WW3 was 1,232 ft/day. The estimated dye travel rate for the first detection at WW4 was 689 ft/day. The first sample from WW4 (collected approximately 26 hours of injection) was non-detect, but the charcoal packet was not submerged in water. Subsequent samples were deployed deeper into WW4. GHD and Hydrogeology Inc. believe the sample from the day after injection would have been positive for dye if the charcoal packet had been submerged in WW4 water. Eosine detections at WW3 and WW4 continued throughout the study, as illustrated in the graph below.



Inset 9. Dye travel time graph for Far Field test after injection at GUS Cleanouts CO1 and CO2.

Results of the GUS injection indicate that dyed groundwater flows to the Pilot Trench from the GUS, dyed groundwater concentrations are higher in WW3 than WW4, there was no dyed groundwater observed flowing around the trench to the north or the south, no dyed groundwater was observed flowing below the trench, no dyed groundwater was observed flowing through the trench and no dyed groundwater was observed flowing off of the Facility to the west, north or south.

6.5 Comparison to Previous Dye Trace Studies

Recent dye trace studies indicate that dyed groundwater injected into Location A, CH-71, CH-73 and the GUS flows to the Pilot Trench or to WW3. Past dye trace studies, prior to the installation of the Pilot Trench, indicate that dyed groundwater injected into TMW-X193Y251 flows to Site Source Controls located upgradient of the Pilot Trench (which subsequently flow to WW3). The dye trace study performed at MW-X143Y245S was inconclusive with no dye detected at downgradient locations. Both the Pilot Trench dye trace studies and past dye trace studies indicate that dyed water does not extend beyond control measures installed at the site.

The time of travel for recent dye trace studies ranged from 213 ft/day to 2,516 ft/day. The variability in the time of travel was dependent on the location of the dye injection, geology of the corehole, frequency of dye testing via charcoal pack and the location of the observed dye. The past dye trace study indicated that the estimated time of travel ranged from 1.5 ft/day to 18.6 ft/day. This dye trace study was also subject to the same variability in the time of travel as the most recent dye trace studies performed as part of this evaluation.

The recent Pilot Trench dye trace studies at Location A, CH-71, CH-73 and the GUS and the past study at TMW-X193Y251 indicate that groundwater flows to the east within the northern bedrock valley toward the current location of the Pilot Trench. No indications of flow outside of the northern bedrock valley to the north, south, or west have been observed in the dye trace studies.

6.6 Conclusions

The dye traces are a definitive and direct line of evidence that the Pilot Trench is effectively capturing potentially impacted water upgradient of the Pilot Trench; the dyed water moved rapidly and directly to the Pilot Trench and WW3 and no dyes attributable to the injections were detected in surface water, seeps, or springs. The Near Field study has

shown that at locations immediately west and upgradient (to the north, middle and south) of the Pilot Trench, result in the rapid and direct movement of dyed groundwater into the Pilot Trench. As part of the Far Field study, injection of dyed water in the GUS cleanouts has demonstrated the rapid and direct movement of dyed groundwater into the Pilot Trench and WW3.

Furthermore, the absence of dye detected in surface water, seeps and springs during the dye trace study is in itself a strong indicator that groundwater is not currently migrating beyond the Pilot Trench because in karstic terrains groundwater would be expected to migrate to the closest surface water body or discharge to adjacent seeps and springs.

Hydrogeology Inc. indicates that these studies conclude the following:

– Dyed groundwater in the western portion of the East Plant Area migrated into the northern bedrock valley;
– Dyed groundwater within the northern bedrock valley traveled quickly and directly into the Pilot Trench;
– Dye traces verified the site conceptual model, effective capture zone and the implied direction of groundwater flow from water elevation measurements;
– No evidence of dyed groundwater by-passing the Pilot Trench or the northern bedrock valley system within the East Plant Area; and,
– No evidence of any off-site groundwater migration in the northern portion of the East Plant Area.

A figure depicting historical on-site dye traces, including the Far-Field and Near-Field dye trace completed as part of this PMR is provided as Figure 6.1.

7. Groundwater and Surface Water Monitoring for PCBs

7.1 Goal/Background

Groundwater quality monitoring at locations up- and downgradient of the Pilot Trench was completed as a secondary line of evidence to evaluate current conditions related to the performance of the Pilot Trench. The potential for spring and surface water monitoring was also included in the PMP, however, because as described in the PMP, since no dye was detected in the springs or surface water, PCB sampling was not completed at these locations.

A subset of the monitoring wells included in the groundwater sampling program outlined in the Pilot Trench PMP were to be resampled during the EI CA750 monitoring program if the baseline samples (collected in August 2022) exhibited PCBs. Due to the high turbidity readings encountered in some of the wells, which may have resulted in a high bias of PCB results (see Section 7.3.2 for more detail), wells were redeveloped in November 2022. Rather than wait for the EI CA750 event (May 2023), GM resampled select wells (above and beyond what was required under the PMP) during January 2023.

Groundwater monitoring for total and dissolved PCBs in groundwater was conducted in August 2022 and January 2023. A number of the coreholes/monitoring wells sampled that had not been previously developed (or developed several years ago) were developed prior to the sampling in order to remove accumulated sediment from the wells prior to the January 2023 sampling. As a result, several of the sampled wells had elevated turbidity during the August 2022 sampling which could have potentially biased the PCB results high (Note that the turbidity and PCB results of monitoring wells may typically decline as a result of repeated sampling due to the periodic purging that is conducted.). Additionally, dedicated bladder pumps were installed prior to the January 2023 sampling event to further reduce disturbance of the water column before and during sampling.

Groundwater samples for total and dissolved PCBs were collected at 31 monitoring well/corehole locations, WW3, and WW4 during the August 2022 sampling event. During the January 2023 event, 32 monitoring well/corehole locations,

WW3, and WW4 were sampled for total and dissolved PCBs. Five of the locations (9-4, CH-20, MW-X261Y356D-3, MW-X297Y305D-2, and MW-X300Y199I-2) are also sampled semiannually as part of the CA750 monitoring program and WW3 and WW4 are sampled monthly as part of the collection system. Table 7.1 summarizes the planned groundwater monitoring locations and rationale/frequency for sampling.

Samples could not be collected from the following locations:

– CH-71: Dry, not enough water to collect sample during August 2022 and January 2023;
– MW-X143Y193CG: Dry, not enough water to collect sample during August 2022;
– MW-X178Y367D-5: Dry, not enough water to collect sample during August 2022 and January 2023;
– MW-X261Y356D-1: Sample port not working, could not collect sample during August 2022 and January 2023;
– MW-X261Y356D-4: Sample port not working, could not collect sample during August 2022 and January 2023; and
– MW-X261Y356D-5: Sample port not working, could not collect sample during August 2022 and January 2023.

No samples were collected from MW-X261Y356 Waterloo ports during the August 2022 and January 2023 sampling events. Consultation with personnel familiar with the Waterloo design structure identified two possible reasons why samples could not be collected: either the water level was below the intake of the port or the line was losing air pressure through a worn gasket or damaged airline. In February 2023, GHD replaced the gaskets in the ports.

In March 2024, GHD conducted a third groundwater sampling event focusing on wells were GHD was previously unable to collect a sample and wells in the vicinity of the Pilot Trench which had exhibited PCB detections in either of the August 2022 or January 2023 events. Samples could not be collected at MW-X261Y356D-1 or MW-X261Y356D-4 because the water table was below sample intake. Sample collection was attempted during the May 2024 EI CA750 event. A sample was able to be collected from MW-X261Y356D-1.

PCB results from the Pilot Trench groundwater performance monitoring conducted in August 2022, January 2023, March 2024, and May 2024, are summarized in Table 7.2 and on Figure 7.1.

During implementation of the groundwater sampling portion of the Pilot Trench PMP, groundwater samples could not be collected from four wells. The well has caved in at CH-71 since installation. The water level in monitoring well MW-X143Y193CG has fallen to an elevation below the pump intake and below the sample port depths for Waterloo ports MW-X178Y367D-5 and MW-X261Y356D-4. None of these wells are individually critical in importance for interpreting PCB concentrations that could be migrating off of the Facility because they are more reflective of conditions upgradient of the Pilot Trench. These locations are included in the long term groundwater monitoring program for evaluating the upgradient extent of pumping influence due to the Pilot Trench and evaluating the overall conditions within the flow systems. Location CH-71 will be reamed out back to total depth before monitoring resumes under the long term monitoring program.

7.2 PCB Sampling as a Line of Evidence for Pilot Trench Performance

U.S.EPA requested that GM include PCB sampling as a “secondary line of evidence” to supplement the dye trace testing and hydraulic monitoring. The Pilot Trench PMP included the basis for caution in interpreting PCB groundwater results without additional lines of evidence for purposes of assessing the performance of the Pilot Trench collection system. Some of these concerns include:

– **Sampling artifacts.** Groundwater sample results may reflect historical conditions and are not necessarily reliable indicators of current groundwater transportation. It is possible that PCBs migrated beyond the Pilot Trench prior to its installation and came to be adsorbed onto unconsolidated materials lining weathered fracture faces or unconsolidated materials deposited in grikes or other solution-widened elements of the bedrock drainage network. If such features happen to be penetrated by a monitoring well, the sampling process could mobilize residual particulate matter to which PCBs are adsorbed, entraining them in the sample. This is a particular challenge for monitoring wells within impacted areas that cannot be fully developed. Thus, the PCBs detected in

the sample would not be indicative of PCBs moving with the groundwater, but rather of historical, immobile PCBs sorbed to or located within rock voids and would have no relation to the operation of the Pilot Trench.

- **Residual impact from historic migration.** Groundwater sample results may not reflect mobile PCBs in the groundwater system. Groundwater in more stagnant portions of the bedrock system(for example, in tight or isolated fractures or in the matrix pore water) may contain PCBs from historical migration prior to installation of the Pilot Trench. Such “pre-existing” PCBs, which could be isolated or moving very slowly toward more active elements of the bedrock flow system, and therefore would not be relevant to the performance of the trench.
- **Laboratory affects.** There are potential challenges associated with the ability of laboratories to consistently and accurately detect and report very low concentrations of PCBs in groundwater samples and sometimes false detects occur. To minimize this potential GM will rely on one laboratory so that a consistent detection/non-detection and identification of the specific Aroclor patterns will be reported. An additional laboratory may be used if any difficulties are noted at the original lab.
- **Entrained sediment and colloidal material.** There are potential challenges associated with potential entrained sediment, or colloidal material, from surface water and/or spring water, after remediation to the cleanup standards (Ewers, et.al., 2012).

These concerns in interpreting PCB results, combined with the limitation that PCB water quality data by itself does not provide any information on the direction of groundwater flow or the performance of the trench in capturing groundwater, limit the usefulness and thus cannot be used without other lines of evidence to assess trench performance.

7.3 Methodology

Groundwater samples are collected either with portable bladder pumps or from Waterloo sampling ports manufactured by Solinst Canada. Samples are collected using a zero-purge sampling protocol under low-flow sampling procedures.

Digital field sampling forms for the groundwater sampling events (August 2022, January 2023, March 2024, and May 2024) are included in Appendix C. Please note that traditional, hard-copy field books are not used for data collection and data is logged into a digital collection device. Following completion of the sampling event, the data is exported from the digital collection device and saved to the project file.

At least one groundwater sample was collected from the monitoring wells included in the groundwater sampling program outlined in the Pilot Trench PMP with the exception of CH-71, MW-X143Y193CG and MW-X261Y356D-4. Samples were attempted, but the water level appears below the level of the pump intake.

7.3.1 August 2022 Monitoring Event

The August 2022 sampling event was conducted August 2 through August 5, August 8, and August 9, 2022. Groundwater samples were collected with portable bladder pumps or from Waterloo sampling ports using a zero-purge sampling protocol under low-flow sampling procedures. The samples were submitted to Eurofins for analysis of total and dissolved PCBs under chain-of-custody.

A sample for dissolved PCBs analysis was not collected from monitoring well MW-X234Y157D-1 during August 2022 due to insufficient sample volume. Copies of the laboratory analytical reports are provided in Appendix D.

7.3.2 November 2022 Development

Because high turbidity was encountered in some wells during the August 2022 monitoring event, the 22 monitoring wells/coreholes listed below were developed November 1 through 3, 2022 in an effort to reduce sample turbidity, which may result in a high bias of the PCB results.

- CH-22
- CH-46
- CH-62
- CH-63
- CH-69
- CH-70

- CH-48
- CH-49
- CH-52
- CH-53
- CH-54
- CH-61
- CH-64
- CH-65
- CH-66
- CH-67
- CH-68
- CH-72
- MW-LOC-A
- MW-LOC-B
- MW-X143Y193CG
- MW-X234Y157S

The wells were developed by surging a submersible pump up and down within each corehole/well to remove sediment present in the open interval of the well and at the bottom of the well. During development approximately one to five well volumes of water were pumped from each well depending on the water column length and recharge characteristics of the well.

Total depth measurements recorded prior to and following development are summarized in Table 7.3. Total depth measurements showed an increase in depth of the developed locations ranging from no increase in depth up to a maximum of 1.67 feet in depth increase (at CH-48), indicating the development activities removed a significant amount of sediment at some of the coreholes.

The dedicated pumps were installed the week of November 14, 2023, several weeks before the January 2023 sampling event, to allow time for stabilization of the water column following pump installation.

7.3.3 January 2023 Monitoring Event

The second round of PMP groundwater sampling was completed January 16 through 19, 2023 using dedicated bladder pumps and the zero-purge sampling protocol under low-flow sampling procedures. The samples were submitted under chain-of-custody to Eurofins for analysis of total and dissolved PCBs. Copies of the laboratory analytical reports are provided in Appendix D. This event followed the November 2022 well redevelopment activities, designed to reduce groundwater turbidity within the monitoring wells.

7.3.4 March 2024 Monitoring Event

The March 2024 sampling event was conducted March 25 and 26, 2024. Groundwater samples were collected with portable bladder pumps or from Waterloo sampling ports using a zero-purge sampling protocol under low-flow sampling procedures. The samples were submitted to Eurofins for analysis of total and dissolved PCBs under chain-of-custody. Copies of the laboratory analytical reports are provided in Appendix D. Sample collection was attempted at wells that were previously dry and at wells that exhibited PCB detection in either the August 2022 or January 2023 sampling events. Wells that could not be sampled due to maintenance were sampled during March following well repair.

7.3.5 May 2024 Monitoring Event

Sample collection was attempted at the remaining two Waterloo wells (which were previously dry) in conjunction with the regularly scheduled EI CA750 monitoring event. Five wells (9-4, CH-20, MW-X261Y356D-3, MW-X297Y305D-2, and MW-X300Y199D-2) which are sampled as part of the EI CA750 program overlap are also sampled as part of the Pilot Trench PMP program. Groundwater samples were collected using a zero-purge sampling protocol under low-flow sampling procedures. The samples were submitted to Eurofins for analysis of total and dissolved PCBs under chain-of-custody. Copies of the laboratory analytical reports are provided in Appendix D.

7.4 Data Validation

Data validation memoranda for the PMP sampling events are included in Appendix D. The data were determined to be acceptable for use with the specific qualifiers noted in Table 7.2 and Appendix D.

7.5 Summary of Results

7.5.1 August 2022

Groundwater analytical results for the August 2022 sampling event are summarized in Table 7.2. A total of 16 of the 31 sampled monitoring well/corehole locations had PCB detections above the method detection limit (MDL). Of these locations with detections, all were in the total PCB sample and two of those monitoring wells also had detections in the filtered (dissolved PCB) sample. One of the detections was from a monitoring location currently included in the CA750 sampling program (CH-20). PCB detections from the August 2022 event are summarized below:

– Aroclor-1242
  - CH-20, CH-46, CH-48, CH-49, CH-53, CH-54, CH-63, CH-65, CH-66, CH-67, CH-68, CH-69, CH-70, CH-72, and Location B
– Aroclor-1248
  - MW-X234Y157S
– Dissolved Aroclor-1242
  - CH-68 (duplicate only)
– Dissolved Aroclor-1248
  - CH-72 (duplicate only)

No exceedances of the 0.5 µg/L PCB MCL were detected on the east (downgradient) side of the Pilot Trench. The following locations (located on the upgradient side of the Pilot Trench) had reported exceedances of the PCB MCL in August 2022:

– CH-67, CH-68, CH-69, and WW3

7.5.2 January 2023

Groundwater analytical results for the January 2023 sampling event are summarized in Table 7.2. A total of 17 of the 32 sampled monitoring well/corehole locations had detections of total PCBs above the MDL. One monitoring well (MW-X234Y157D-1) had a dissolved PCB detection, but not a corresponding total PCB detection. Two of the detections were from monitoring well locations currently included in the CA750 sampling program (9-4 and CH-20). PCB detections from the January 2023 event are summarized below:

– Aroclor-1242
  - 9-4, CH-20, CH-22, CH-46, CH-48, CH-49, CH-53, CH-54, CH-61, CH-62, CH-63, CH-65, CH-67, CH-69, Location B, and MW-X143Y193
– Aroclor-1248
  - MW-X234Y157S
– Dissolved Aroclor-1242
  - MW-X234Y157D-1

No exceedances of the 0.5 µg/L PCB MCL were detected on the east (downgradient) side of the Pilot Trench. The following locations (located on the upgradient side of the Pilot Trench) had reported exceedances of the PCB MCL in January 2023:

– Location B (duplicate only), MW-X143Y193, and WW3

7.5.3 March 2024

Groundwater analytical results for the March 2024 sampling event are summarized in Table 7.2. A total of 4 of the 11 sampled monitoring well/corehole locations had detections of total PCBs above the MDL. PCB detections from the March 2024 event are summarized below:

– Aroclor-1242
  - CH-63, CH-67, CH-68, and CH-69

No exceedances of the 0.5 µg/L PCB MCL were detected on the east (downgradient) or west (upgradient) side of the Pilot Trench.

7.5.4 May 2024

Groundwater analytical results for the May 2024 (as it pertains to the Pilot Trench performance monitoring, including the 5 wells that overlap with the EI CA750 event [9-4, CH-20, MW-X261Y356D-3, MW-X297Y305D-2, and MW-X300Y199D-2]) are summarized in Table 7.2. A total of 1 of the 6 sampled monitoring well/corehole locations had detections of total PCBs above the MDL. PCB detections from the May 2024 are summarized below:

– Aroclor-1242
  - 9-4
  - CH-20

No exceedances of the 0.5 µg/L PCB MCL were detected on the east (downgradient) or west (upgradient) side of the Pilot Trench.

7.5.5 Effect of Additional Well Development

Generally, the angle-drilled locations showed the most significant decrease in total PCB concentrations between the August 2022 and January 2023 sampling events. The January 2023 data was collected following well development conducted in November 2022. Wells sampled in March 2024 were similarly re-developed prior to sampling. CH-68 to CH-73, Location A, and Location B are angle-drilled wells (30 degrees from vertical). The PCB results appear to have been affected by the difficulty in developing the wells and the presence of a large number of fractures and voids the angled wells were intended to intersect (in comparison to a vertical well).

Although exceedances of the 0.5 µg/L PCB MCL upgradient of the Pilot Trench are not completely unexpected, the August 2022 sampling results from some of the angle-drilled wells appear to have been biased high by relatively high levels of measured turbidity and use of non-dedicated sampling equipment (due to disturbance of sediment on the corehole walls and disturbance of the water column prior to sampling).

Inset Table 1a Angle-Drilled Wells

Well	August 2022 Total PCBs (µg/L)	January 2023 Total PCBs (µg/L)	March 2024 Total PCBs (µg/L)	Comment
CH-68	0.59 J/1.1 J	ND	0.15	PCB concentration decrease from initial high
CH-69	0.77 J	0.2	0.16	PCB concentration decrease
CH-70	0.43 J	ND	ND	PCB concentration decrease
CH-71	Not Sampled	Not Sampled	Not sampled	Collapsed well
CH-72	0.32/0.35 J	ND	ND	PCB concentration decrease
CH-73	Not Detected (ND)	ND	Not sampled	ND for both sampled events
Location A	ND	ND	Not sampled	ND for both sampled events

Well	August 2022 Total PCBs (µg/L)	January 2023 Total PCBs (µg/L)	March 2024 Total PCBs (µg/L)	Comment
Location B	0.49	0.34 J/0.74 J	Not sampled	Slight PCB concentration increase, but generally similar results (within magnitude)

Inset Table 2b Vertical-Drilled Wells

Well	August 2022 Total PCBs (µg/L)	January 2023 Total PCBs (µg/L)	March 2024 Total PCBs (µg/L)	Comment
CH-61	ND	0.1	ND	PCB concentration decrease from previous event
CH-62	ND	0.086 J	ND	PCB concentration decrease from previous event
CH-63	0.075 J	0.088 J	0.15	PCB concentration increase
CH-65	0.22 J/0.19 J	0.076 J	ND	PCB concentration decrease
CH-66	0.13 J	ND	ND	PCB concentration decrease from initial high
CH-67	1.2 J	ND	0.23	PCB concentration decrease from initial high

The only other monitoring well location with an exceedance of the MCL during the August 2022 sampling event (other than WW3) was CH-67. The August 2022 result from CH-67 may also have been biased high by relatively high levels of measured turbidity. In the August 2022 event, the sample turbidity was 23.4 NTU and the total PCB concentration was 1.2 J µg/L, whereas in January 2023, the sample turbidity was 2.89 NTU, with a corresponding total PCB concentration of only 0.15 µg/L.

– Samples collected from coreholes CH-67, CH-68, and CH-69 exceeded the 0.5 µg/L MCL for total PCBs in August 2022, but were below in the January 2023 samples. The three coreholes are located near the ends of and upgradient of the Pilot Trench. Groundwater flow is towards the Pilot Trench in these areas, providing evidence the Pilot Trench is capturing groundwater with sampling results above the 0.5 µg/L MCL.
– No exceedances of the 0.5 µg/L MCL were detected downgradient of the Pilot Trench during either event (August 2022 or January 2023). Low detections of PCBs are likely the result of historical deposition or the vestiges of migration, as described previously.
– Wells with notable changes in total PCB concentration and/or turbidity between the August 2022 and January 2023 events:
    - Well 9-4 total PCBs increased from ND to 0.33 µg/L while turbidity decreased from 10.65 to 2.14 NTUs.
    - CH-48 turbidity reduced from 1000 NTU to 12.08 NTU. However, total PCB concentrations were similar (0.27 µg/L and 0.22 J µg/L).
    - CH-67 total PCBs decreased from 1.2 J µg/L to ND; turbidity decreased from 23.4 to 2.89 NTU.
    - CH-68 total PCBs decreased from 0.59 J/1.1 J µg/L to ND; turbidity decreased from 6.3 to 0.76 NTU.
    - CH-69 total PCBs decreased from 0.77 J µg/L to 0.2 µg/L; turbidity decreased from 49.2 to 4.66 NTU.
    - CH-70 total PCBs decreased from 0.43 J µg/L to ND; turbidity increased slightly from 7.71 to 16.8 NTU.
    - CH-72 total PCBs decreased from 0.32/0.35 J µg/L to ND; turbidity was low during both events (3.35 and 1.4 NTU).
    - Location B total PCBs changed from 0.49 µg/L to 0.34/0.74 J; turbidity decreased from 42 to 2.04 NTU.

In March and May 2024, GHD collected groundwater samples from wells where GHD was previously unable to collect a sample and wells in the vicinity of the Pilot Trench which had exhibited PCB detections in either of the August 2022 or January 2023 events.

- Where PCBs were detected in samples collected from monitoring locations during the March 2024 and May 2024 sampling events (as it pertains to the Pilot Trench performance monitoring), the detected concentrations were below the MCL.
- PCB concentrations have generally decreased during the three sampling events. Total PCB concentrations at the wells sampled during March 2024, except CH-63, were lower than the detections observed in the initial round. With the exceptions at CH-63, CH-67, CH-68, and CH-69, the total PCBs in the last event were lower than the results from the second round.
- Total PCB concentration at CH-63 was higher in March 2024 than detected in August 2022 and January 2023, but still below the MCL.
- The turbidity in the wells sampled during March 2024, except CH-61, CH-63, and CH-72, was lower than the highest readings at each well recorded in either of the first two rounds. This is consistent with previous observations at other wells that repeated purging generally lowers turbidity.

7.6 Conclusions

The dye-trace studies clearly demonstrated that the Pilot Trench captured dyed groundwater associated with areas at the Facility where monitoring wells had detectible PCBs. Dye was not detected at any monitored locations to the north, east, west, or south of the East Plant Area, consistent with the Pilot Trench fully capturing this impacted groundwater.

The dye trace studies and the inferred groundwater flow patterns based on potentiometric mapping, combined with historical and current PCB detections in groundwater, demonstrate that the Pilot Trench captures the potentially impacted groundwater in the northern portion of the East Plant Area.

- Groundwater west of the Pilot Trench near the GUS, WW3, and 9-4 where the higher PCB concentrations in this area of the Facility were detected, is inferred to move to the east, towards the Pilot Trench, based on historical and current potentiometric mapping. This was confirmed by the dye trace studies.
- Groundwater northwest of the Pilot Trench (e.g., CH-46, CH-48, CH-49, CH-67, and CH-69), where a few PCB detections were identified, is inferred to move to the southeast, towards the Pilot Trench, based on historical and current potentiometric mapping. This was confirmed with the dye trace studies.
- Groundwater southwest of the Pilot Trench (e.g., CH-68), where PCBs were detected, is inferred to move to the northeast, towards the Pilot Trench, based on historical and current potentiometric mapping. This was confirmed with the dye trace studies.
- No exceedances of the 0.5 µg/L PCB MCL occurred east of (downgradient of) the Pilot Trench.
- The variability observed in the PCB sampling results between the August 2022 and January 2023 events illustrates the concerns associated with using sample results from individual monitoring wells in a karst environment as a line of evidence as discussed in Section 7.2. Positive PCB detections, as a secondary line of evidence, should be used in combination with other Facility information in order to be informative as to the potential for off-site migration. Based on the dye trace studies, potentiometric mapping and other primary lines of evidence the PCB test results are not indicative of any significant potential for off-site migration.

8. Groundwater Treatment Plant Monitoring

8.1 Goal/Background

The GWTP was designed and constructed for treating PCB-impacted groundwater collected from the Pilot Trench (WW4), WW1, WW2, and WW3, and Vault collection systems GUS, LDS, and LCS, with the treated water being discharged to the Creek via Tributary 3 under a NPDES permit. Monitoring activities for the GWTP includes sampling of the treated discharge as required by the NPDES permit. The discharged water is tested monthly for PCBs, HEM, and TSS. GWTP operational samples include monthly monitoring of the system influent (including wet wells and vault

sumps). Sampling regarding the GWTP has been and will continue to be reported in Quarterly Progress Reports and the CA750 Reports. In order to evaluate conditions related to the performance of the Pilot Trench, this section focuses directly on results related to WW3 and WW4. Groundwater analytical data from these wet wells are representative of the shallow groundwater in the Pilot Trench area.

8.2 Methodology

WW3 and WW4, located upgradient of the Pilot Trench are sampled on a monthly basis for PCBs, TSS and pH. Grab samples are collected from each well using a bailer. The bailer is lowered into each wet well to collect a representative sample. Samples are collected in labeled, laboratory supplied containers, placed on ice and shipped to Eurofins Test America in Barberton, Ohio.

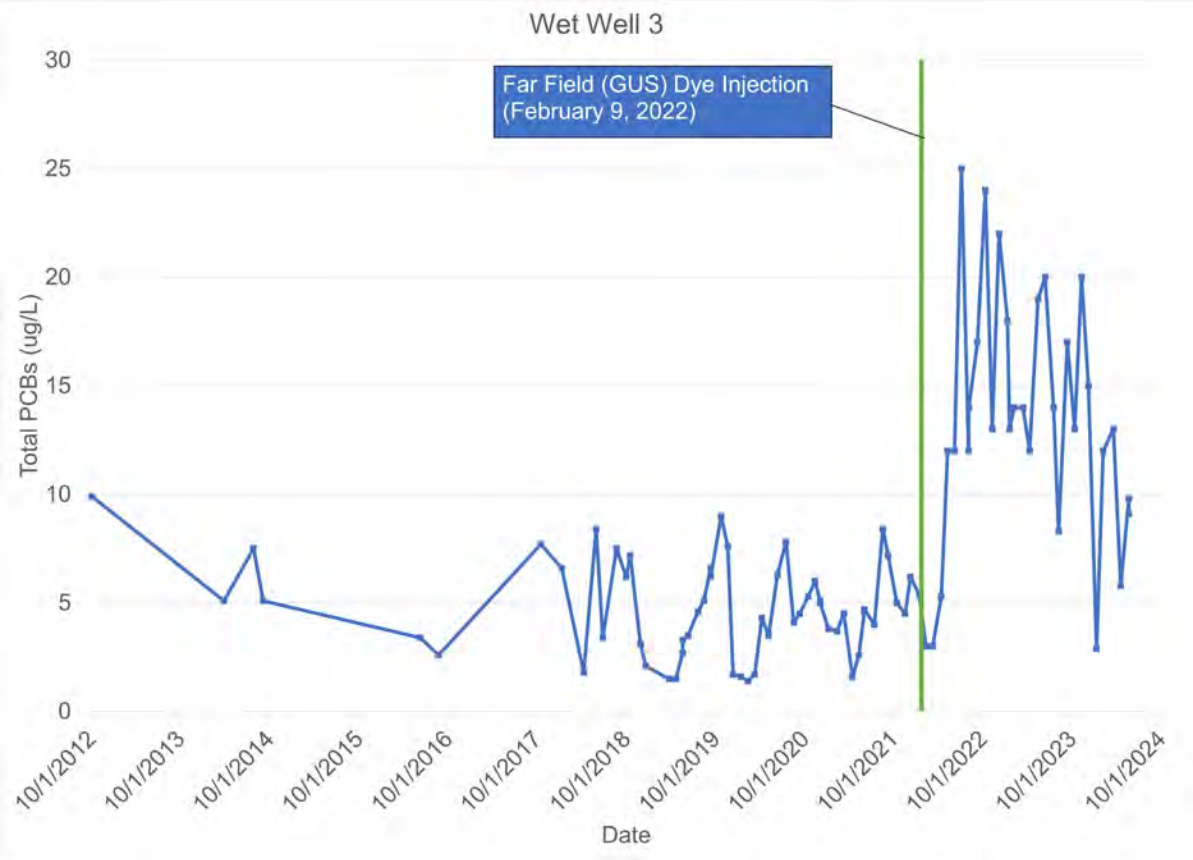
8.3 Results

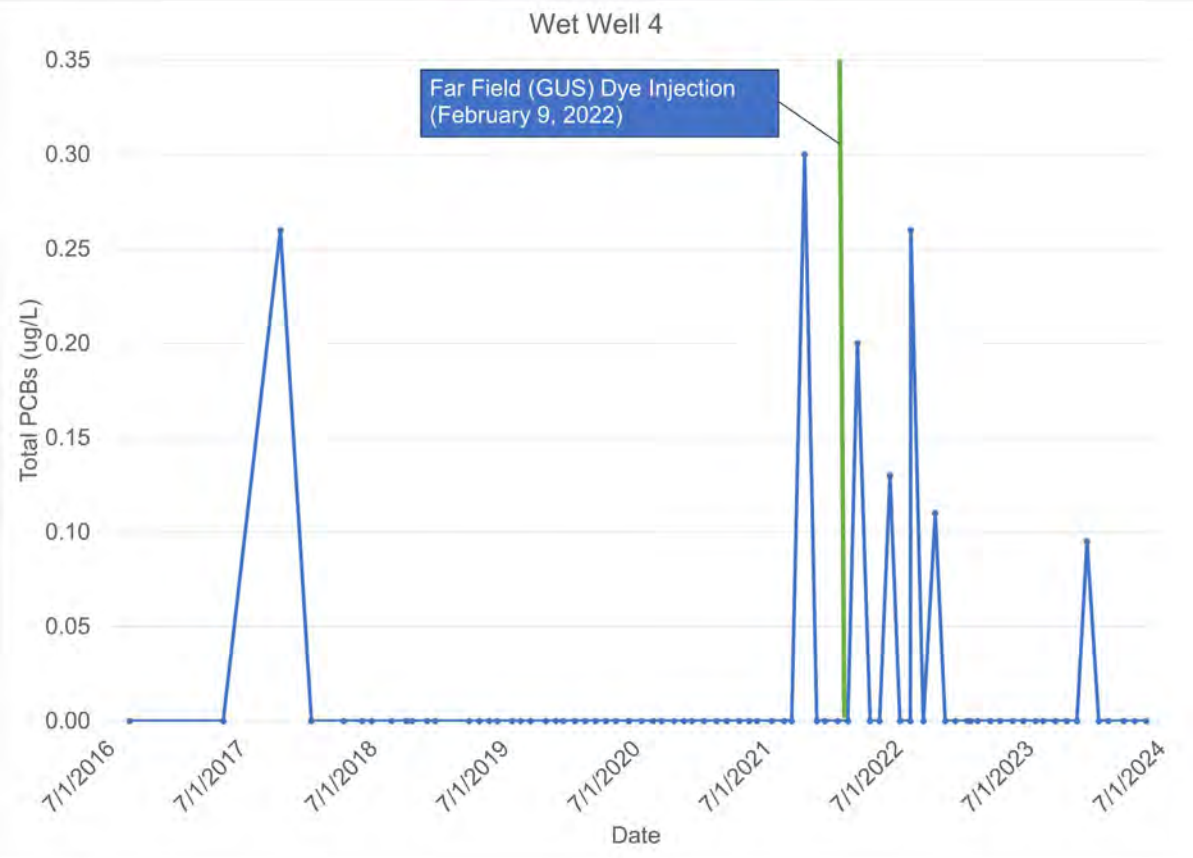
PCB detections in groundwater samples collected at WW3 have reduced significantly since initial sampling began in 2004. Peak PCB detections at WW3 occurred in 2005 and 2006 (as high as 535 J[4] mg/L total PCBs), with recent PCB detections (January 2021 through May 2024) remaining at or below 0.025 mg/L total PCBs. WW3 is the collection point for seeps and spring locations beneath the cover system, north and east of the Facility stormwater pond. WW4 is the collection point for shallow groundwater collected by the Pilot Trench. A total of 77 samples were collected from WW4 from August 2016 through May 2024, with a total of seven detections above laboratory reporting limits (maximum concentration of 0.0003 mg/L total PCBs) of which three were estimated values. Groundwater results from WW3 and WW4 through May 2024 are included in Table 8.1.

Shortly after dye was introduced into the GUS as part of the PMP activities (February 9, 2022), PCB concentrations in groundwater collected from WW3 and WW4 showed higher concentrations higher than historical observations. Prior to dye injection at the GUS, PCBs were detected in just two of the 47 sampling events at WW4. Following the GUS dye injection, PCBs were detected in four of the next 10 sampling events at WW4, however, the PCB detections were below the MCL.

PCB concentrations at WW3 from the period following cover system completion through February 2022 (GUS dye injection) averaged 0.0048 mg/L. Following GUS dye injection, PCB concentrations have averaged 0.0133 mg/L. PCB concentrations in both WW3 and WW4 are both currently showing a decreasing trend, following the initial peak concentrations immediately after the GUS dye injection.

[4] J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value


Wet Well 3
Far Field (GUS) Dye Injection
(February 9, 2022)
Total PCBs (ug/L)
30
25
20
15
10
5
0
10/1/2012
10/1/2013
10/1/2014
10/1/2015
10/1/2016
10/1/2017
10/1/2018
10/1/2019
10/1/2020
10/1/2021
10/1/2022
10/1/2023
10/1/2024
Date


Wet Well 4
Far Field (GUS) Dye Injection
(February 9, 2022)
Total PCBs (ug/L)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
7/1/2016
7/1/2017
7/1/2018
7/1/2019
7/1/2020
7/1/2021
7/1/2022
7/1/2023
7/1/2024
Date

Historical use of the former North Lagoon (AOI 7) resulted in buildup of PCBs in the former stormwater lagoon and sediment. The accumulated PCBs in the lagoon eventually leached through the karstic rock into the groundwater, resulting in AOI 7 being one of two locations within the East Plant Area which exhibit consistent detections of residual PCBs in groundwater. Groundwater in the GUS has exhibited an average PCB concentration of 0.030 mg/L.

During the Far Field dye trace study, approximately 860 gallons of water were injected into the GUS during the Far Field dye trace study. The GUS is located within the footprint of AOI 7. Dye was detected at WW3 and WW4 within 1 and 2 days of dye injection, respectively. This rapid and direct movement of dyed groundwater shows there exists an interconnected network of conduits and fractures between the GUS and WW3 and WW4.

When water is injected into a karst geological formation, as was done during the dye trace study, water infiltrates and flows through fractures. The pressure could dislodge PCB-impacted sediment or particles from within the fractures, flushing residual PCBs to the wet wells. The flushing may also open a new or widen an existing conduit for groundwater migration from the GUS to the wet wells. However, regardless of slight PCB concentration increases, groundwater analytical results from WW3 and WW4 indicate that PCBs are being captured by the SSC system and Pilot Trench, preventing further migration of PCBs beyond the Pilot Trench.

9. Summary and Conclusions

The Pilot Trench segment of the PGCS has been used to evaluate the design and performance of the groundwater collection system in the northern portion of the East Plant Area. Because of the complexities of the karst setting, a multiple lines of evidence approach has been used to evaluate whether or not the Pilot Trench is preventing the offsite migration of potentially impacted groundwater in the northern bedrock channel. The DQOs established in the PMP are:

– Does the groundwater above the competent bedrock in the northern portion of the East Plant Area preferentially flow into the northern bedrock drainage valley and to the Pilot Trench?
– Do lines of evidence support a determination that the Pilot Trench operates as designed in capturing contaminated groundwater present above competent bedrock, thereby preventing contaminated groundwater from migrating beyond the trench at levels which would result in an unacceptable risk to human health and the environment?

The multiple evaluation techniques described in this PMR, as summarized below, support the affirmative conclusion for both of these DQOs and therefore that impacted groundwater is being adequately captured by the Pilot Trench.

9.1 Multiple Lines of Evidence Summary

9.1.1 Conceptual Site Model

The CSM (Figure 2.10) and a deep understanding of the bedrock structure (Inset 2) has been developed over the years of assessment at the site. The knowledge of the site gained through numerous site investigations, interim measures, monitoring events and researched literature sources has been distilled into a working CSM of Facility conditions that has been further validated by the PMP work activities. The CSM itself is a tool that explains the observed groundwater flow and contaminant transport at the Facility and can be used supplement direct observations to assess the expected performance of the Pilot Trench.

9.1.1.1 Bedrock Topography

– Bedrock topography information was derived from literature sources, refined by borings and coreholes installed throughout the Facility, geophysical surveys along the Pilot Trench alignment and in the TSCA Vault area, and

supported by direct visual observations. From these data, maps and cross-sections of the bedrock topography were developed for the Facility.

– The surficial bedrock surface at the Facility and surrounding area has been dissected with paleo-drainageways that control surface water flow and shallow groundwater flow. At the Facility, these paleo-drainageways into the bedrock are particularly developed in the East Plant Area, towards and within the two bedrock valley systems.
– The groundwater flow information collected to date has yielded relatively consistent inferred flow patterns and is consistent with the results of the dye trace studies.
– Within the East Plant Area there are two well developed bedrock valley drainageways. In the northern portion of the East Plant Area this generally east-west trending feature has three smaller incised bedrock valleys connecting with it from the south and another from the north. Bedrock highs are located on the north and south margins of this valley. South of the southern bedrock high, in the midsection of the East Plant Area, there is another east-west trending paleo-drainageway bounded by another extensive bedrock high on the southern end of the East Plant Area. This smaller southern bedrock valley system has two minor incised valleys connecting to it from the south and also has a base that dips to the east.
– These paleo-drainage features within the bedrock in the East Plant Area have consolidated surficial surface water flow, draining water to Bailey's Branch Creek. This preferential flow of surface water has led to well-developed karst features in these bedrock features over time. When incorporated into the hydrogeological system these bedrock valleys influence shallow groundwater movement because these karst features, such as solution enlarged fractures, result in preferential groundwater flow within the shallow bedrock. The areas of high bedrock act to further constrain groundwater flow at the Facility, directing it inwards and towards the east within the defined valleys as described below.

9.1.1.2 Groundwater Movement

– Groundwater flow information was derived from literature sources, karstic features observed from borings installed throughout the Facility, direct groundwater elevation measurements, dye trace studies, and identification of seep/spring/surface water locations through aerial and on the ground reconnaissance.
– Groundwater flows from areas of higher hydraulic pressure to lower pressure.
– In the East Plant Area, interconnected conduits are preferentially located in the upper portion of the karstic rock. This vertical fracture/void density gradient tends to result in a strong shallow horizontal groundwater flow component in the East Plant Area, towards and within the two bedrock valley systems. Vertical groundwater movement is retarded by the competent bedrock below the karstic rock.
– The groundwater flow information collected to date has yielded relatively consistent inferred flow patterns and is consistent with the results of the dye trace studies.
– Within the northern portion of the East Plant Area a bedrock high on the northern Facility margin directs groundwater flow towards the interior and to the east within the bedrock valley system towards the Pilot Trench. Similarly, a bedrock high in the midsection of the Facility directs groundwater flow northwards into the northern bedrock valley towards the Pilot Trench.
– Dye trace testing, combined with groundwater elevation monitoring in the shallow bedrock indicates that (1) groundwater west of the East Plant Area flows easterly into the northerly bedrock valley system, (2) groundwater just north of the East Plant Area flows southeasterly, into the northerly bedrock valley system, (3) groundwater in the central area of the East Plant Area, north of the bedrock high, flows north and northeasterly into the northerly bedrock valley system, (4) groundwater within the northerly bedrock valley system flows towards the Pilot Trench, and (5) groundwater above the competent bedrock that is upgradient of the Pilot Trench is fully captured by the trench.

9.1.1.3 Contaminant Transport

– As evidenced by groundwater monitoring in the northern portion of the East Plant Area, removal of the higher levels of PCB soil contamination (i.e., at and above 50 mg/kg) during the various IMs, combined with the

installation of the cover system, has significantly reduced the likelihood of PCB transport from the East Plant Area.

- There are no known areas of DNAPL in the northern portion of the East Plant Area.
- The groundwater system within the East Plant Area appears to be in equilibrium conditions.
- The only known source of significant PCBs in groundwater within the northern portion of the East Plant Area is within the gravel GUS beneath the TSCA Vault. The GUS is located within the northerly bedrock valley system. Groundwater from the GUS is collected at WW3, which is located just upgradient of the Pilot Trench.
- Other than the GUS (and WW3, which consolidates groundwater from the GUS), there are no consistent, detections of PCBs in the northern portion of the East Plant Area (Figure 2.9).
- To date, PCBs have only occasionally been detected and only at low concentrations in samples of the Pilot Trench effluent (WW4), indicating that PCBs have not been migrating appreciably in the groundwater collected by the Pilot Trench.
- The presence of springs upgradient of the Pilot Trench indicates that one-or-more local conduit networks exist in the area and are collecting and transporting impacted groundwater to the SSC systems. Based on this information, it is possible that all or practically all, impacted groundwater upgradient of the Pilot Trench in this area is being collected by these SSC systems, which would explain the absence of any significant, or consistent, PCB detections in water pumped from the Pilot Trench.
- There is no monitoring evidence of off-site contaminant transport in the northern portion of the East Plant Area.

9.1.2 Pilot Trench Construction

Inspections, geophysical testing and construction quality assurance activities documented that the Pilot Trench construction characteristics had achieved the criteria established to meet design objectives consistent with the conceptual site model.

- The location and alignment of the Pilot Trench was designed to work in conjunction with the local geology/hydrogeology and other East Plant Area IMs to provide horizontal control of groundwater migration in the northern portion of the East Plant Area. The Pilot Trench exploits the intrinsic control of groundwater flow by the bedrock topography, which includes the northern bedrock valley system that consolidates the shallow bedrock groundwater flow as well as surface water flow along the topographic and bedrock valley axis.
- The Pilot Trench was designed to span the full width of the northern bedrock valley above the water table in order to collect groundwater moving along its axis.
- The Pilot Trench was designed to extend vertically downward, through the karstic rock where groundwater predominantly flows, into the top of the competent bedrock. The bottom design elevation of the Pilot Trench was determined based on direct observation of bedrock cores collected during pre-design drilling activities, and further verified by geophysical testing performed after removal of the overburden and prior to excavating the bedrock. The base of the trench was positioned just below the topographically lowest identified transmissive fractures (both vertical and horizontal), therefore seating the trench bottom into the expected competent bedrock surface (Section 3.3 of the Construction Certification Report [GHD, 2019b]). These fracture features are the main conduits for shallow bedrock groundwater movement in a karstic environment.
- The trench walls and floor were visually inspected using high quality video to determine that the Pilot Trench had been completed within competent bedrock. This inspection of the exposed bedrock surface demonstrated that fractures capable of transmitting significant amounts of groundwater were preferentially located closure to the upper bedrock surface and these fractures decreased significantly with depth (Figures 3.1 and 3.2).
- The East Plant Area Cover System has reduced overall local groundwater recharge, thereby moderating and/or reducing the flow of groundwater through the karstic rock and into the Pilot Trench.

9.1.3 Spring/Seep Reconnaissance

Thermal imaging studies, field inspections, and sampling have been completed to identify potential spring and seep locations. Use of multiple surveys provides a thorough basis for understanding karst groundwater flow from the Facility.

– Spring and seep locations identified during the 2004 and 2019 surveys were combined and were visually inspected during a field survey.
– The surveys resulted in the identification of 23 locations within the area of coverage using the UAV and 39 locations from the 2004 helicopter survey. These locations were assessed for the possibility of representing groundwater discharges from the Facility. Those locations that could not be ruled out (e.g., a spring location topographically higher than the elevation of the Facility would not be expected to represent groundwater discharge from the Facility) were further considered for inclusion into the dye trace study and PCB sampling program.
– Previous sampling of springs and seeps along the creek system did not identify any potential PCB migration from the Facility. This conclusion was further supported by the dye trace studies further described in Section 9.1.5 below.

9.1.4 Hydraulic Monitoring

Hydraulic data collected prior to and during the testing activities were used to define groundwater flow.

– Groundwater potentiometric flow mapping indicates a consistent inferred pattern of flow in the northern portion of the East Plant Area. Recent gauging events continue to demonstrate groundwater flows toward the northern bedrock valley and the Pilot Trench (Figure 2.2).
– Results from hydraulic monitoring indicate that coreholes just upgradient of the Pilot Trench (CH-20 and CH-22) have shown an overall reduction of approximately three to four feet in the water table since installation of the Pilot Trench. The limited response to rainfall events indicates that the Pilot Trench has served as an effective barrier to shallow groundwater migration, slowing flow down as it is captured by the Pilot Trench, remaining stable and metered by pumping rate at WW4.
– Groundwater flow shows a rapid decrease in groundwater elevation from wells just upgradient (CH-22: 606.19 ft AMSL) of the Pilot Trench to wells immediately near the Pilot Trench and collection system (IPT-6: 597.34 ft AMSL). The rapid decrease in groundwater elevation is approximately 8.85 feet over 220 feet in horizontal distance, indicating the Pilot Trench is capturing groundwater in the northern bedrock valley.

9.1.5 Dye Trace

A series of dye traces were conducted at the Facility as part of the PMP. The traces consisted of Near-field and Far-field injections with respect to distance from the Pilot Trench. The Near-field study dye injection points were immediately west and hydrologically upgradient from the Pilot Trench. One Near-field injection into the shallow bedrock on either end of the trench and another towards the center and upgradient of the trench. The three injections demonstrated rapid movement (less than 1 day travel time) of dyed water to the Pilot Trench. The Far-field study consisted of injections into two of the GUS cleanouts (CO1 and CO2). Both injections as part of the Far-field study demonstrated rapid movement of dye to the Pilot Trench and WW3. The Near-field, Far-field, and previous dye trace studies within AOI4 (2005) show a consistent eastern movement of groundwater towards the Pilot Trench within the northern bedrock valley system. Furthermore, these studies indicate the Pilot Trench is performing as designed and prohibiting groundwater flow beneath, around or through the trench. In addition, there was no evidence of potential off-site groundwater flow from the East Plant Area.

The dye traces yielded the following significant conclusions:

– Dyed groundwater in the western portion of the East Plant Area migrated easterly into the northern bedrock valley

– Dyed groundwater within the northern bedrock valley traveled quickly and directly to the Pilot Trench
– Dye traces verified the CSM and the implied direction of groundwater flow from water elevation measurements at monitoring wells
– No evidence of dyed groundwater bypassing the Pilot Trench or the northern bedrock valley system within the East Plant Area
– No evidence of any groundwater migration off of the Facility in the northern portion of the East Plant Area.

Based on the monitoring network, the dye-trace studies demonstrated that the Pilot Trench captured dyed groundwater, including that from the GUS – the area where the most significant PCB concentrations in groundwater within the northern portion of the East Plant Area are located. No dyed water was detected during the monitoring events to have bypassed the Pilot Trench. The studies were conducted over a period of many months and captured a wide range of seasonal and rainfall conditions. The near-field dye trace included a total of 73 sampling locations and the far-field dye trace included a total of 96 sampling locations, collected over a span of nearly 2 years (December 3, 2020, to August 15, 2022). The absence of dye detections in springs, seeps and surface water adjacent to the Facility is particularly noteworthy, as these features would be the most likely discharge points for any Facility groundwater if it were migrating beyond the Pilot Trench.

The dye traces are a definitive and direct line of evidence that the Pilot Trench is effectively capturing potentially impacted water upgradient of the Pilot Trench. The conclusions from the dye trace studies are consistent with the CSM developed for the Facility as presented in the RFI Report (GHD, 2020b) and RCRA Corrective Measures Proposal (GHD, 2021b) and demonstrate there is no evidence of any groundwater bypassing the Pilot Trench and migrating off the Facility in the northern portion of the East Plant Area.

9.1.6 Groundwater and Surface Water Monitoring for PCBs

Two rounds of groundwater sampling for PCBs were completed as part of the PMP as a secondary line of evidence to supplement the dye trace testing and hydraulic monitoring. No spring or surface water sampling for PCBs was completed because no dyes were detected at these locations. The first round of groundwater sampling was completed in August 2022. Due to high turbidity encountered in some of the sampled monitoring wells and coreholes that may have resulted in a high bias to the PCB results, development of twenty-two of the sampled locations was completed in November 2022. After installation of dedicated bladder pumps a second round of groundwater sampling was completed in January 2023.

Other than WW3, none of the PMP groundwater sampling locations were above the PCB MCL during both sampling events, and detected total PCB concentrations were generally below 0.3 µg/L. The variability observed in the PCB sampling results between the August 2022 and January 2023 events illustrates concerns associated with using sample results from individual monitoring wells in a karst environment as a line of evidence as discussed in Section 7.2. Although there are limitations and concerns associated with using monitoring wells in a karst environment, the following conclusions are drawn from the monitoring:

– Areas associated with PCB impacted groundwater in the northern portion of the East Plant Area, including the GUS and WW3, are captured by the Pilot Trench as illustrated by the groundwater flow monitoring and dye trace studies.
– Groundwater far west of the Pilot Trench near the GUS where the Far-field test was performed is inferred to move to the east, towards the Pilot Trench, based on historical and current potentiometric mapping.
– Groundwater northwest of the Pilot Trench (e.g., CH-46, CH-48, CH-49, CH-67, and CH-69) is inferred to move to the southeast, towards the Pilot Trench, based on historical and current potentiometric mapping.
– Groundwater southwest of the Pilot Trench (e.g., CH-68) is inferred to move to the northeast, towards the Pilot Trench, based on historical and current potentiometric mapping.
– No exceedances of the 0.5 µg/L PCB MCL occurred east of (downgradient of) the Pilot Trench during either of the PMP monitoring events.

– PCB results are a secondary line of evidence and therefore detections should be corroborated by other information in order to be informative as to groundwater conditions. Based on the dye trace studies, potentiometric mapping and other primary lines of evidence the PCB test results are not indicative of any significant potential for off-site migration.
– PCB detections in the northern portion of the East Plant Area are in areas where the groundwater flow has been demonstrated to be flowing towards the Pilot Trench either through the conduct of dye trace studies, hydraulic monitoring, or both.

9.1.7 Groundwater Treatment Plant Monitoring

GWTP monitoring activities completed during the PMP activities was evaluated to document the water quality of groundwater captured by the collection system.

– PCB detections in groundwater samples collected at WW3 have reduced significantly since initial sampling began in 2004. Peak PCB detections occurred in 2005 and 2006, with PCB detections from April 2007 through January 2023 remaining at or below 0.025 mg/L. The maximum total PCB detection at WW3 was 535 J ug/L in December 2005.
– WW4 is the collection point for shallow groundwater collected by the Pilot Trench. A total of 61 groundwater samples were collected between 2016 and January 2023, with a total of only six detections above laboratory reporting limits.
– Analytical results from WW3 and WW4 indicate that PCBs are being captured by the SSC system and Pilot Trench, preventing further migration of PCBs beyond the Pilot Trench

9.2 Data Gap Evaluation

During implementation of PMP activities, minor deviations from the proposed sampling occurred. These minor deviations were evaluated as possible data gaps and are summarized in the bullets below.

– During PCB sampling, several locations were unable to be sampled due to limited groundwater availability or low groundwater elevations (Section 7.1).
– An accumulation of dye within Catch Basin 3 following dye injection in the Near Field dye trace study due to damaged seals which allowed infiltration into the catch basin. This resulted in dye discharging with surface water from the catch basin and subsequently visual dye being identified at multiple locations in Tributary 3 and Bailey's Branch (Section 6.3).
– During dye testing, staff inadvertently removed charcoal packs from select wells to perform groundwater sampling, transducer downloads and/or water level measurement.

During dye testing, charcoal packs that were removed from wells for either groundwater sampling, transducer downloads and/or water level measurements. The removal of the charcoal packs during these isolated events did not impact the overall results or interpretation of the dye trace tests. Due to low groundwater elevations or limited groundwater availability, GHD staff were unable to collect groundwater samples from select locations. The lack of groundwater samples at these locations did not affect the overall evaluation of groundwater analytical data, due to the data density that was collected and analytical sampling results being a secondary line of evidence. The release of dye from Catch Basin 3 resulting in dye being visually detected in Tributary 3 and Bailey's Branch was remedied by performing repairs at Catch Basin 3 and ceasing sampling until dye was no longer visible. These minor deviations from the planned sampling did not materially affect the ability to effectively evaluate groundwater quality, the performance of the dye trace study or the overall performance of the Pilot Trench.

9.3 Conclusion

The Pilot Trench was installed as the first portion of a PGCS to collect the shallow, PCB-impacted groundwater beneath the East Plant Area that has the potential to migrate from the Facility at levels above the MCL. The capture

and removal of groundwater by the Pilot Trench accentuates the naturally existing hydraulic gradients associated with the bedrock valley drainage feature located in the northern portion of the East Plant Area.

The Pilot Trench monitoring activities indicate (1) overall groundwater flow in the northern portion of the East Plant Area is controlled by an east-west trending bedrock valley system that conducts groundwater in this area towards it and then eastward to the Pilot Trench, (2) horizontal and vertical hydraulic capture of groundwater above the competent bedrock at the Pilot Trench effectively prevents contaminated groundwater from migrating off-site at levels above the MCL, (3) areas of groundwater where PCBs were detected within the northern portion of the East Plant Area flow towards and appear to be captured by the Pilot Trench and (4) there is no indication of any off-site groundwater migration to the north, west, south or east of the northern portion of the East Plant Area; notably, no dye was detected in surface water, seeps or springs at Bailey's Branch Creek where groundwater from the Facility would be most likely to be migrating to if not collected by the Pilot Trench.

The multiple evaluation techniques employed indicate converging lines of evidence that the impacted groundwater in the northern portion of the East Plant Area is being adequately captured by the Pilot Trench.

9.4 Groundwater Monitoring Plan

The groundwater monitoring program outlined in the LTOMMP (GHD, December 2023) has been developed to monitor the long-term effectiveness of the PGCS, including the Pilot Trench, in preventing PCB-impacted groundwater at the downgradient margins of the Facility from migrating beyond the property boundary at levels which would result in an unacceptable risk to human health and the environment. Wells monitored during the Pilot Trench performance monitoring work were evaluated for inclusion in the long term groundwater monitoring program The program includes collecting data on hydraulic head, periodic dye tracer studies, and other supporting lines of evidence (e.g. groundwater quality sampling) to perform this evaluation.

10. References

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Tables

Table 5.1

Hydraulic Monitoring Locations
GM BCO Facility -
Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency	Qualifier	Rationale[1]
IPT-1	Trench Piezometer	Pressure Transducer	15 Minutes/Monthly Download		Provide control point for pumping level in the northern portion of the pilot trench
IPT-11	Trench Piezometer	Pressure Transducer	15 Minutes/Monthly Download		Provide control point for pumping level in the southern portion of the pilot trench
9-4	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence of the Pilot Trench
CH-20	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence of the Pilot Trench
CH-22	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence of the Pilot Trench
CH-45	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
CH-46	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
CH-47	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
CH-48	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download	Obstruction may prevent location	Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
CH-49	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
CH-52	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the south of the Pilot Trench
CH-53	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the south of the Pilot Trench
CH-54	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the south of the Pilot Trench
CH-61	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-62	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-63	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-64	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-65	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-66	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-67	Monitoring Well	Pressure Transducer	15 Minutes/Monthly Download	Obstruction may prevent location	Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence to the north of the Pilot Trench
CH-68	Monitoring Well	Hand Measurement	Weekly up to the time of dye injection		Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence of the Pilot Trench
CH-69	Monitoring Well	Hand Measurement	Weekly up to the time of dye injection		Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence of the Pilot Trench
CH-70	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
CH-72	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
Location B	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
MW-X128Y255	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence to the west of the Pilot Trench
MW-X143Y193CG	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence to the west of the Pilot Trench
MW-X184Y285	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent pf pumping influence to the northwest of the Pilot Trench
MW-X297Y305D-2	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
MW-X178Y367D-2	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence in the Intermediate Flow System to the north of the Pilot Trench
MW-X178Y367D-5	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the northwest of the Pilot Trench
MW-X234Y157S	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the southwest of the Pilot Trench
MW-X261Y356D-4	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the north of the Pilot Trench
MW-X261Y356D-5	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the upgradient extent of pumping influence to the north of the Pilot Trench
MW-X318Y217D-5	Waterloo	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
MW-X344Y230	Monitoring Well	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
SG-1	Staff Gauge	Hand Measurement	Weekly for 1 month, then monthly for 5 months		Data will allow for the collection of head measurements to evaluate the downgradient influence, if any, of pumping at the Pilot Trench
WW-4	Collection Sump	Pressure Transducer	15 Minutes/Monthly Download		Evaluate pumping level at pumping location

Notes:
(1) - The rationale are representative of GHD's understanding of the data and the potential use of such data. Data was used in conjunction with, and in context with, other collected information as part of a multiple lines of evidence approach.

Table 6.1

Near Field Study Sampling Plan
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency	Qualifier	Rationale[1]
First Injection					
CH-20	Injection	NA	NA		For the near injection of a dye tracer into the shallow groundwater flow system upgradient and near the middle portion of the Pilot Trench.
CH-22	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-46	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-48	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-49	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-52	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess potential tracer movement south of the Pilot Trench.
CH-61	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-62	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-63	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-64	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-65	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-66	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-67	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Obstruction may prevent location	Data will be used to help assess potential tracer movement north of the Pilot Trench.
CH-68	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess potential tracer movement north of the Pilot Trench.
CH-69	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess potential tracer movement north of the Pilot Trench.
CH-70	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-72	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
Location B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
MW-X178Y367D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to help identify the potential for other, upgradient dye in the area and within the intermediate flow system.
MW-X234Y157D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to help identify the potential for other, upgradient dye in the area and within the deep flow system.
MW-X234Y157D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to help identify the potential for other, upgradient dye in the area and within the intermediate flow system.
MW-X261Y356D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-2	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
MW-X318Y217D-5	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
MW-X344Y230	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel beyond the trench to Bailey's Branch
BB-1	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to monitor the background fluorescence of water in the head waters of Bailey's Branch throughout the tracer study for inputs of non-site-related dye into the study area.
BB-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-1 and this location.
BB-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-2 and this location.
BB-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-3 and this location.
BB-5	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-4 and this location.
Tributary 3-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI4 Dye Trace. Data will be used to evaluate the potential for dye to discharge to Tributary 3 upstream of this location.
Tributary 3-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Tributary 3 upstream of this location and prior to joining Bailey's Branch.
WW-3	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel to the existing collections systems located upgradient of the Pilot Trench
WW-4	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to evaluate recovery of dye in water pumped from the trench.
Outfall 003/004[2]	NPDES Outfall	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to assess the viability of downstream dye detections.
NT-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
Spring 021-004	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-003	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-002	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 018C	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.

Table 6.1

Near Field Study Sampling Plan
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency	Qualifier	Rationale[1]
Second Injection					
CH-68	Injection	NA	NA		For the near injection of a dye tracer into the shallow groundwater flow system upgradient and near the southern extent of the Pilot Trench operations
CH-69	Injection	NA	NA		For the near injection of a dye tracer into the shallow groundwater flow system upgradient and near the northern extent of the Pilot Trench operations
CH-22	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement and, if dye is detected, estimate straight-line groundwater velocity.
CH-52	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess potential tracer movement south of the Pilot Trench.
CH-61	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-62	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-63	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-64	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-65	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-66	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
CH-67	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Obstruction may prevent location	Data will be used to help assess potential tracer movement north of the Pilot Trench.
CH-70	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-72	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
Location B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
MW-X178Y367D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-X234Y157D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X234Y157D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-X261Y356D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-2	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
MW-X318Y217D-5	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
MW-X344Y230	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel beyond the trench to Bailey's Branch
BB-1	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to monitor the background fluorescence of water in the head waters of Bailey's Branch throughout the tracer study for inputs of non-site-related dye into the study area.
BB-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-1 and this location.
BB-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-2 and this location.
BB-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-3 and this location.
BB-5	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-4 and this location.
Tributary 3-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI4 Dye Trace. Data will be used to evaluate the potential for dye to discharge to Tributary 3 upstream of this location.
Tributary 3-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to discharge to Tributary 3 upstream of this location and prior to joining Bailey's Branch.
WW-3	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel to the existing collections systems located upgradient of the Pilot Trench
WW-4	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to evaluate recovery of dye in water pumped from the trench.
Outfall 003/004[(2)]	NPDES Outfall	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to assess the viability of downstream dye detections.
NT-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
Spring 021-004	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-003	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-002	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 018C	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.

Notes:
(1) - The rationale are representative of GHD's understanding of the data and the potential use of such data. Data was used in conjunction with, and in context with, other collected information as part of a multiple lines of evidence approach.
(2) - Outfall 003/004 is the location where treated groundwater discharges to Tributary 3. Dye detections after the groundwater is treated will nullify, or complicate, interpretations of any dye presence within Tributary 3 and downstream thereof.

Table 6.2

Far Field Study Sampling Locations
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency	Qualifier	Rationale[1]
Vault CO1	Injection	NA	NA		To distribute dye into the shallow bedrock groundwater flow system within the north-eastern portion of the Facility
Vault CO2	Injection	NA	NA		To distribute dye into the shallow bedrock groundwater flow system within the north-eastern portion of the Facility
9-4	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye presence at this location will serve to confirm the successful introduction of dye to the shallow bedrock flow system. Dye absence would indicate that the well is poorly connected to the flow system.
CH-20	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye presence at this location will serve to confirm the successful introduction of dye to the shallow bedrock flow system. Dye absence would indicate that the well is poorly connected to the flow system.
CH-22	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye presence at this location will serve to confirm the successful introduction of dye to the shallow bedrock flow system. Dye absence would indicate that the well is poorly connected to the flow system.
CH-45	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a northerly component
CH-46	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a northerly component
CH-47	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a northerly component
CH-48	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Obstruction may prevent location	Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a northerly component
CH-49	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a north-easterly component
CH-52	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a south-easterly component
CH-53	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a south-easterly component
CH-54	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Positive dye detections at this location would indicate that a portion of the northeastern area of the Facility includes a south-easterly component
CH-61	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-62	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-63	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-64	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-65	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-66	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
CH-67	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Obstruction may prevent location	Data will be used to evaluate the potential for dye travel from the injection location around to the north-northeast of the Pilot Trench
CH-68	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye presence at this location will serve to confirm the successful introduction of dye to the shallow bedrock flow system. Dye absence would indicate that the well is poorly connected to the flow system.
CH-69	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye presence at this location will serve to confirm the successful introduction of dye to the shallow bedrock flow system. Dye absence would indicate that the well is poorly connected to the flow system.
CH-70	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel from the injection location around to the north-northeast of the Pilot Trench
CH-72	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
Location B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to help assess tracer movement.
MW-X033Y147S	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for westward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X128Y255	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northwestward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X143Y193CG	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for westward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X184Y285	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X209Y078S	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y071B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI6 Dye Trace. Monitor for southward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y095	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y100	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y110B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y115B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y120B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X233Y125B	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-234Y157S	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI4 Dye Trace. Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X234Y157D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X234Y157D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-234Y157D-4	Waterloo	Hand Collect	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI4 Dye Trace. Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X242Y060S	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X251Y189D-7	Waterloo	Hand Collect	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X257Y073	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X269Y201D-3	Waterloo	Hand Collect	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X297Y305D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-2	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location.
MW-X178Y367D-2	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-X178Y367D-5	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X261Y356D-1	Waterloo	Hand Collection	Weekly for 8 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X261Y356D-4	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Location is primarily intended to bound the observed flow direction

Table 6.2

Far Field Study Sampling Locations
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency	Qualifier	Rationale[1]
MW-X261Y356D-5	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X318Y217D-5	Waterloo	Hand Collection	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
MW-X344Y230	Monitoring Well	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel beyond the trench to Bailey's Branch
BB-1	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access	Data will be used to monitor the background fluorescence of water in the head waters of Bailey's Branch throughout the tracer study for inputs of non-site-related dye into the study area.
BB-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access	Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-1 and this location.
BB-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access	Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-2 and this location.
BB-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access	Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-3 and this location.
BB-5	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access	Data will be used to evaluate the potential for dye to discharge to Bailey's Branch between location BB-4 and this location.
Tributary 3-3	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for AOI4 Dye Trace. Data will be used to evaluate the potential for dye travel to the existing collections systems located upgradient of the Pilot Trench
Tributary 3-4	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to evaluate recovery of dye in water pumped from the trench.
NT-1	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
NT-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for northward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
Western Tributary 1	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for westward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
WT-2	Surface Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for westward movement of dye. Potential access issues exist for any remaining springs. Location is primarily intended to bound the observed flow direction
WW-1	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for Outfall 002 Dye Trace. Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
WW-2	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Monitor for southeastward movement of dye. Location is primarily intended to bound the observed flow direction
WW-3	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye travel to the existing collections systems located upgradient of the Pilot Trench
WW-4	Collection Sump	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to evaluate recovery of dye in water pumped from the trench.
Outfall 003/004[2]	NPDES Outfall	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		These data will be used to assess the viability of downstream dye detections.
Spring 021-004	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Dye positive location for Swallet 1, 2 and 5 dye traces. Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-003	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Dye positive location for Swallet 1, 2 and 5 dye traces. Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 021-002	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Dye positive location for Swallet 1, 2 and 5 dye traces. Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Spring 018C	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Dye positive location for Swallet 1, 2 and 5 dye traces. Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Bdfd A	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months		Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.
Bdfd W	Spring Water	Charcoal	Daily for 2 weeks, weekly for 6 weeks, monthly for 4 months	Pending Access and Thermal Reconnaissance	Data will be used to evaluate the potential for dye to travel beyond the Pilot Trench, and if so, document where dyed water discharges to the surface.

Notes:
(1) - The rationale are representative of GHD's understanding of the data and the potential use of such data. Data was used in conjunction with, and in context with, other collected information as part of a multiple lines of evidence approach.
(2) - Outfall 003/004 is the location where treated groundwater discharges to Tributary 3. Dye detections after the groundwater is treated will nullify, or complicate, interpretations of any dye presence within Tributary 3 and downstream thereof.

Table 7.1

PCB Sampling Locations
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency[2]	Qualifier	Rationale[1]
9-4	Monitoring Well	Zero Purge/Low Flow	CA750 (bi-annually)[3]		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. This well is also included as part of the CA750 sampling program.
CH-20	Monitoring Well	Zero Purge/Low Flow	CA750 (bi-annually)[3]		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. This well is also included as part of the CA750 sampling program.
CH-22	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the current overall shallow groundwater conditions in the northeast portion of the Facility.
CH-46	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-48	Monitoring Well	Zero Purge/Low Flow	Baseline	Obstruction may prevent sampling	Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-49	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-52	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-53	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-54	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
CH-61	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-62	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-63	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-64	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-65	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-66	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-67	Monitoring Well	Zero Purge/Low Flow	Baseline	Obstruction may prevent sampling	Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-68	Monitoring Well	Zero Purge/Low Flow	Baseline		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-69	Monitoring Well	Zero Purge/Low Flow	Baseline		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-70	Monitoring Well	Zero Purge/Low Flow	Baseline		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-71	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-72	Monitoring Well	Zero Purge/Low Flow	Baseline, if PCB detections, then resample during CA750		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
CH-73	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
Location A	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
Location B	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. New installation
MW-X143Y193CG	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the immediately west of the Vault.
MW-X234Y157S	Monitoring Well	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility. Static groundwater elevations indicate response to rainfall events.
MW-X178Y367D-2	Waterloo	Zero Purge/Low Flow	Baseline		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-X178Y367D-5	Waterloo	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
MW-X234Y157D-1	Waterloo	Zero Purge/Low Flow	One Time		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X234Y157D-2	Waterloo	Zero Purge/Low Flow	One Time		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Intermediate Flow System.
MW-X261Y356D-1	Waterloo	Zero Purge/Low Flow	One Time		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X261Y356D-3	Waterloo	Zero Purge/Low Flow	CA750 (bi-annually)[3]		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall groundwater conditions within the intermediate flow system in the northeast portion of the Facility.
MW-X261Y356D-4	Waterloo	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
MW-X261Y356D-5	Waterloo	Zero Purge/Low Flow	Baseline		Upgradient of Pilot Trench. To assist in the evaluation of the existing overall shallow groundwater conditions in the northeast portion of the Facility.
MW-X297Y305D-1	Waterloo	Zero Purge/Low Flow	One Time		Data will be used to evaluate the potential for dye to travel beneath the Pilot Trench at this location in the Deep Flow System.
MW-X297Y305D-2	Waterloo	Zero Purge/Low Flow	CA750 (bi-annually)[3]		Data will be used to evaluate the potential for dye travel from the injection location beneath the bottom of the Pilot Trench
MW-X300Y199D-2	Waterloo	Zero Purge/Low Flow	CA750 (bi-annually)[3]		Downgradient of Pilot Trench. To assist in the evaluation of the existing overall groundwater conditions within the intermediate flow system in the northeast portion of the Facility.
WW-3	Wet Well	Spigot	Baseline		Provide a current "snapshot" of the concentration of PCBs in groundwater discharging from this spring under base-flow conditions, if tested positive for dye. If PCBs are detected, a second, confirmatory sample will be collected and analyzed.
WW-4	Wet Well	Spigot	Baseline		Provide a current "snapshot" of the concentration of PCBs in groundwater discharging from this spring under base-flow conditions, if tested positive for dye. If PCBs are detected, a second, confirmatory sample will be collected and analyzed.

Table 7.1

PCB Sampling Locations
GM BCO Facility - Bedford, Indiana

Location ID	Location Type	Measurement Type	Frequency[2]	Qualifier	Rationale[1]

Notes:
(1) - The rationale are representative of GHD's understanding of the data and the potential use of such data. Data was used in conjunction with, and in context with, other collected information as part of a multiple lines of evidence approach.
(2) - Sampling network was develop to include wells in the area of the Pilot Trench. Sampling frequencies were determined as follows:
CA750 (bi-annually): These locations are part of the EI CA750 sampling program and will continued to be collected under that sampling program following Pilot Trench performance monitoring.
One Time: Data collected from these intermediate and deep wells were used to provide, in conjunction with the shallow flow system monitoring, a snap shot of the groundwater flow systems and were not expected to be monitored further as part of the Pilot Trench performance monitoring.
Baseline: These locations were sampled as part of the Pilot Trench performance monitoring to provide baseline data upgradient and downgradient of the Pilot Trench. Newly installed wells were re-sampled if PCBs were detected in the initial sample to confirm the detection.
Data gathered during the Pilot Trench performance monitoring will be used to develop the long term PGCS monitoring plan (monitoring locations and frequency for hydraulic head and/or groundwater quality).
(3) - Collected bi-annually as part of the CA750 program.

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		EPA [2]	9-4	9-4	9-4	CH-20	CH-20	CH-20	CH-22	CH-22
Sample Identification		MCL Primary	GW-080822-MC-34	GW-011823-AC-32	GW-052324-AC-23	GW-080922-KH-37	GW-011723-SS-13	GW-052324-DS-24	GW-080322-TP-11	GW-011723-AC-11
Sample Date			08/08/2022	01/18/2023	05/23/2024	08/09/2022	01/17/2023	05/23/2024	08/03/2022	01/17/2023
Sample Type										
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 UJ	0.11 U	0.099 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U	0.099 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U	0.099 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	0.5	0.0099 U	**0.33**	**0.29 J**	**0.12 J**	**0.17**	**0.090 J**	0.099 U	**0.087 J**
Aroclor-1248 (PCB-1248)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U	0.099 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U	0.099 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.5	0.0099 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U	0.099 U	0.095 U
Total PCBs[1]	ug/L	0.5	ND	**0.33**	**0.29**	**0.12 J**	**0.17**	**0.09 J**	ND	**0.087 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.5	0.0099 U	0.095 U	0.095 U	0.099 U	0.097 U	0.095 U	0.10 U	0.095 U
Total PCBs (dissolved)[1]	ug/L	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU		**10.65**	**2.14**	**4.48**	**6.01**	**4.89**	**6.69**	**5.42**	**11.7**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-22	CH-46	CH-46	CH-48	CH-48	CH-49	CH-49	CH-52	CH-52
Sample Identification		GW-011723-AC-12	GW-080222-KH-01	GW-011623-AC-01	GW-080222-TP-02	GW-011923-JK-37	GW-080222-TP-04	GW-011623-AC-04	GW-080422-KH-22	GW-011623-JL-07
Sample Date		01/17/2023	08/02/2022	01/16/2023	08/02/2022	01/19/2023	08/02/2022	01/16/2023	08/04/2022	01/16/2023
Sample Type		Duplicate								
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	**0.088 J**	**0.30**	**0.11**	**0.27**	**0.22 J**	**0.091 J**	**0.11**	0.10 U	0.095 U
Aroclor-1248 (PCB-1248)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.095 U	0.098 U	0.096 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Total PCBs[(1)]	ug/L	**0.088 J**	**0.3**	**0.11**	**0.27**	**0.22 J**	**0.091 J**	**0.11**	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.098 U	0.095 U	0.10 U	0.096 U	0.097 U	0.095 U	0.095 U	0.095 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**11.7**	**31.0**	**21.6**	**1000**	**12.08**	**4.56**	**11.15**	**8.20**	**8.97**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-53	CH-53	CH-54	CH-54	CH-61	CH-61	CH-61	CH-62	CH-62
Sample Identification		GW-080522-MC-24	GW-011623-SS-09	GW-080522-MC-23	GW-011623-SS-05	GW-080222-MC-03	GW-011623-AC-08	GW-032624-SS-09	GW-080222-MC-05	GW-011623-JK-06
Sample Date		08/05/2022	01/16/2023	08/05/2022	01/16/2023	08/02/2022	01/16/2023	03/26/2024	08/02/2022	01/16/2023
Sample Type										
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	**0.41**	**0.46**	**0.27**	**0.074 J**	0.098 U	**0.10**	0.097 U	0.095 U	**0.086 J**
Aroclor-1248 (PCB-1248)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.10 U	0.10 U	0.095 U	0.095 U	0.098 U	0.095 U	0.097 U	0.095 U	0.095 U
Total PCBs[(1)]	ug/L	**0.41**	**0.46**	**0.27**	**0.074 J**	ND	**0.1**	ND	ND	**0.086 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.10 U	0.11 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.095 U	0.095 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**17.0**	**4.33**	**0.13**	**0.41**	**9.68**	**38.8**	**120**	**9.35**	**21.9**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-62	CH-63	CH-63	CH-63	CH-64	CH-64	CH-65	CH-65	CH-65
Sample Identification		GW-032624-SS-10	GW-080222-MC-07	GW-011623-JK-10	GW-032624-AC-05	GW-080322-MC-09	GW-011723-SS-15	GW-080822-TP-32	GW-080822-TP-33	GW-011623-JL-03
Sample Date		03/26/2024	08/02/2022	01/16/2023	03/26/2024	08/03/2022	01/17/2023	08/08/2022	08/08/2022	01/16/2023
Sample Type									Duplicate	
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Aroclor-1242 (PCB-1242)	ug/L	0.095 U	**0.075 J**	**0.088 J**	**0.15**	0.10 U	0.10 U	**0.22 J**	**0.19 J**	**0.076 J**
Aroclor-1248 (PCB-1248)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.099 U	0.095 U	0.098 U	0.10 U	0.10 U	0.097 U	0.10 U	0.096 U
Total PCBs[(1)]	ug/L	ND	**0.075 J**	**0.088 J**	**0.15**	ND	ND	**0.22 J**	**0.19 J**	**0.076 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.095 U	0.095 U	0.098 U	0.095 U	0.11 U	0.096 U	0.10 U	0.095 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**8.02**	**12.84**	**2.51**	--	**8.22**	**0.91**	**3.64**	**3.64**	**1.27**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-65	CH-66	CH-66	CH-66	CH-67	CH-67	CH-67	CH-68	CH-68
Sample Identification		GW-032524-AC-01	GW-080322-MC-15	GW-011723-AC-16	GW-032624-AC-06	GW-080822-MC-30	GW-011723-JK-21	GW-032524-AC-03	GW-080422-MC-20	GW-080422-MC-21
Sample Date		03/25/2024	08/03/2022	01/17/2023	03/26/2024	08/08/2022	01/17/2023	03/25/2024	08/04/2022	08/04/2022
Sample Type										Duplicate
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Aroclor-1221 (PCB-1221)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Aroclor-1232 (PCB-1232)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Aroclor-1242 (PCB-1242)	ug/L	0.11 U	**0.13 J**	0.095 U	0.095 U	**1.2 J**	**0.15**	**0.23**	**0.59 J**	**1.1 J**
Aroclor-1248 (PCB-1248)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Aroclor-1254 (PCB-1254)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Aroclor-1260 (PCB-1260)	ug/L	0.11 U	0.096 U	0.095 U	0.095 U	0.096 U	0.096 U	0.095 U	0.095 U	0.099 U
Total PCBs[(1)]	ug/L	ND	**0.13 J**	ND	ND	**1.2 J**	**0.15**	**0.23**	**0.59 J**	**1.1 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	**0.093 J**
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.095 U	0.098 U	0.10 U	0.10 U	0.095 U	0.098 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	**0.093 J**
Field Parameters										
Turbidity, field	NTU	--	**3.06**	**4.07**	--	**23.4**	**2.89**	**0.65**	**6.30**	**6.30**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-68	CH-68	CH-69	CH-69	CH-69	CH-70	CH-70	CH-70	CH-72
Sample Identification		GW-011723-SS-18	GW-032624-AC-07	GW-080822-MC-29	GW-011723-JK-17	GW-032524-AC-02	GW-080322-MC-16	GW-011723-AC-22	GW-032624-AC-08	GW-080322-TP-12
Sample Date		01/17/2023	03/26/2024	08/08/2022	01/17/2023	03/25/2024	08/03/2022	01/17/2023	03/26/2024	08/03/2022
Sample Type										
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Aroclor-1221 (PCB-1221)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Aroclor-1232 (PCB-1232)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Aroclor-1242 (PCB-1242)	ug/L	0.12 U	**0.15**	**0.77 J**	**0.20**	**0.16**	**0.43 J**	0.095 U	0.095 U	**0.32**
Aroclor-1248 (PCB-1248)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Aroclor-1254 (PCB-1254)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Aroclor-1260 (PCB-1260)	ug/L	0.12 U	0.095 U	0.099 U	0.098 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U
Total PCBs[(1)]	ug/L	ND	**0.15**	**0.77 J**	**0.2**	**0.16**	**0.43 J**	ND	ND	**0.32**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.12 U	0.095 U	0.096 U	0.10 U	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**0.76**	**0.77**	**49.2**	**4.66**	**1.83**	**7.71**	**16.8**	**0.69**	**3.35**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		CH-72	CH-72	CH-72	CH-73	CH-73	MW-LOC-A	MW-LOC-A	MW-LOC-B	MW-LOC-B
Sample Identification		GW-080322-TP-13	GW-011723-AC-19	GW-032624-AC-04	GW-080822-KH-36	GW-011923-JK-35	GW-080822-KH-31	GW-011623-JK-02	GW-080822-MC-35	GW-011823-AC-26
Sample Date		08/03/2022	01/17/2023	03/26/2024	08/08/2022	01/19/2023	08/08/2022	01/16/2023	08/08/2022	01/18/2023
Sample Type		Duplicate								
Parameters	Units									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	**0.35 J**	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	**0.49**	**0.34 J**
Aroclor-1248 (PCB-1248)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.10 U	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.095 U
Total PCBs[(1)]	ug/L	**0.35 J**	ND	ND	ND	ND	ND	ND	**0.49**	**0.34 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	**0.057 J**	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.096 U	0.095 U	0.095 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.095 U
Total PCBs (dissolved)[(1)]	ug/L	**0.057 J**	ND	ND	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**3.35**	**1.40**	--	**8.56**	**4.02**	**25.1**	--	**42.0**	**2.04**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		MW-LOC-B	MW-X143Y193	MW-X178Y367D-2	MW-X178Y367D-2	MW-X234Y157D-1	MW-X234Y157D-1	MW-X234Y157D-2	MW-X234Y157D-2	MW-X234Y157S
Sample Identification		**GW-011823-AC-30**	**GW-011823-JK-33**	**GW-080322-KH-17**	**GW-011723-JL-14**	**GW-080522-KH-26**	**GW-011823-JL-27**	**GW-080522-KH-28**	**GW-011823-JL-31**	**GW-080522-DS-25**
Sample Date		**01/18/2023**	**01/18/2023**	**08/03/2022**	**01/17/2023**	**08/05/2022**	**01/18/2023**	**08/05/2022**	**01/18/2023**	**08/05/2022**
Sample Type		**Duplicate**								
Parameters	**Units**									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	ug/L	**0.74 J**	**3.8**	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	**0.18 J**
Aroclor-1254 (PCB-1254)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	ug/L	0.099 U	0.48 U	0.10 U	0.096 U	0.095 U	0.11 U	0.10 U	0.095 U	0.095 U
Total PCBs[(1)]	ug/L	**0.74 J**	**3.8**	ND	ND	ND	ND	ND	ND	**0.18 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	**0.20**	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.096 U	0.097 U	0.10 U	--	0.11 U	0.095 U	0.095 U	0.095 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	--	**0.2**	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**2.04**	**29.8**	**0.40**	**2.30**	**5.54**	**2.53**	**3.58**	**3.12**	**3.91**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		MW-X234Y157S	MW-X234Y157S	MW-X261Y356D-1	MW-X261Y356D-3	MW-X261Y356D-3	MW-X261Y356D-3	MW-X261Y356D-5	MW-X297Y305D-1	MW-X297Y305D-1
Sample Identification		**GW-080522-DS-27**	**GW-011823-JL-29**	**GW-052124-DS-10**	**GW-080322-KH-14**	**GW-011723-JL-23**	**GW-052124-DS-08**	**GW-032624-AC-11**	**GW-080222-KH-06**	**GW-011723-JL-20**
Sample Date		**08/05/2022**	**01/18/2023**	**05/21/2024**	**08/03/2022**	**01/17/2023**	**05/21/2024**	**03/26/2024**	**08/02/2022**	**01/17/2023**
Sample Type		**Duplicate**								
Parameters	**Units**									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1221 (PCB-1221)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1232 (PCB-1232)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1242 (PCB-1242)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1248 (PCB-1248)	ug/L	**0.19 J**	**0.16 J**	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1254 (PCB-1254)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Aroclor-1260 (PCB-1260)	ug/L	0.095 U	0.10 U	0.19 U	0.10 U	0.095 U	0.099 U	0.11 U	0.10 U	0.098 U
Total PCBs[(1)]	ug/L	**0.19 J**	**0.16 J**	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.096 U	--	0.10 U	0.11 U	0.095 U	0.11 U	0.11 U	0.11 U
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	--	ND	ND	ND	ND	ND	ND
Field Parameters										
Turbidity, field	NTU	**3.91**	**1.85**	**19.5**	**1.86**	**1.30**	**7.89**	**2.55**	**3.25**	**2.60**

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		**MW-X297Y305D-2**	**MW-X297Y305D-2**	**MW-X300Y199I-2**	**MW-X300Y199I-2**	**MW-X300Y199I-2**	**Wet Well 3**	**Wet Well 3**	**Wet Well 3**
Sample Identification		**GW-080222-KH-08**	**GW-011923-JL-36**	**GW-080422-KH-10**	**GW-011823-JL-34**	**GW-052224-DS-18**	**WW-412-080322-MC-41434**	**GW-080422-KH-19**	**WW-412-010923-MC-41486**
Sample Date		**08/02/2022**	**01/19/2023**	**08/04/2022**	**01/18/2023**	**05/22/2024**	**08/03/2022**	**08/04/2022**	**01/09/2023**
Sample Type									
Parameters	**Units**								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Aroclor-1221 (PCB-1221)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Aroclor-1232 (PCB-1232)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Aroclor-1242 (PCB-1242)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	12	14	18
Aroclor-1248 (PCB-1248)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Aroclor-1254 (PCB-1254)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Aroclor-1260 (PCB-1260)	ug/L	0.099 U	0.098 U	0.10 U	0.11 U	0.095 U	1.9 U	0.99 U	3.8 U
Total PCBs[(1)]	ug/L	ND	ND	ND	ND	ND	12	14	18
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	0.095 U	0.10 U	0.11 U	0.099 U	--	0.11 U	--
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	ND	ND	ND	--	ND	--
Field Parameters									
Turbidity, field	NTU	**3.40**	**0.89**	**3.80**	**1.81**	**5.61**	--	--	--

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		GW-011823-JK-28	WW-412-031824-MC-41645	WW-412-052024-MC-41670	WW-412-052024-MC-41671	WW-412-080322-MC-41435	GW-080422-KH-18	WW-412-010923-MC-41487
Sample Date		01/18/2023	03/18/2024	05/20/2024	05/20/2024	08/03/2022	08/04/2022	01/09/2023
Sample Type					Duplicate			
Parameters	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**13 J**	**13**	**9.8**	**9.1**	0.19 U	**0.26**	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	1.0 U	3.8 U	1.9 U	1.9 U	0.19 U	0.10 U	0.19 U
Total PCBs[(1)]	ug/L	**13 J**	**13**	**9.8**	**9.1**	ND	**0.26**	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	**0.68**	--	--	--	--	0.10 U	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.099 U	--	--	--	--	0.10 U	--
Total PCBs (dissolved)[(1)]	ug/L	**0.68**	--	--	--	--	ND	--
Field Parameters								
Turbidity, field	NTU	**4.08**	--	--	--	--	--	--

Table 7.2

PMP PCB Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		GW-011823-JK-24	GW-011823-JK-25	WW-412-031824-MC-41646	WW-412-052024-MC-41672
Sample Date		01/18/2023	01/18/2023	03/18/2024	05/20/2024
Sample Type			Duplicate		
Parameters	Units				
PCBs					
Aroclor-1016 (PCB-1016)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.11 U	0.097 U	0.19 U	0.19 U
Total PCBs[(1)]	ug/L	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.097 U	0.095 U	--	--
Total PCBs (dissolved)[(1)]	ug/L	ND	ND	--	--
Field Parameters					
Turbidity, field	NTU	**4.08**	**4.08**	--	--

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.
(1) - Total PCB concentrations are the sum of the detected Aroclors.
(2) - Environmental Protection Agency (EPA) - National and Secondary Drinking Water Regulations, Maximim Contaminant Level (MCL)

710 Black/Bold Detected Parameter

6.8 J Red exceeds PCB Criteria of 0.5 ug/L

Table 7.3

November 2022 Well Development Results
GM BCO Facility - Bedford, Indiana

Location ID	Final Turbidity[1] (Sampling Event) NTU	Final Turbidity[2] (Well Development) NTU	One Well Volume[3] (Well Development) Gallons	Ten Well Volumes[3] (Well Development) Gallons	Actual Volume Removed (Well Development) Gallons	Depth to Bottom (Before Development)[2] feet below TOC	Depth to Bottom (After Development)[2] feet below TOC	Depth to Bottom (Increase or Decrease)[2] feet below TOC
CH-22	5.4	1000	16.2	162.4	30.5	37.13	37.30	0.17
CH-46	31	1000	12.9	128.8	13.5	41.09	41.85	0.76
CH-48	1000	1000	1.5	15.0	7.5	32.68	34.35	1.67
CH-49	4.6	1000	8.8	88.2	16.5	37.27	37.27	0.00
CH-52	8.2	1000	27.1	271.0	35.1	57.46	57.80	0.34
CH-53	17	1000	13.7	137.2	16.0	61.55	62.49	0.94
CH-54	0.1	25	12.4	123.5	26.5	70.70	70.75	0.05
CH-61	9.7	1000	12.9	129.1	18.4	31.18	31.25	0.07
CH-62	9.4	1000	11.9	118.6	14.5	32.05	32.20	0.15
CH-63	13	807	15.8	158.0	23.3	45.01	45.00	-0.01
CH-64	8.2	46	20.7	207.0	35.7	57.82	57.85	0.03
CH-65	3.6	165	23.6	236.2	39.0	68.35	68.45	0.10
CH-66	3.1	230	18.9	188.7	28.0	60.95	61.00	0.05
CH-67	23	1000	5.4	54.0	26.5	66.65	66.70	0.05
CH-68	6.3	203	41.4	414.2	62.5	79.35	79.51	0.16
CH-69	49	1000	5.9	58.8	17.5	71.85	72.90	1.05
CH-70	7.7	49	40.6	406.3	208.5	85.43	85.45	0.02
CH-72	3.4	504	2.2	21.6	1.8	45.15	45.15	0.00
MW-LOC-A	25	1000	12.1	120.9	17.8	38.00	38.50	0.50
MW-LOC-B	42	1000	3.6	36.2	4.0	39.73	40.52	0.79
MW-X143Y193CG	NA	169	12.9	129.0	17.0	38.40	38.40	0.00
MW-X234Y157S	3.9	1000	14.5	144.6	22.2	35.28	35.28	0.00

Notes:
NTU = Nephelometric Turbidity Unit.
TOC = Top of Casing.
(1) - August 2022 Groundwater Sampling Event.
(2) - November 2022 Groundwater Development Event.
(3) - Calculated Well Volumes.
CH-68 to CH-73, Location A and Location B are angle-drilled wells (30 degrees from vertical).

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		EPA [2]	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		MCL Primary	SW-100804-JN-5269	SW-102104-JN-5302	W-NAOI4-011105-CH-7104	SW-011205-JN-5330	SW-020205-JN-5363	SW-020205-JN-5364	SW-NAOI4-030105-CL-7353
Sample Date			10/08/2004	10/21/2004	01/11/2005	01/12/2005	02/02/2005	02/02/2005	03/01/2005
Sample Type								Duplicate	
Parameters	**Units**								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	0.5	4.0 U	0.20 U	0.40 U	0.20 U	2.0 U	2.0 U	2.0 U
Aroclor-1221 (PCB-1221)	ug/L	0.5	4.0 U	0.20 U	0.40 U	0.20 U	2.0 U	2.0 U	2.0 U
Aroclor-1232 (PCB-1232)	ug/L	0.5	31	0.40 U	0.80 U	0.40 U	4.0 U	4.0 U	4.0 U
Aroclor-1242 (PCB-1242)	ug/L	0.5	4.0 U	**0.22 J**	5.9	3.4	16	16	16
Aroclor-1248 (PCB-1248)	ug/L	0.5	4.0 U	0.20 U	0.40 U	0.20 U	2.0 U	2.0 U	2.0 U
Aroclor-1254 (PCB-1254)	ug/L	0.5	4.0 U	0.20 U	0.40 U	0.20 U	2.0 U	2.0 U	2.0 U
Aroclor-1260 (PCB-1260)	ug/L	0.5	4.0 U	0.20 U	0.40 U	0.20 U	2.0 U	2.0 U	2.0 U
Total PCBs [1]	ug/L	0.5	31	**0.22 J**	5.9	3.4	16	16	16
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.5	0.40 U	0.40 U	--	0.40 U	0.40 U	0.40 U	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	--
Total PCBs (dissolved) [1]	ug/L	0.5	ND	ND	--	ND	ND	ND	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		SW-NAOI4-033105-CL-7467	WW-NAOI4-041305-CL-7529	WW-052005-JN-5411	WW-062105-JN-5448	WW-090105-CG-5497	WW-092005-CG-5524	WW-112205-JS-5540	WW-122805-AH-5582
Sample Date		03/31/2005	04/13/2005	05/20/2005	06/21/2005	09/01/2005	09/20/2005	11/22/2005	12/28/2005
Sample Type									
Parameters	**Units**								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	1.0 U	0.40 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	40 U
Aroclor-1221 (PCB-1221)	ug/L	1.0 U	0.40 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	40 U
Aroclor-1232 (PCB-1232)	ug/L	2.0 U	0.80 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	40 U
Aroclor-1242 (PCB-1242)	ug/L	**7.6**	**4.7**	**10**	**12**	4.0 U	**12**	1.0 U	40 U
Aroclor-1248 (PCB-1248)	ug/L	1.0 U	0.40 U	1.0 U	1.0 U	**80**	1.0 U	**6.4**	**510**
Aroclor-1254 (PCB-1254)	ug/L	1.0 U	0.40 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	40 U
Aroclor-1260 (PCB-1260)	ug/L	1.0 U	0.40 U	1.0 U	1.0 U	**2.6 J**	1.0 U	1.0 U	**25 J**
Total PCBs [(1)]	ug/L	**7.6**	**4.7**	**10**	**12**	**82.6 J**	**12**	**6.4**	**535 J**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	0.40 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	**1.1**
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total PCBs (dissolved) [(1)]	ug/L	--	ND	ND	ND	ND	ND	ND	**1.1**

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		**WW-030606-JN-5631**	**WW-030606-JN-5632**	**WW-031306-JN-5674**	**WW-031306-JN-5675**	**WW-090706-JN-5797**	**WW-090706-JN-5798**	**WW-091906-JN-5843**	**WW-102406-JN-5896**	**WW-102406-JN-5897**
Sample Date		**03/06/2006**	**03/06/2006**	**03/13/2006**	**03/13/2006**	**09/07/2006**	**09/07/2006**	**09/19/2006**	**10/24/2006**	**10/24/2006**
Sample Type			**Duplicate**		**Duplicate**		**Duplicate**			**Duplicate**
Parameters	**Units**									
PCBs										
Aroclor-1016 (PCB-1016)	ug/L	0.40 U	1.0 U	0.40 U	0.40 U	0.20 U	0.40 U	4.0 U	10 U	10 U
Aroclor-1221 (PCB-1221)	ug/L	0.40 U	1.0 U	0.40 U	0.40 U	0.20 U	0.40 U	4.0 U	10 U	10 U
Aroclor-1232 (PCB-1232)	ug/L	0.40 U	1.0 U	0.40 U	0.40 U	0.20 U	0.40 U	4.0 U	10 U	10 U
Aroclor-1242 (PCB-1242)	ug/L	**4.3**	**4.8**	0.40 U	0.40 U	0.20 U	0.40 U	**4.9**	10 U	10 U
Aroclor-1248 (PCB-1248)	ug/L	0.40 U	1.0 U	**3.7**	**3.7**	**3.7**	**4.3**	4.0 U	**90**	**88**
Aroclor-1254 (PCB-1254)	ug/L	0.40 U	1.0 U	0.40 U	0.40 U	0.20 U	0.40 U	4.0 U	10 U	10 U
Aroclor-1260 (PCB-1260)	ug/L	0.40 U	1.0 U	0.40 U	**0.24 J**	0.20 U	0.40 U	4.0 U	10 U	10 U
Total PCBs [(1)]	ug/L	**4.3**	**4.8**	**3.7**	**3.94 J**	**3.7**	**4.3**	**4.9**	**90**	**88**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	**0.39**	0.20 U	0.20 U	**0.084 J**	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total PCBs (dissolved) [(1)]	ug/L	ND	**0.39**	ND	ND	**0.084 J**	ND	ND	ND	ND

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-031507-JN-5944	WW-042607-JN-5996	WW-082707-JN-6012	WW-121107-JN-6029	WW-011108-JN-6055	WW-031308-CH-31694	WW-051308-JN-6080	WW-092308-JN-6090
Sample Date		03/15/2007	04/26/2007	08/27/2007	12/11/2007	01/11/2008	03/13/2008	05/13/2008	09/23/2008
Sample Type									
Parameters	**Units**								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	20 U	2.0 U	0.40 UJ	1.0 U	0.20 U	--	0.20 U	1.0 U
Aroclor-1221 (PCB-1221)	ug/L	20 U	2.0 U	0.40 UJ	1.0 U	0.20 U	--	0.20 U	1.0 U
Aroclor-1232 (PCB-1232)	ug/L	20 U	2.0 U	0.40 UJ	1.0 U	0.20 U	--	0.20 U	1.0 U
Aroclor-1242 (PCB-1242)	ug/L	**150**	**24**	**4.4 J**	1.0 U	0.20 U	--	**2.9**	**7.7**
Aroclor-1248 (PCB-1248)	ug/L	20 U	2.0 U	0.40 UJ	**4.1**	**3.5**	--	0.20 U	1.0 U
Aroclor-1254 (PCB-1254)	ug/L	20 U	2.0 U	0.40 UJ	1.0 U	0.20 U	--	**0.26**	1.0 U
Aroclor-1260 (PCB-1260)	ug/L	20 U	2.0 U	0.40 UJ	1.0 U	0.20 U	--	0.20 U	1.0 U
Total PCBs [(1)]	ug/L	**150**	**24 J**	**4.4 J**	**4.1**	**3.5**	--	**3.16**	**7.7**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	--	0.20 U	0.20 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	--	0.20 U	0.20 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	--	0.20 U	0.20 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 U	--	0.20 U	0.20 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	**0.11 J**	0.20 UJ	**0.11 J**	0.20 U	--	0.20 U	0.20 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 UJ	--	0.20 U	0.20 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.20 U	0.20 UJ	0.20 U	0.20 UJ	--	0.20 U	0.20 U
Total PCBs (dissolved) [(1)]	ug/L	ND	**0.11 J**	ND	**0.11 J**	ND	--	ND	ND

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-122908-JN-6103	WW-012209-JN-6115	WW-100312-GS-35558	W-AOI4-032814-GS-40036	W-AOI4-032814-GS-40042	WW-072714-GS-40153	WW-090514-GS-40161	WW-216-060916-PB-40400
Sample Date		12/29/2008	01/22/2009	10/03/2012	03/28/2014	03/28/2014	07/27/2014	09/05/2014	06/09/2016
Sample Type									
Parameters	**Units**								
PCBs									
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	2.0 U	0.98 U	--	1.9 U	0.95 U	0.40 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	2.0 U	0.98 U	--	1.9 U	0.95 U	0.40 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	2.0 U	0.98 U	--	1.9 U	0.95 U	0.40 U
Aroclor-1242 (PCB-1242)	ug/L	1.8	2.2	2.0 U	0.98 U	--	1.9 U	5.1	3.4
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	9.9	5.1	--	7.5	0.95 U	0.40 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	2.0 U	0.98 U	--	1.9 U	0.95 U	0.40 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	2.0 U	0.98 U	--	1.9 U	0.95 U	0.40 U
Total PCBs [1]	ug/L	1.8	2.2	9.9	5.1	--	7.5	5.1	3.4
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.20 U	0.20 U	--	--	--	--	--	--
Total PCBs (dissolved) [1]	ug/L	ND	ND	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-082316-GS-40458	WG-101617-MC-40976	WW-412-011018-MC-40987	WW-412-041018-MC-40995	WW-412-053118-MC-40999	WW-412-062718-MC-41002	WW-412-082218-MC-41006
Sample Date		08/23/2016	10/16/2017	01/10/2018	04/10/2018	05/31/2018	06/27/2018	08/22/2018
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**2.6**	**7.7**	**6.6**	**1.8**	**8.4**	**3.4**	**7.5**
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.97 U	0.20 U	0.19 U	0.20 U	0.20 U	0.19 U
Total PCBs [(1)]	ug/L	**2.6**	**7.7**	**6.6**	**1.8**	**8.4**	**3.4**	**7.5**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-100118-GS-41009	WW-412-101718-MC-41016	GW-412-112818-GS-41019	GW-412-122018-GS-41020	GW-412-032519-MC-40956	GW-412-042219-MC-40968	WW-412-052019-MC-40980
Sample Date		10/01/2018	10/17/2018	11/28/2018	12/20/2018	03/25/2019	04/22/2019	05/20/2019
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**6.2**	**7.2**	**3.1**	**2.1**	**1.5**	**1.5**	**2.7**
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	**6.2**	**7.2**	**3.1**	**2.1**	**1.5**	**1.5**	**2.7**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-052019-MC-40981	WW-412-061119-MC-40993	WW-412-072219-MC-41005	WW-412-081519-MC-41018	WW-412-091219-MC-41030	WW-412-091219-MC-41031	WW-412-102419-MC-41043
Sample Date		05/20/2019	06/11/2019	07/22/2019	08/15/2019	09/12/2019	09/12/2019	10/24/2019
Sample Type		Duplicate					Duplicate	
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	3.3	3.5	4.6	5.1	6.6	6.2	9.0
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	3.3	3.5	4.6	5.1	6.6	6.2	9
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-112119-MC-41055	WW-412-121219-MC-41068	WW-412-011320-MC-41084	WW-412-021120-MC-41102	WW-412-031020-MC-41122	WW-412-040820-MC-41125	WW-412-050620-MC-41142
Sample Date		11/21/2019	12/12/2019	01/13/2020	02/11/2020	03/10/2020	04/08/2020	05/06/2020
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**7.6**	**1.7**	**1.6**	**1.4**	**1.7**	**4.3**	**3.5**
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	**7.6**	**1.7**	**1.6**	**1.4**	**1.7**	**4.3**	**3.5**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-061120-MC-41161	WW-412-071620-MC-41175	WW-412-081720-MC-41188	WW-412-091020-MC-41202	WW-412-101520-MC-41215	WW-412-111220-MC-41228	WW-412-120320-MC-41240
Sample Date		06/11/2020	07/16/2020	08/17/2020	09/10/2020	10/15/2020	11/12/2020	12/03/2020
Sample Type		Duplicate						
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	6.3	7.8	4.1	4.5	5.3	6.0	5.1
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	6.3	7.8	4.1	4.5	5.3	6	5.1
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-120320-MC-41241	WW-412-010621-MC-41253	WW-412-021021-MC-41265	WW-412-031021-MC-41277	WW-412-041421-MC-41292	WW-412-051121-MC-41305	WW-412-060221-MC-41310
Sample Date		12/03/2020	01/06/2021	02/10/2021	03/10/2021	04/14/2021	05/11/2021	06/02/2021
Sample Type		Duplicate						
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.6	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	5.0	3.8	3.7	4.5	1.6	0.19 U	4.6
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	5	3.8	3.7	4.5	1.6	2.6	4.6
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-060221-MC-41311	WW-412-071321-MC-41316	WW-412-081721-MC-41333	WW-412-090721-MC-41338	WW-412-101321-MC-41345	WW-412-111621-MC-41358	WW-412-120821-MC-41364
Sample Date		06/02/2021	07/13/2021	08/17/2021	09/07/2021	10/13/2021	11/16/2021	12/08/2021
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	4.7	4.0	8.4	7.2	5.0	4.5	6.2
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	4.7	4	8.4	7.2	5	4.5	6.2
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-011322-MC-41369	WW-412-021022-MC-41383	WW-412-030922-MC-41388	WW-412-041322-MC-41394	WW-412-050922-MC-41407	WW-412-060722-MC-41414	WW-412-070522-MC-41419
Sample Date		01/13/2022	02/10/2022	03/09/2022	04/13/2022	05/09/2022	06/07/2022	07/05/2022
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Aroclor-1242 (PCB-1242)	ug/L	**5.4**	**3.0**	**3.0**	**5.3**	**12**	**12**	**25**
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	2.0 U	1.9 U	1.9 U
Total PCBs [1]	ug/L	**5.4**	**3**	**3**	**5.3**	**12**	**12**	**25**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [1]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-080322-MC-41434	GW-080422-KH-19	WW-412-090822-MC-41443	WW-412-101122-MC-41454	WW-412-110822-MC-41468	WW-412-120622-MC-41477	WW-412-010923-MC-41486
Sample Date		08/03/2022	08/04/2022	09/08/2022	10/11/2022	11/08/2022	12/06/2022	01/09/2023
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Aroclor-1221 (PCB-1221)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Aroclor-1232 (PCB-1232)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Aroclor-1242 (PCB-1242)	ug/L	12	14	17	24	13	22	18
Aroclor-1248 (PCB-1248)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Aroclor-1254 (PCB-1254)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Aroclor-1260 (PCB-1260)	ug/L	1.9 U	0.99 U	1.9 U	1.9 U	1.9 U	1.9 U	3.8 U
Total PCBs [(1)]	ug/L	12	14	17	24	13	22	18
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	0.11 U	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	ND	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		GW-011823-JK-28	WW-412-020623-MC-41500	WW-412-020623-MC-41501	WW-412-031423-MC-41509	WW-412-041023-MC-41518	WW-412-051523-MC-41535	WW-412-061323-MC-41544
Sample Date		01/18/2023	02/06/2023	02/06/2023	03/14/2023	04/10/2023	05/15/2023	06/13/2023
Sample Type				Duplicate				
			A004	A004	A004			
Parameters	Units							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Aroclor-1221 (PCB-1221)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Aroclor-1232 (PCB-1232)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Aroclor-1242 (PCB-1242)	ug/L	**13 J**	**14**	**14**	**14**	**12**	**19**	**20**
Aroclor-1248 (PCB-1248)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Aroclor-1254 (PCB-1254)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Aroclor-1260 (PCB-1260)	ug/L	1.0 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Total PCBs [(1)]	ug/L	**13 J**	**14**	**14**	**14**	**12**	**19**	**20**
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	**0.68**	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.099 U	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	**0.68**	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3
Sample Identification		WW-412-071723-MC-41553	WW-412-080723-MC-41568	WW-412-091123-MC-41577	WW-412-101223-MC-41587	WW-412-110923-MC-41604	WW-412-120723-MC-41613	WW-412-010924-MC-41621
Sample Date		07/17/2023	08/07/2023	09/11/2023	10/12/2023	11/09/2023	12/07/2023	01/09/2024
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Aroclor-1221 (PCB-1221)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Aroclor-1232 (PCB-1232)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Aroclor-1242 (PCB-1242)	ug/L	14	8.3	17	13	20	15	2.9
Aroclor-1248 (PCB-1248)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Aroclor-1254 (PCB-1254)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Aroclor-1260 (PCB-1260)	ug/L	1.9 U	0.95 U	1.9 U	1.9 U	1.9 U	1.9 U	0.95 U
Total PCBs [(1)]	ug/L	14	8.3	17	13	20	15	2.9
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 3	Wet Well 4	Wet Well 4
Sample Identification		WW-412-020524-MC-41637	WW-412-031824-MC-41645	WW-412-041724-MC-41654	WW-412-052024-MC-41670	WW-412-052024-MC-41671	WW-082316-GS-40459	GW-216-051017-MC-40919
Sample Date		02/05/2024	03/18/2024	04/17/2024	05/20/2024	05/20/2024	08/23/2016	05/10/2017
Sample Type						Duplicate		
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	12	13	5.8	9.8	9.1	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.95 U	3.8 U	0.95 U	1.9 U	1.9 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	12	13	5.8	9.8	9.1	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WG-101617-MC-40977	WW-412-011018-MC-40988	WW-412-041018-MC-40996	WW-412-053118-MC-41000	WW-412-053118-MC-41001	WW-412-062718-MC-41003	WW-412-082218-MC-41007
Sample Date		10/16/2017	01/10/2018	04/10/2018	05/31/2018	05/31/2018	06/27/2018	08/22/2018
Sample Type						Duplicate		
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242 (PCB-1242)	ug/L	**0.26 P**	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.20 U	0.19 U	0.20 U	0.20 U	0.20 U	0.20 U
Total PCBs [(1)]	ug/L	**0.26 P**	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-100118-GS-41010	WW-412-100118-GS-41011	WW-412-101718-MC-41017	GW-412-112818-GS-41020	GW-412-122018-GS-41021	GW-412-032519-MC-40957	GW-412-042219-MC-40969
Sample Date		10/01/2018	10/01/2018	10/17/2018	11/28/2018	12/20/2018	03/25/2019	04/22/2019
Sample Type			Duplicate					
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.20 U	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-052019-MC-40982	WW-412-061119-MC-40994	WW-412-072219-MC-41006	WW-412-081519-MC-41019	WW-412-091219-MC-41032	WW-412-102419-MC-41044	WW-412-112119-MC-41056
Sample Date		05/20/2019	06/11/2019	07/22/2019	08/15/2019	09/12/2019	10/24/2019	11/21/2019
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-121219-MC-41069	WW-412-011320-MC-41085	WW-412-021120-MC-41103	WW-412-031020-MC-41123	WW-412-040820-MC-41126	WW-412-050620-MC-41143	WW-412-061120-MC-41162
Sample Date		12/12/2019	01/13/2020	02/11/2020	03/10/2020	04/08/2020	05/06/2020	06/11/2020
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-071620-MC-41176	WW-412-081720-MC-41189	WW-412-091020-MC-41203	WW-412-101520-MC-41216	WW-412-111220-MC-41229	WW-412-120320-MC-41242	WW-412-010621-MC-41254
Sample Date		07/16/2020	08/17/2020	09/10/2020	10/15/2020	11/12/2020	12/03/2020	01/06/2021
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-021021-MC-41266	WW-412-031021-MC-41278	WW-412-041421-MC-41293	WW-412-051121-MC-41306	WW-412-060221-MC-41312	WW-412-071321-MC-41317	WW-412-081721-MC-41334
Sample Date		02/10/2021	03/10/2021	04/14/2021	05/11/2021	06/02/2021	07/13/2021	08/17/2021
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.20 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-090721-MC-41339	WW-412-101321-MC-41346	WW-412-111621-MC-41359	WW-412-120821-MC-41365	WW-412-011322-MC-41370	WW-412-011322-MC-41371	WW-412-021022-MC-41384
Sample Date		09/07/2021	10/13/2021	11/16/2021	12/08/2021	01/13/2022	01/13/2022	02/10/2022
Sample Type							Duplicate	
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	**0.30**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	**0.3**	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-030922-MC-41389	WW-412-041322-MC-41395	WW-412-050922-MC-41408	WW-412-060722-MC-41415	WW-412-070522-MC-41420	WW-412-070522-MC-41421	WW-412-080322-MC-41435
Sample Date		03/09/2022	04/13/2022	05/09/2022	06/07/2022	07/05/2022	07/05/2022	08/03/2022
Sample Type							Duplicate	
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**0.20**	0.19 U	0.20 U	**0.13 J**	0.19 U	2.5 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.20 U	0.19 U	0.19 U	2.5 U	0.19 U
Total PCBs [(1)]	ug/L	**0.2**	ND	ND	**0.13 J**	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		GW-080422-KH-18	WW-412-090822-MC-41444	WW-412-101122-MC-41455	WW-412-110822-MC-41469	WW-412-120622-MC-41478	WW-412-010923-MC-41487	GW-011823-JK-24
Sample Date		08/04/2022	09/08/2022	10/11/2022	11/08/2022	12/06/2022	01/09/2023	01/18/2023
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1221 (PCB-1221)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1232 (PCB-1232)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1242 (PCB-1242)	ug/L	**0.26**	0.19 U	**0.11 J**	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1248 (PCB-1248)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1254 (PCB-1254)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Aroclor-1260 (PCB-1260)	ug/L	0.10 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.11 U
Total PCBs [(1)]	ug/L	**0.26**	ND	**0.11 J**	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.10 U	--	--	--	--	--	0.097 U
Total PCBs (dissolved) [(1)]	ug/L	ND	--	--	--	--	--	ND

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		GW-011823-JK-25	WW-412-020623-MC-41502	WW-412-031423-MC-41510	WW-412-031423-MC-41511	WW-412-031423-MC-41510	WW-412-031423-MC-41511	WW-412-041023-MC-41519
Sample Date		01/18/2023	02/06/2023	03/14/2023	03/14/2023	03/14/2023	03/14/2023	04/10/2023
Sample Type		Duplicate			Duplicate		Duplicate	
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.097 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	0.095 U	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	ND	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-051523-MC-41536	WW-412-061323-MC-41545	WW-412-071723-MC-41554	WW-412-080723-MC-41569	WW-412-091123-MC-41578	WW-412-101223-MC-41588	WW-412-110923-MC-41605
Sample Date		05/15/2023	06/13/2023	07/17/2023	08/07/2023	09/11/2023	10/12/2023	11/09/2023
Sample Type								
Parameters	**Units**							
PCBs								
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	ND	ND	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--	--

Table 8.1

Wet Well 3 and Wet Well 4 Sampling Results
GM BCO Facility - Bedford, Indiana

Sample Location		Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4	Wet Well 4
Sample Identification		WW-412-120723-MC-41614	WW-412-010924-MC-41622	WW-412-020524-MC-41638	WW-412-031824-MC-41646	WW-412-041724-MC-41655	WW-412-052024-MC-41672
Sample Date		12/07/2023	01/09/2024	02/05/2024	03/18/2024	04/17/2024	05/20/2024
Sample Type							
Parameters	**Units**						
PCBs							
Aroclor-1016 (PCB-1016)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1221 (PCB-1221)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1232 (PCB-1232)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1242 (PCB-1242)	ug/L	**0.095 J**	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1248 (PCB-1248)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1254 (PCB-1254)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Aroclor-1260 (PCB-1260)	ug/L	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Total PCBs [(1)]	ug/L	**0.095 J**	ND	ND	ND	ND	ND
Aroclor-1016 (PCB-1016) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1221 (PCB-1221) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1232 (PCB-1232) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1242 (PCB-1242) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1248 (PCB-1248) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1254 (PCB-1254) (dissolved)	ug/L	--	--	--	--	--	--
Aroclor-1260 (PCB-1260) (dissolved)	ug/L	--	--	--	--	--	--
Total PCBs (dissolved) [(1)]	ug/L	--	--	--	--	--	--

Notes:

U - Not detected at the associated reporting limit.

J - Estimated concentration.

UJ - Not detected; associated reporting limit is estimated.

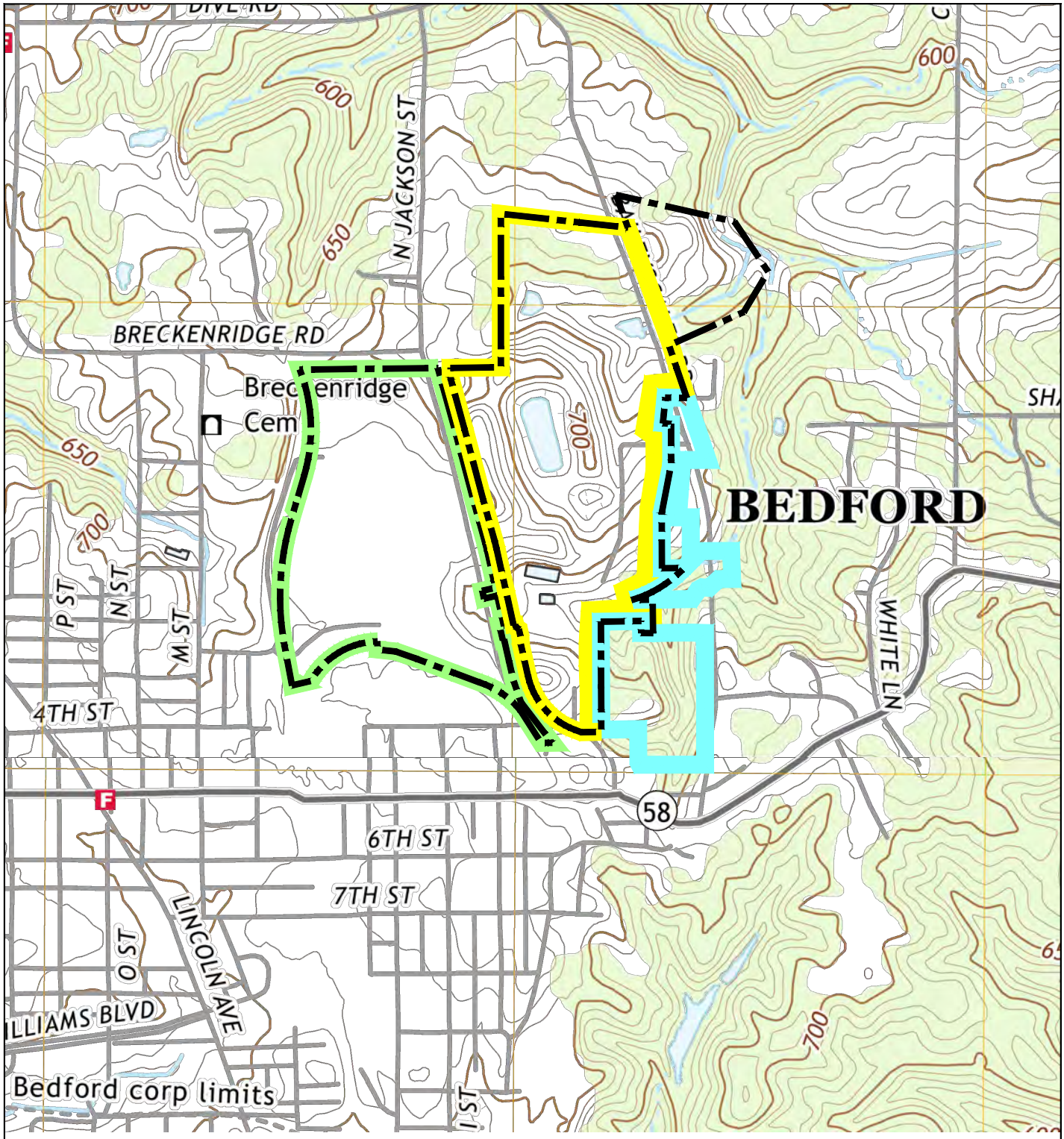
(1) - Total PCB concentrations are the sum of the detected Aroclors.

(2) - Environmental Protection Agency (EPA) - National and Secondary Drinking Water Regulations, Maximim Contaminant Level (MCL).

710 Black/Bold Detected Parameter.

6.8 J Red exceeds PCB Criteria of 0.5 ug/L.

Figures



INDIANA

BEDFORD

LEGEND

- APPROXIMATE FACILITY BOUNDARY
- GM LLC OWNED RESIDENTIAL PROPERTIES
- EAST PLANT AREA BOUNDARY
- WEST PLANT AREA BOUNDARY

0 500 1000 ft

1" = 1000 ft

Coordinate System:
INDIANA WEST STATE PLANE
NAD83 FEET

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
RCRA CORRECTIVE MEASURES PROPOSAL

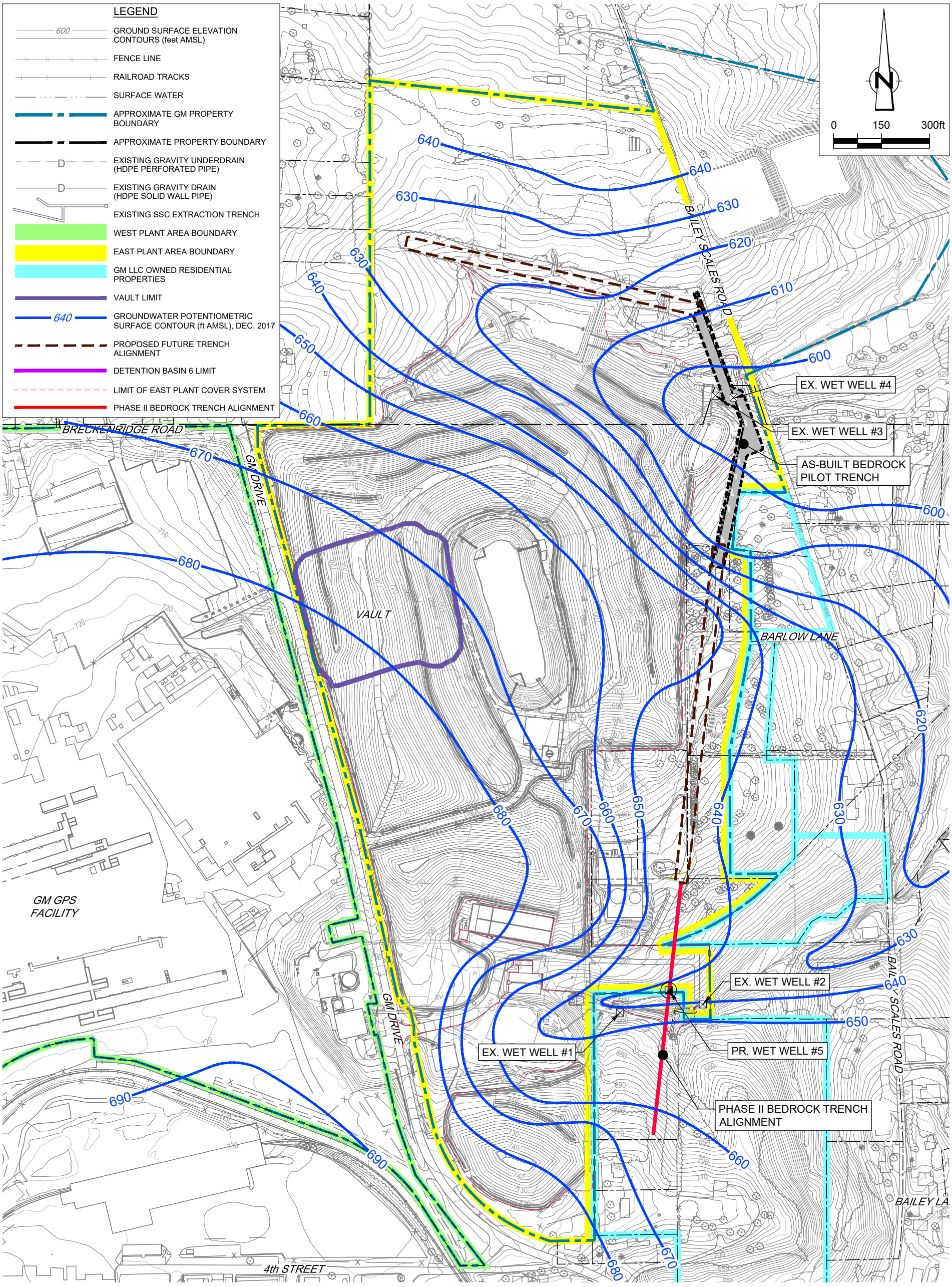
Project No. **11228036**
Date **March 2024**

FACILITY LOCATION

FIGURE 1.1

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D113_WA-015.dwg
Plot Date: 26 March 2024 5:54 PM

Data Source: USGS QUADRANGLE MAPS BARTLETTSVILLE, INDIANA 2019; BEDFORD EAST, INDIANA 2019; BEDFORD WEST, INDIANA 2019; OOLITIC, INDIANA 2019



NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 150 300 ft
1" = 300 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

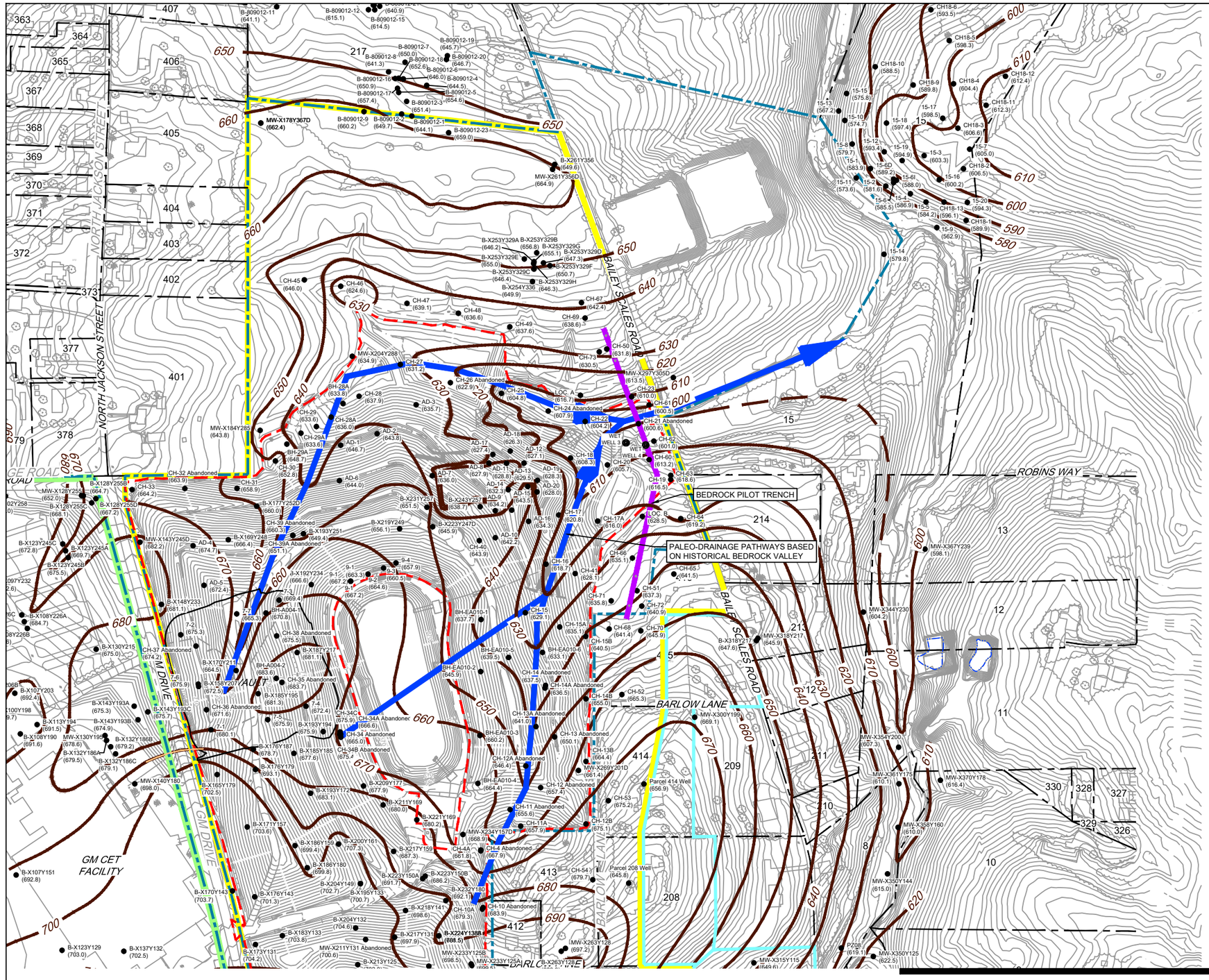
PERIMETER GROUNDWATER TRENCH COLLECTION SYSTEM LAYOUT

Project No. **11228036**
Date **July 2024**

FIGURE 1.2

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D128_WA-015.dwg
Plot Date: 08 July 2024 10:40 AM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL PROPERTY
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA
- WEST PLANT AREA
- GM LLC OWNED RESIDENTIAL PROPERTIES
- PILOT TRENCH ALIGNMENT
- WET WELL 4 — WET WELL
- EXISTING COREHOLE AND MONITORING WELL LOCATIONS NEAR PROPOSED BEDROCK TRENCH
- 610 — BEDROCK CONTOUR (FT AMSL) DASHED WHERE INFERRED
- PALEO-DRAINAGE PATHWAYS BASED ON HISTORICAL BEDROCK VALLEY

NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 150 300 ft
1" = 300 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

Project No. **11228036**
Date **June 2024**

TOP OF BEDROCK CONTOUR MAP

FIGURE 2.1

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D101_WA-015.dwg
Plot Date: 19 June 2024 3:59 PM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL PROPERTY
- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA
- PILOT TRENCH ALIGNMENT
- RFI BORING SAMPLE LOCATION NOT USED IN CONTOURING
- MONITORING WELL SAMPLE LOCATION
- (604.08) GROUNDWATER ELEVATION (ft AMSL)
- (NA) NO ACCESS
- (NM) NOT MEASURED
- (OBS 20.40) OBSTRUCTION AT SPECIFIED DEPTH (ft AMSL)
- ft AMSL FEET ABOVE MEAN SEA LEVEL
- 640 GROUNDWATER FLOW CONTOUR (ft AMSL)
- HISTORICAL BEDROCK VALLEY SYSTEM
- BEDROCK HIGH BETWEEN THE NORTHERN AND SOUTHERN BEDROCK VALLEYS

0 200 400 ft

1" = 400 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE 4Q2022 - NOVEMBER 2022

Project No. **11228036**
Date **December 2024**

FIGURE 2.2

Filename: \\ghdnetghdl\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D107_WA-015.dwg
Plot Date: 17 December 2024 3:08 PM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

CH-45
(630.00)

CH-46B
(624.62)

CH-67
(616.90)

CH-49
(620.19)

IPT-1
(610.14)

CH-61
(600.90)

CH-22
(606.19)

MW-X184Y285
(640.95)

CH-62
(600.24)

CH-20
(600.96)

IPT-6
(597.34)

APPROXIMATE BEDFORD CITY LIMIT

CH-63
(606.16)

CH-64
(615.32)

9-4
(650.58)

CH-66
(610.73)

CH-65
(618.56)

IPT-11
(607.04)

MW-X318Y217D-5
(621.45)

CH-52
(647.78)

MW-X300Y199I-4
(641.60)

BAILEY SCALES ROAD

BARLOW LANE

15

214

416

213

415

212

414

LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL PROPERTY
- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- EAST PLANT AREA
- PILOT TRENCH ALIGNMENT
- RFI BORING SAMPLE LOCATION NOT USED IN CONTOURING
- MONITORING WELL SAMPLE LOCATION
- (604.08) GROUNDWATER ELEVATION (ft AMSL)
- (NA) NO ACCESS
- (NM) NOT MEASURED
- (OBS 20.40) OBSTRUCTION AT SPECIFIED DEPTH (ft AMSL)
- ft AMSL FEET ABOVE MEAN SEA LEVEL
- FLOW DIRECTION

0 75 150 ft

1" = 150 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

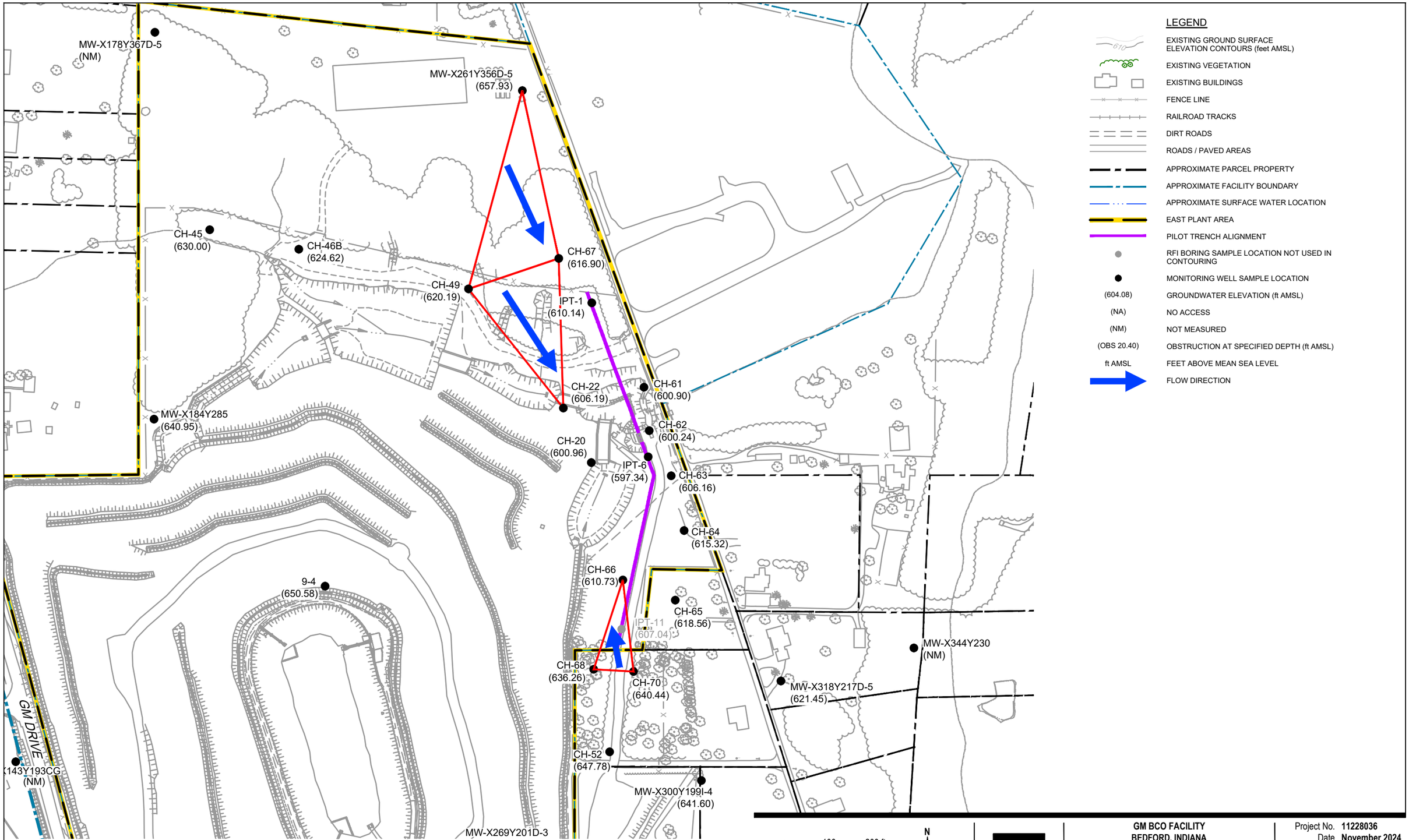
TRIANGULAR ELEMENTS
NEAR PILOT TRENCH

Project No. **11228036**
Date **November 2024**

FIGURE 2.3

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D117_WA-015.dwg
Plot Date: 27 November 2024 10:24 AM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

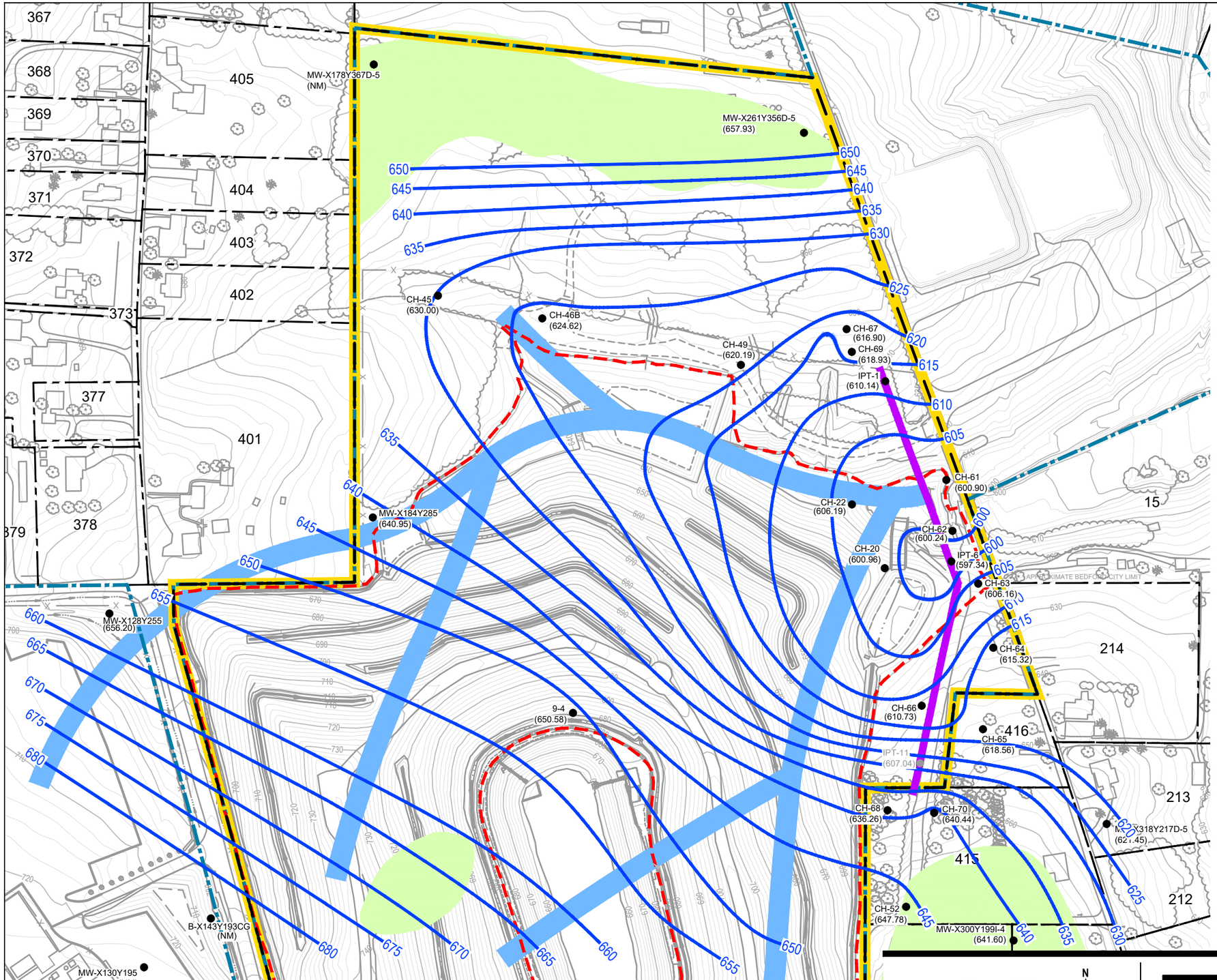
TRIANGULAR ELEMENTS IN NORTHERN BEDROCK VALLEY

Project No. **11228036**
Date **November 2024**

FIGURE 2.4

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D120_WA-015.dwg
Plot Date: 27 November 2024 10:26 AM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- EXISTING GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- EXISTING VEGETATION
- EXISTING BUILDINGS
- FENCE LINE
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE PARCEL PROPERTY
- APPROXIMATE FACILITY BOUNDARY
- APPROXIMATE SURFACE WATER LOCATION
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA
- PILOT TRENCH ALIGNMENT
- RFI BORING SAMPLE LOCATION NOT USED IN CONTOURING
- MONITORING WELL SAMPLE LOCATION
- (604.08) GROUNDWATER ELEVATION (ft AMSL)
- (NA) NO ACCESS
- (NM) NOT MEASURED
- (OBS 20.40) OBSTRUCTION AT SPECIFIED DEPTH (ft AMSL)
- ft AMSL FEET ABOVE MEAN SEA LEVEL
- 640 GROUNDWATER FLOW CONTOUR (ft AMSL)
- HISTORICAL BEDROCK VALLEY SYSTEM
- BEDROCK HIGH BETWEEN THE NORTHERN AND SOUTHERN BEDROCK VALLEYS

0 100 200 ft
1" = 200 ft

N

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

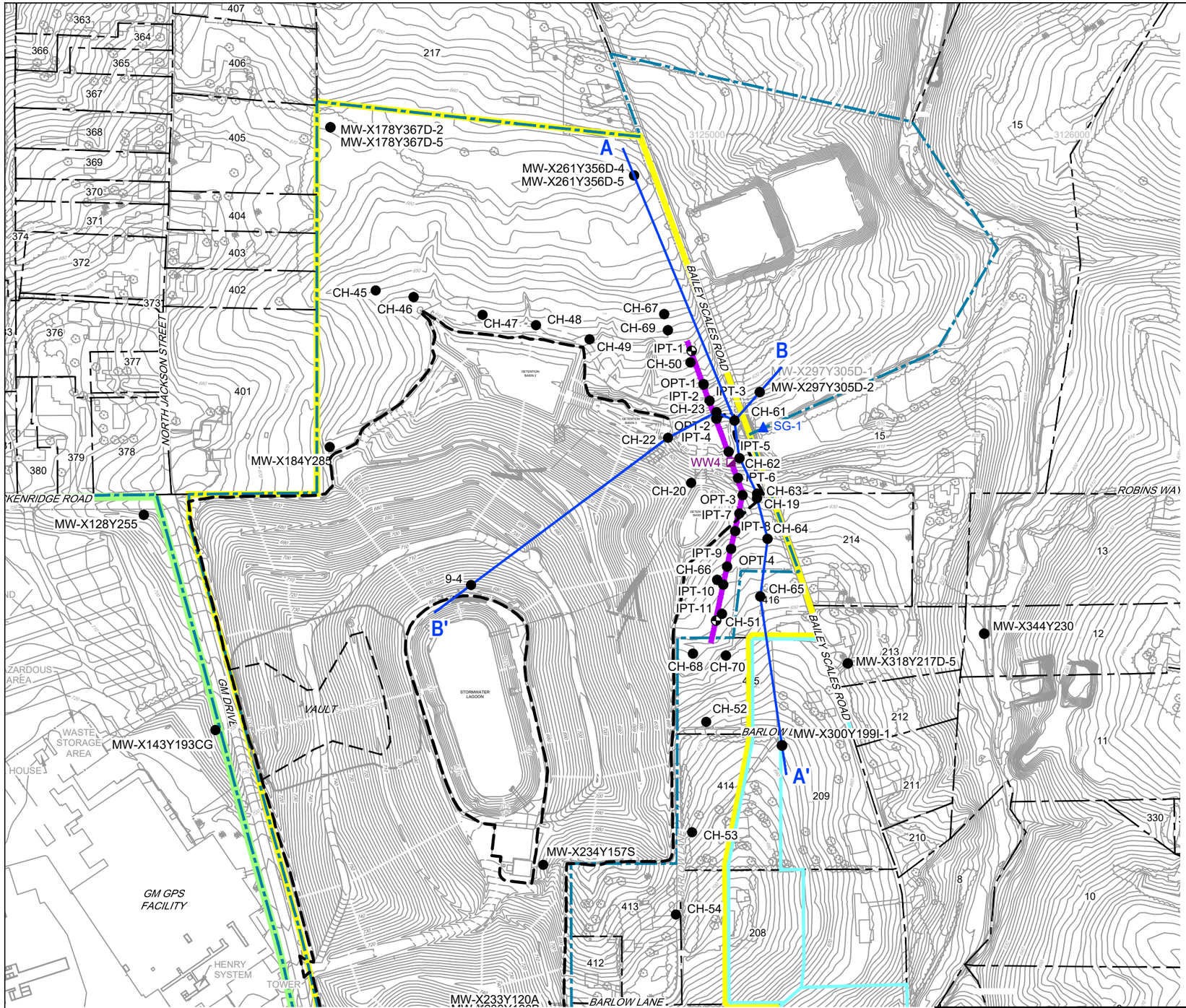
SHALLOW GROUNDWATER POTENTIOMETRIC SURFACE WITHIN NORTHERN BEDROCK VALLEY

Project No. **11228036**
Date **January 2025**

FIGURE 2.5

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D121_WA-015.dwg
Plot Date: 16 January 2025 11:24 AM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- GROUND SURFACE ELEVATION CONTOURS (feet AMSL) (600)
- FENCE LINE
- SURFACE WATER
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA BOUNDARY
- WEST PLANT AREA BOUNDARY
- GM LLC OWNED RESIDENTIAL PROPERTIES
- PILOT TRENCH ALIGNMENT
- WET WELL
- EXISTING COREHOLE AND MONITORING WELL LOCATIONS NEAR PROPOSED BEDROCK TRENCH
- EXISTING PIEZOMETER LOCATION

NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 150 300 ft
1" = 300 ft

N

GHD

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BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

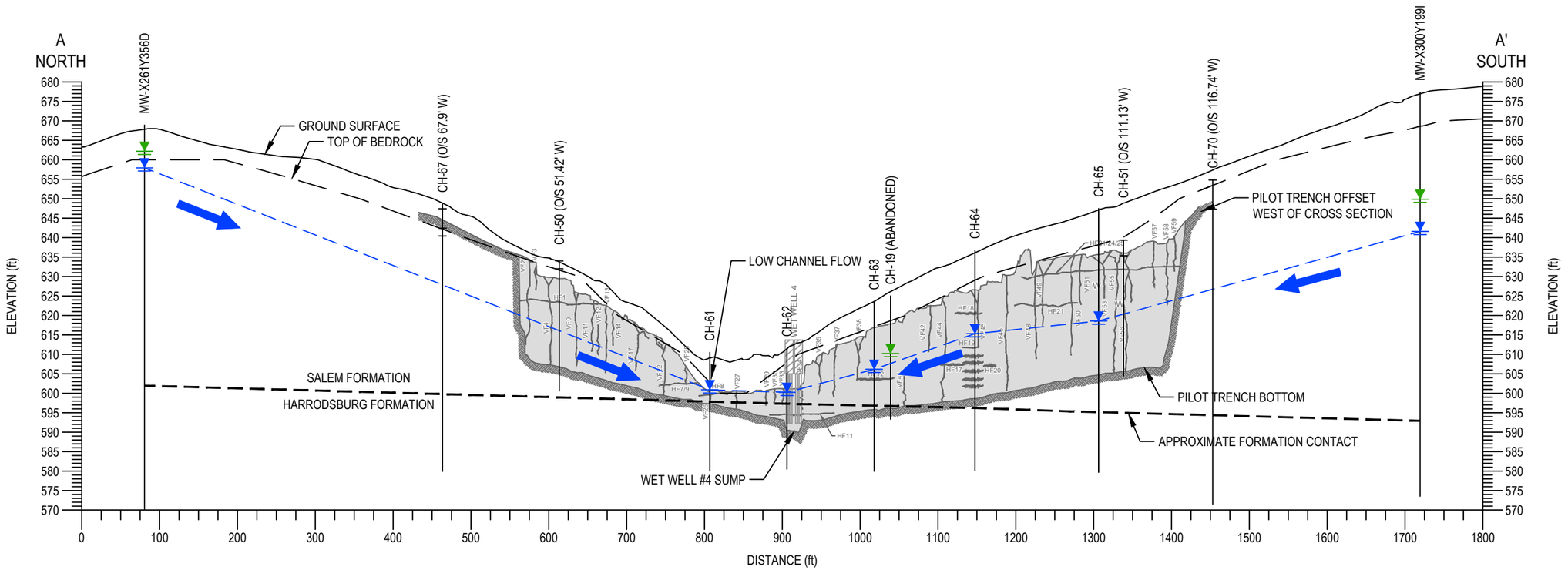
Project No. **11228036**
Date **June 2024**

CROSS-SECTION LOCATION MAP

FIGURE 2.6

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D127_WA-015.dwg
Plot Date: 27 June 2024 5:08 PM

Data Source: SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- APPROXIMATE FORMATION CONTACT
- WATER LEVEL (JULY 2010, PRIOR TO PILOT TRENCH INSTALLATION)
- WATER LEVEL (NOVEMBER 2022)
- INFERRED DIRECTION OF GROUNDWATER FLOW

HORIZONTAL
1" = 150 ft
0 75 150Ft

1" = 30 ft
VERTICAL
0 15 30Ft

GHD

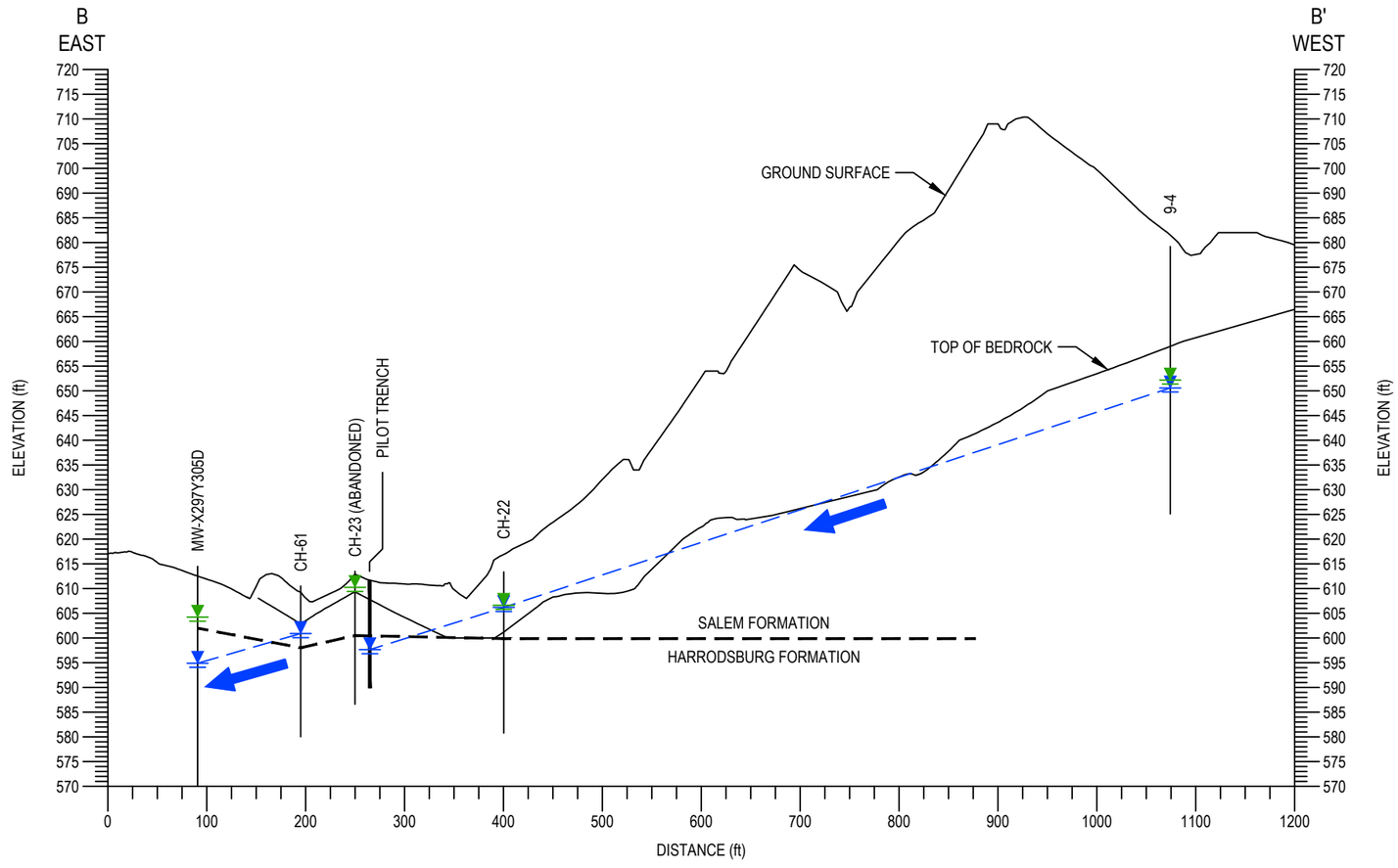
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

CROSS SECTION - A-A'

Project No. **11228036**
Date **June 2024**

FIGURE 2.7

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D126_WA-015.dwg
Plot Date: 27 June 2024 5:08 PM



LEGEND

- APPROXIMATE FORMATION CONTACT
- WATER LEVEL (JULY 2010, PRIOR TO PILOT TRENCH INSTALLATION)
- WATER LEVEL (NOVEMBER 2022)
- INFERRED DIRECTION OF GROUNDWATER FLOW

HORIZONTAL
1" = 150 ft
0 75 150Ft
0 15 30Ft
1" = 30 ft
VERTICAL

GHD

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BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

CROSS SECTION - B-B'

Project No. **11228036**
Date **June 2024**

FIGURE 2.8

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D126_WA-015.dwg
Plot Date: 27 June 2024 5:09 PM

| Wet Well 3 | 10/03/2012 | 03/28/2014 | 07/27/2014 | 09/05/2014 | 06/09/2016 | 08/23/2016 | 10/16/2017 | 01/10/2018 | 04/10/2018 | 05/31/2018 | 06/27/2018 | 08/22/2018 | 10/01/2018 | 10/17/2018 | 11/28/2018 | 12/20/2018 | 03/25/2019 | 04/22/2019 | 05/20/2019 | 06/11/2019 | 07/22/2019 | 08/15/2019 | 09/12/2019 | 10/24/2019 | 11/21/2019 | 12/12/2019 | 01/13/2020 | 02/11/2020 | 03/10/2020 | 04/08/2020 | 05/06/2020 | 06/11/2020 | 07/16/2020 | 08/17/2020 | 09/10/2020 | 10/15/2020 | 11/12/2020 | 12/03/2020 | 01/06/2021 | 02/10/2021 | 03/10/2021 | 04/14/2021 | 05/11/2021 | 06/02/2021 | 07/13/2021 | 08/17/2021 | 09/07/2021 | 10/13/2021 | 11/16/2021 | 12/08/2021 | 01/13/2022 | 02/10/2022 | 03/09/2022 | 04/13/2022 | 05/09/2022 | 06/07/2022 | 07/05/2022 | 08/03/2022 | 08/04/2022 | 09/08/2022 | 10/11/2022 | 11/08/2022 | 12/06/2022 | 01/09/2023 |
|---|---|---

Primary (matrix) porosity; ~9%

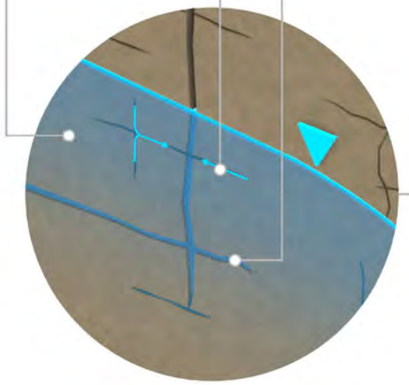
Most of the water in the bedrock is stored here; moves very slowly toward secondary and tertiary porosity.

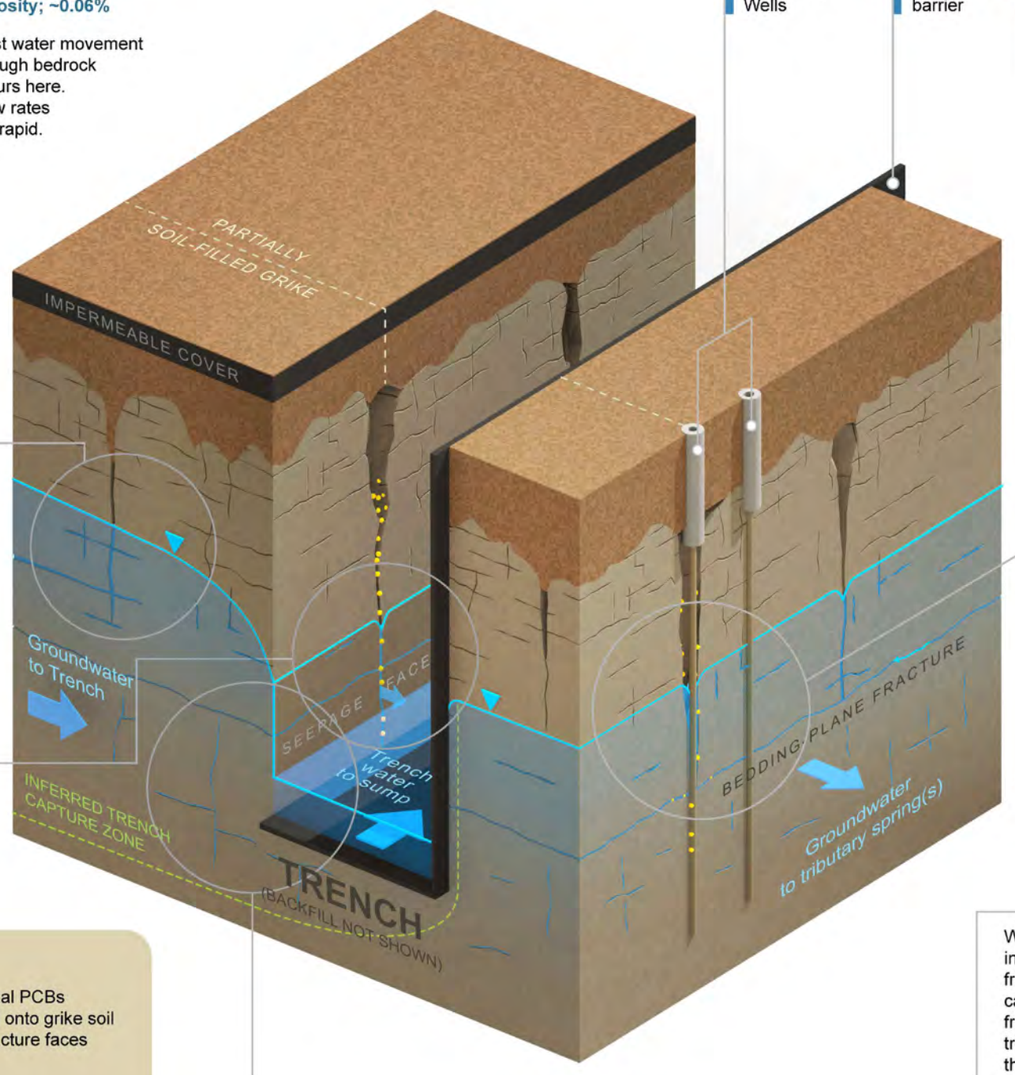
Secondary (fracture) porosity; ~0.3%

Only a small amount of water is transmitted through these tight, generally unweathered fractures; water moves relatively slowly towards tertiary porosity.

Tertiary (solution) porosity; ~0.06%

Most water movement through bedrock occurs here. Flow rates are rapid.





Monitoring Wells

Impermeable barrier

Degree-of-fracturing and karstification decreases with depth

Water in this well is derived from primary and secondary porosity; water moves slowly toward grike (tertiary porosity).



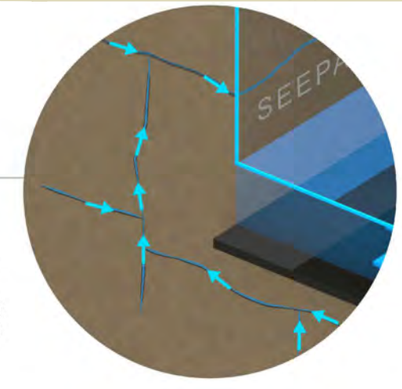
Interpretation of individual groundwater sampling results should involve some degree of caution. PCBs are relatively hydrophobic and adhere strongly to solids, which are typical in karstic rock openings, such as a fracture. Low-level PCBs detected in a well sample may not be representative of water quality due to the potential for sampling artifacts (particulates disturbed by sampling process can become entrained in the sample). Because of this uncertainty, PCB sampling results are a secondary line of evidence in evaluating the trench groundwater capture performance and detections should be repeatable and correlated with other lines of evidence before making any determinations.

Grike water enters trench



Residual PCBs sorbed onto grike soil and fracture faces

Water moving through interconnected fractures in the trench capture zone, including fractures beneath the trench, migrates through the fracture network and into the trench.



Groundwater flow direction in fracture

NOT TO SCALE

GHD

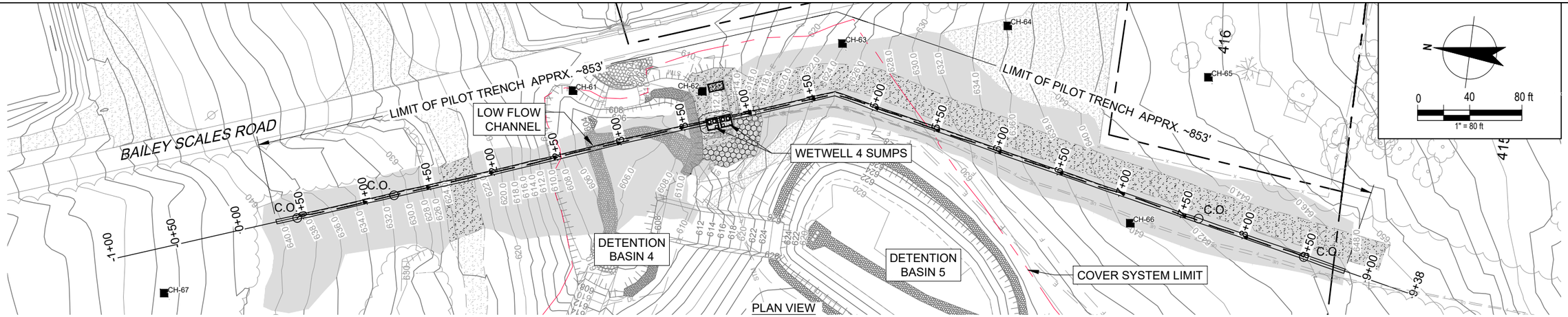
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

CONCEPTUAL SITE MODEL OF TRENCH

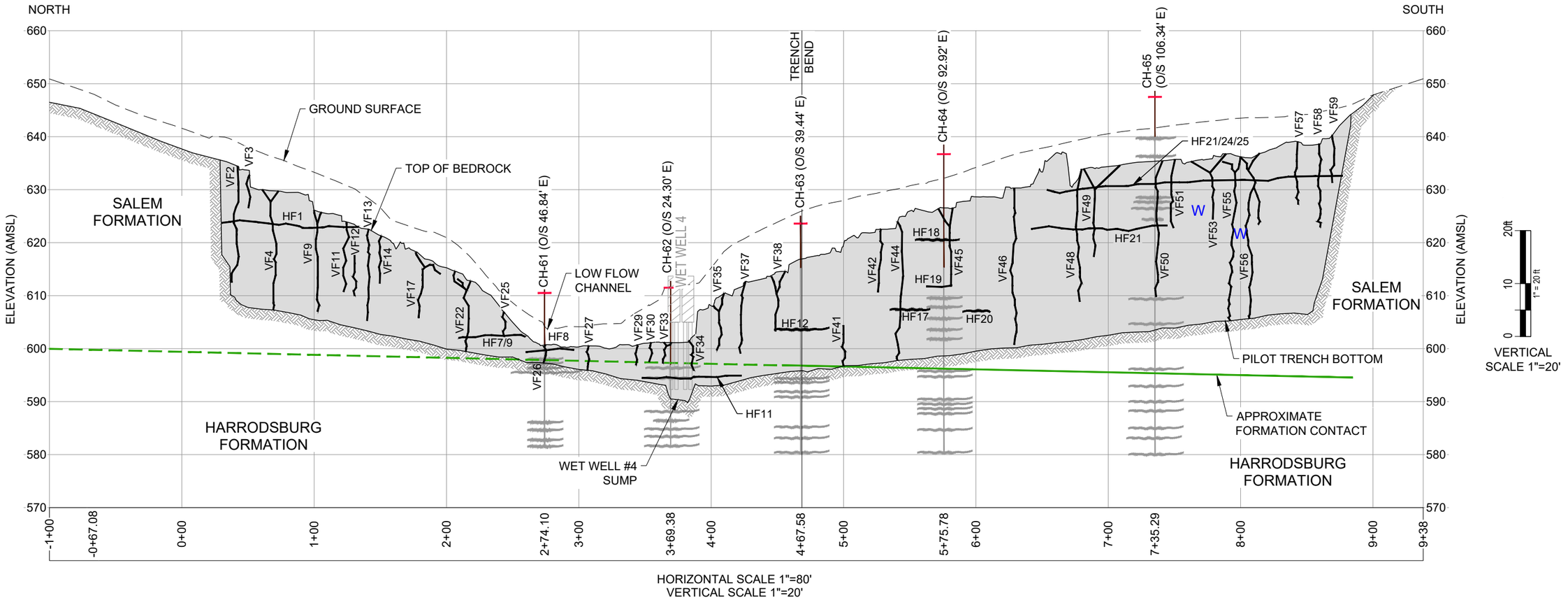
Project No. **11228036**
Date **July 2024**

FIGURE 2.10

Filename: \\ghdnetighd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D102_WA-015.dwg
Plot Date: 08 July 2024 9:45 AM



PLAN VIEW
SCALE 1"=80'



HORIZONTAL SCALE 1"=80'
VERTICAL SCALE 1"=20'

LEGEND:

- TOP OF CASING ELEVATION / GROUND ELEVATION
- CH-67 — WELL IDENTIFIER
- OUTER CASING
- OPEN COREHOLE
- HORIZONTAL FRACTURE
- HF8 — HORIZONTAL FRACTURE ID
- VF25 — VERTICAL FRACTURE ID
- VERTICAL FRACTURE
- W — WATER FLOW
- APPROX. GRADATIONAL CONTACT (DASHED WHERE INFERRED)
- COVER SYSTEM LIMIT

GHD

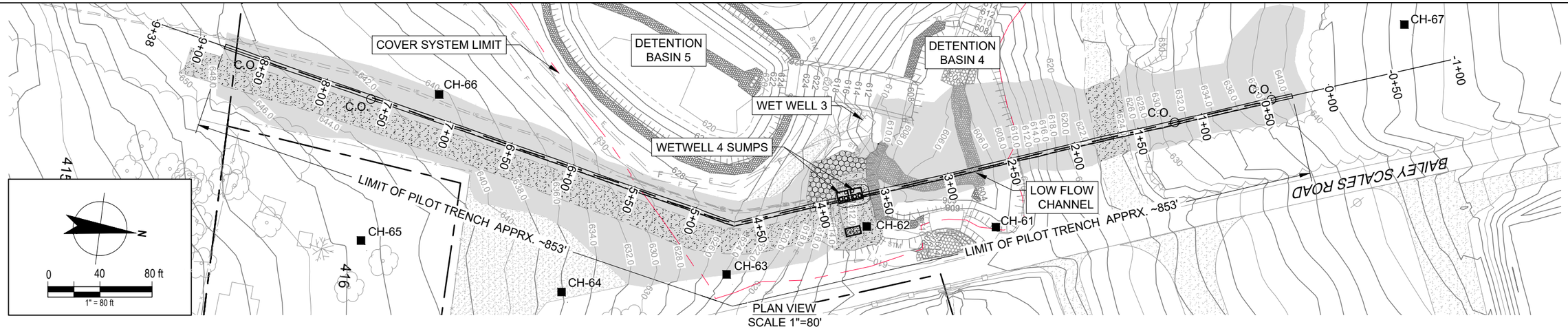
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

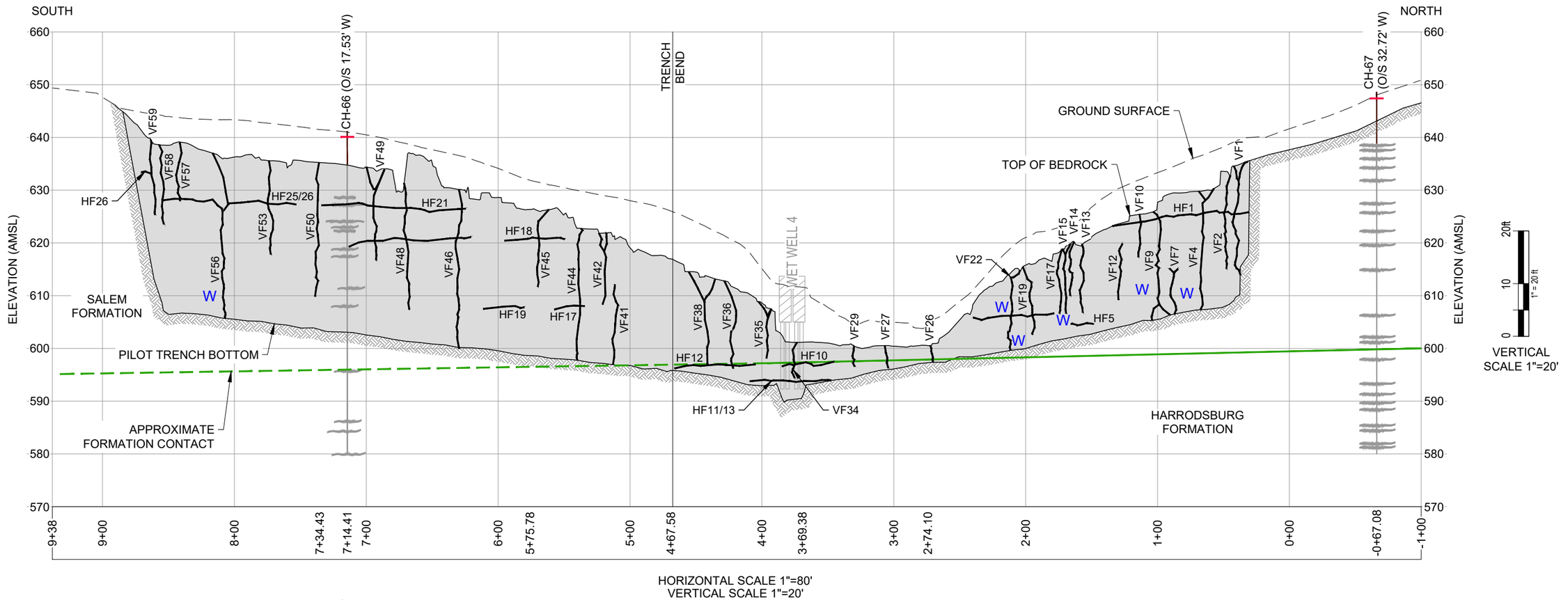
PILOT TRENCH EAST SIDE SCHEMATIC

Project No. **11228036**
Date **February 2024**

FIGURE 3.1

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D103_WA-015.dwg
Plot Date: 29 February 2024 2:19 PM





LEGEND:

- CH-67 — WELL IDENTIFIER
- TOP OF CASING ELEVATION
- GROUND ELEVATION
- OUTER CASING
- OPEN COREHOLE
- HORIZONTAL FRACTURE
- HF8 — HORIZONTAL FRACTURE ID
- VF25 — VERTICAL FRACTURE ID
- VERTICAL FRACTURE
- W — WATER FLOW
- APPROX. GRADATIONAL CONTACT (DASHED WHERE INFERRED)
- COVER SYSTEM LIMIT

GHD

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PILOT TRENCH PERFORMANCE MONITORING REPORT

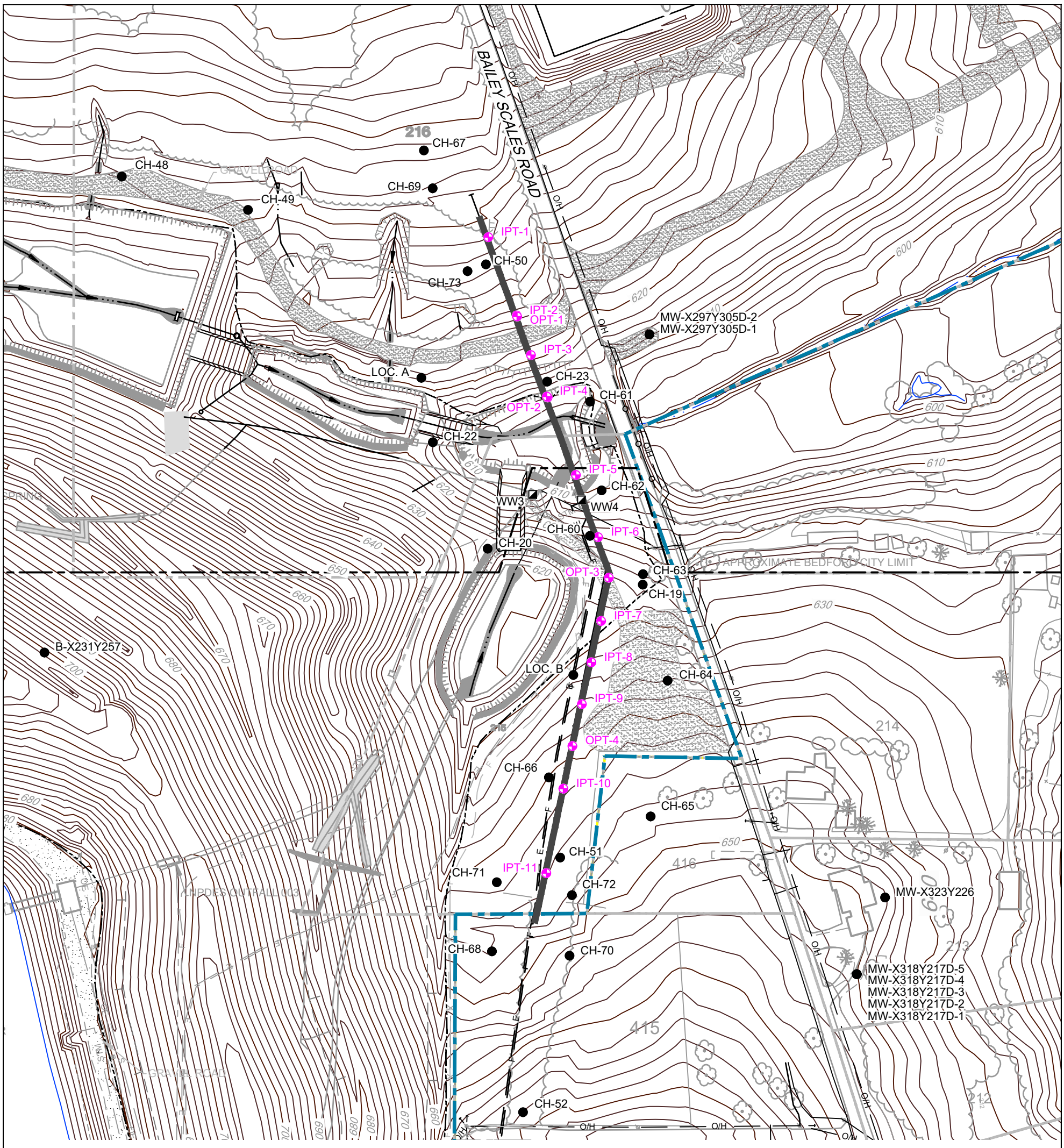
Project No. **11228036**
Date **February 2024**

PILOT TRENCH WEST SIDE SCHEMATIC

FIGURE 3.2

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D104_WA-015.dwg
Plot Date: 29 February 2024 2:19 PM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- FENCE LINE
- SURFACE WATER
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- PILOT TRENCH
- PIEZOMETER LOCATION
- EXISTING COREHOLE AND MONITORING WELL LOCATIONS
- WET WELL

NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 60 120 ft
1" = 120 ft

N

GHD

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BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

PIEZOMETER LOCATIONS WITHIN PILOT TRENCH

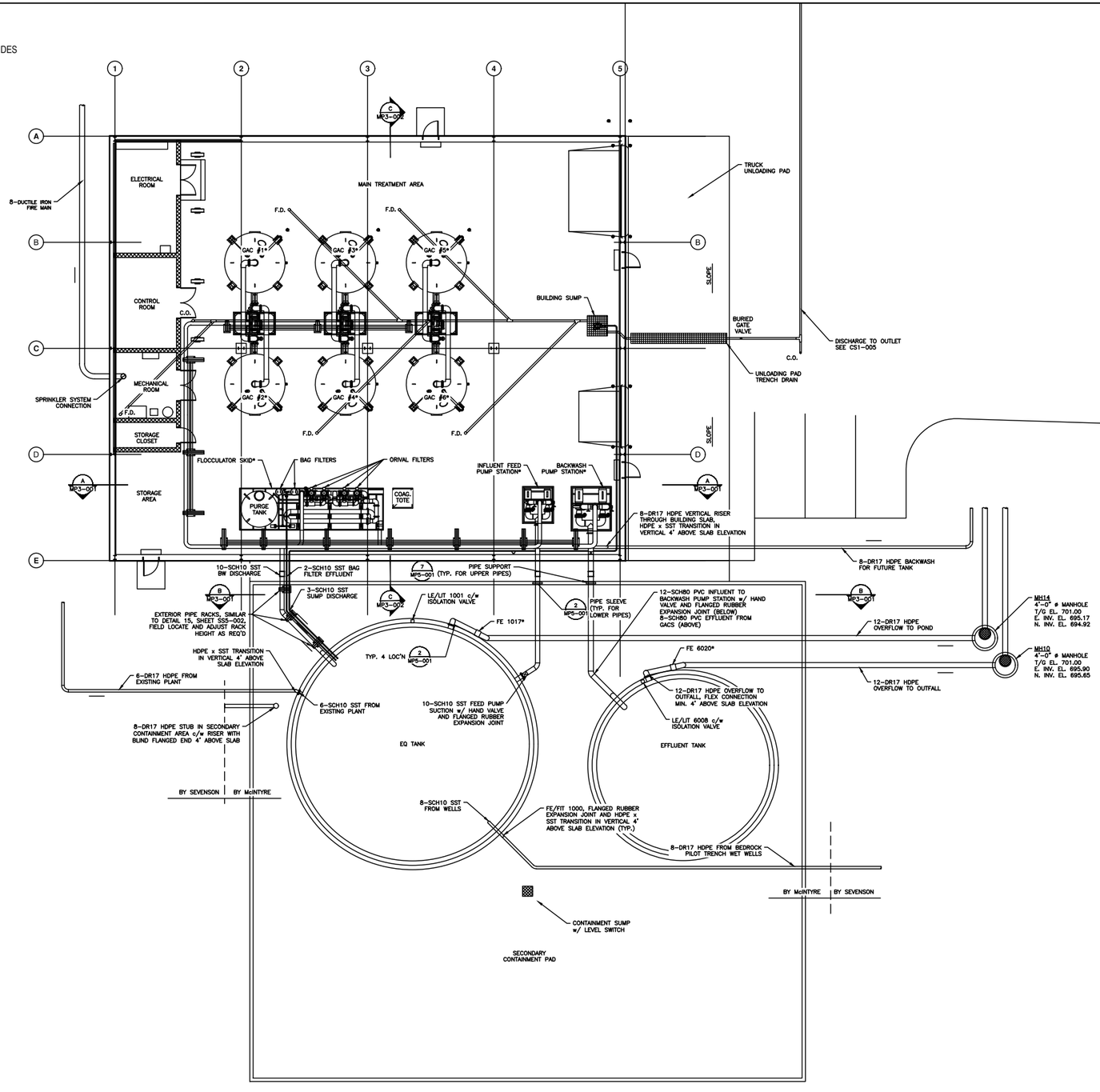
Project No. **11228036**
Date **March 2024**

FIGURE 3.3

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D105_WA-015.dwg
Plot Date: 21 March 2024 9:56 AM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

NOTES:
1. HEAT TRACE AND INSULATION FOR ALL OUTDOOR PIPING TO START INSIDE FACE OF BUILDING WALL AND EXTEND TO OUTLET AT TANK OR CONCRETE PAD.
2. COORDINATE ALL PROCESS WALL PENETRATIONS WITH BUILDING SUPPLIER. ESCUTCHEON PLATE, BOTH SIDES WITH CAULKING AND VOID FILLED WITH INSULATION OR SEALANT AT MINIMUM.
3. SEE MP1-002, MP3-001 AND MP3-002 FOR INTERIOR PIPING IDENTIFICATION.
4. * - SUPPLIED BY OWNER AND INSTALLED BY CONTRACTOR.



0 12 24 ft
1" = 24 ft

N

GHD

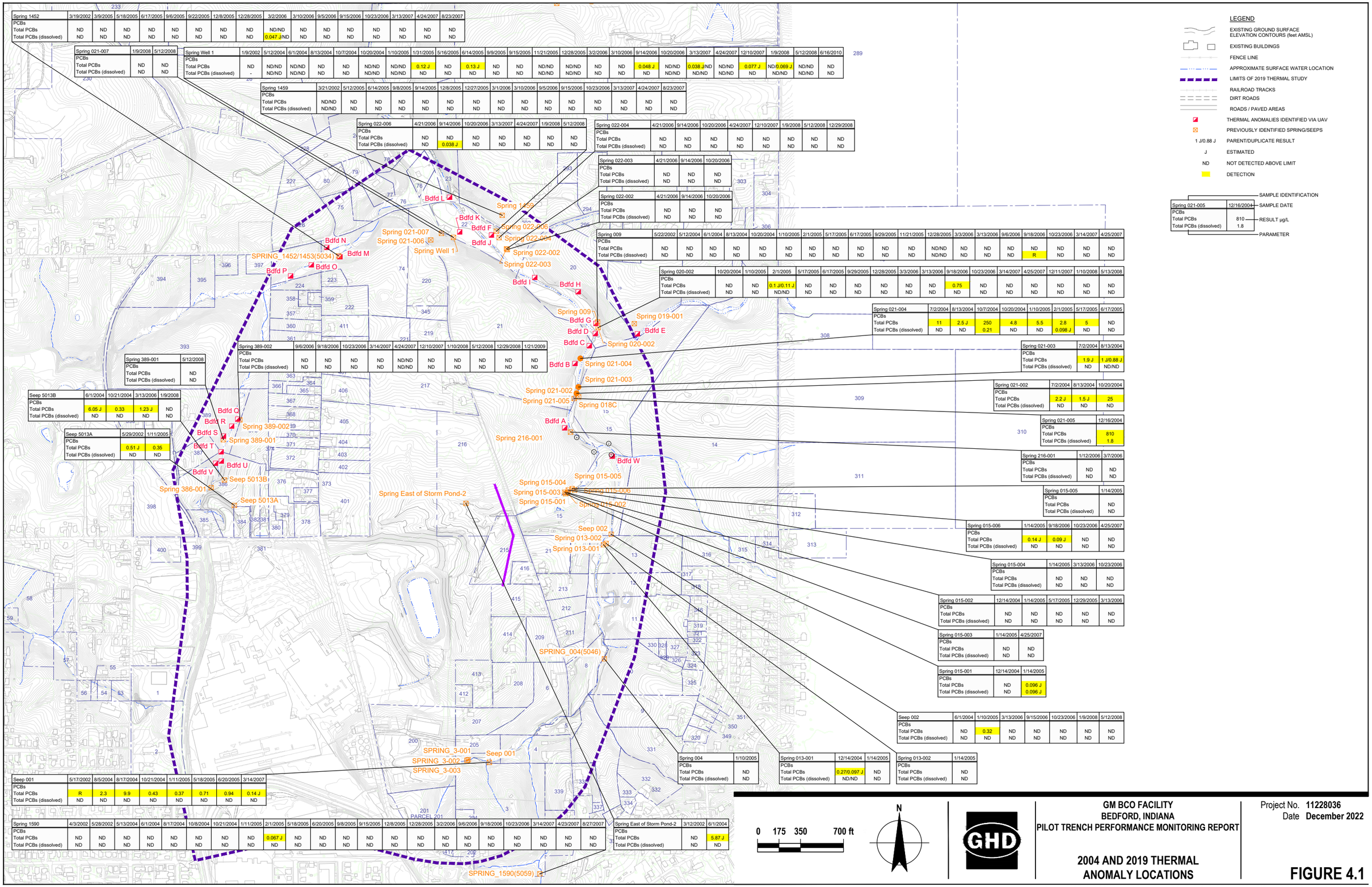
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

GROUNDWATER TREATMENT PLANT LAYOUT

Project No. **11228036**
Date **December 2022**

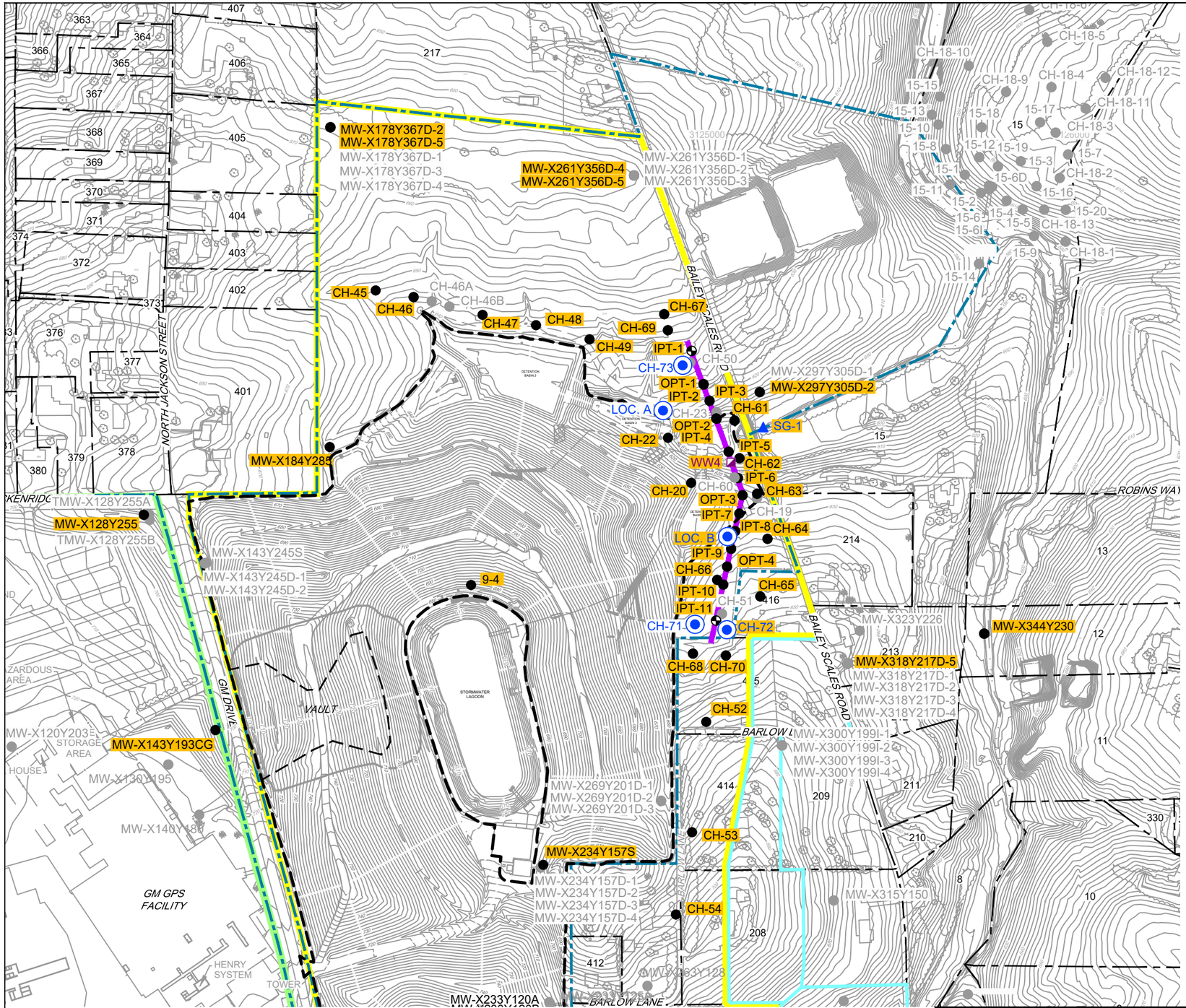
FIGURE 3.4

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D109_WA-015.dwg
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Plot Date: 21 December 2022 1:17 PM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



LEGEND

- GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- FENCE LINE
- SURFACE WATER
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- STAFF GAUGE LOCATION
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA BOUNDARY
- WEST PLANT AREA BOUNDARY
- GM LLC OWNED RESIDENTIAL PROPERTIES
- PILOT TRENCH ALIGNMENT
- WET WELL
- EXISTING COREHOLE AND MONITORING WELL LOCATIONS NEAR PROPOSED BEDROCK TRENCH
- EXISTING PIEZOMETER LOCATION
- LOCATION TO BE MONITORED FOR HYDRAULIC CONTROL
- RECENTLY INSTALLED MONITORING WELL
- EXISTING MONITORING WELL LOCATIONS NOT BEING USED IN INVESTIGATION

NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 150 300 ft
1" = 300 ft

N

GHD

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PILOT TRENCH PERFORMANCE MONITORING REPORT

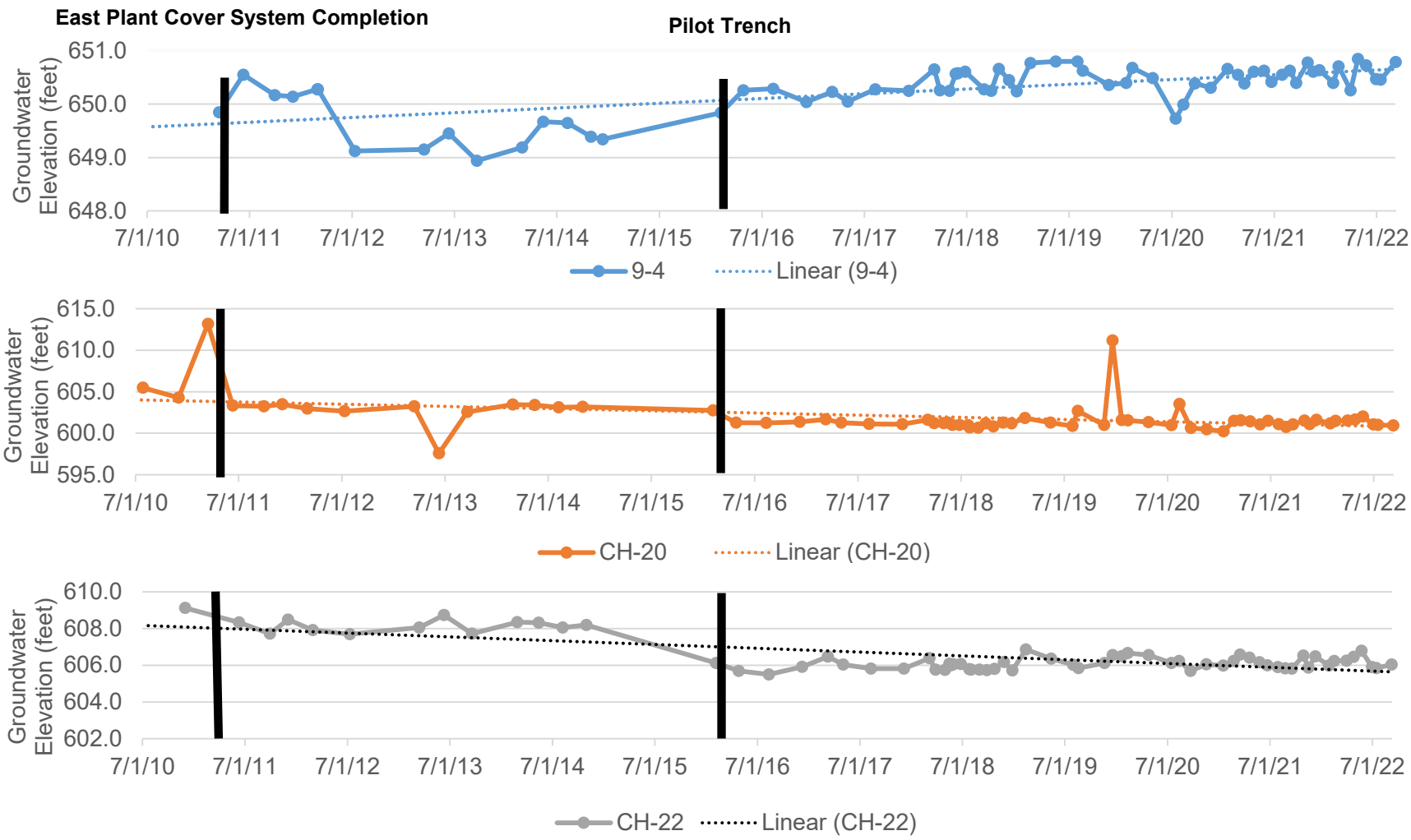
PILOT TRENCH MONITORING NETWORK AND HYDRAULIC CONTROL MONITORING LOCATIONS

Project No. **11228036**
Date **December 2022**

FIGURE 5.1

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D106_WA-015.dwg
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Data Source: SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.



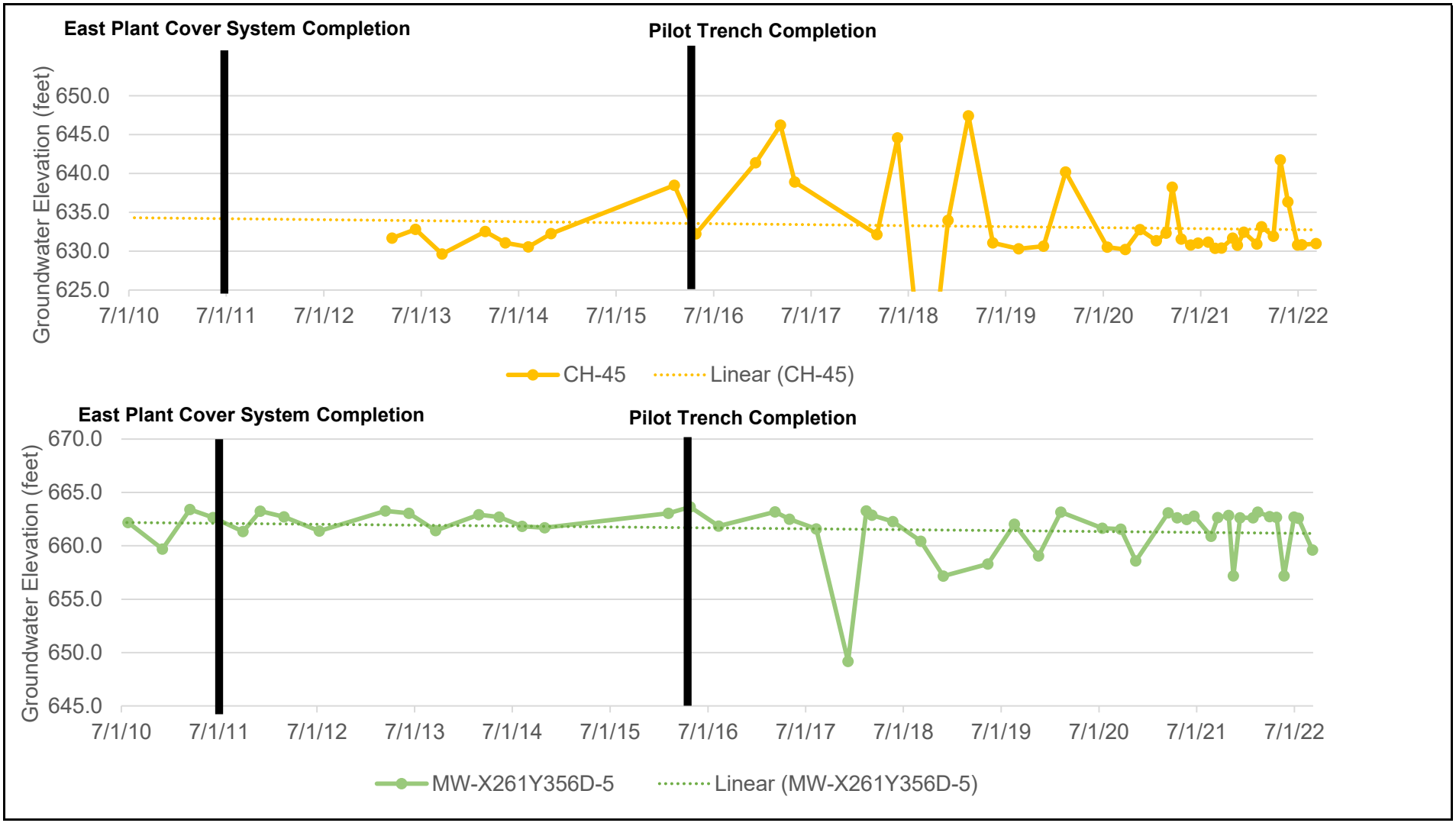
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

11228036

June 18. 2024

HYDROGRAPHS - NORTHERN BEDROCK VALLEY WELLS - INSIDE EAST COVER SYSTEM

FIGURE 5.2a



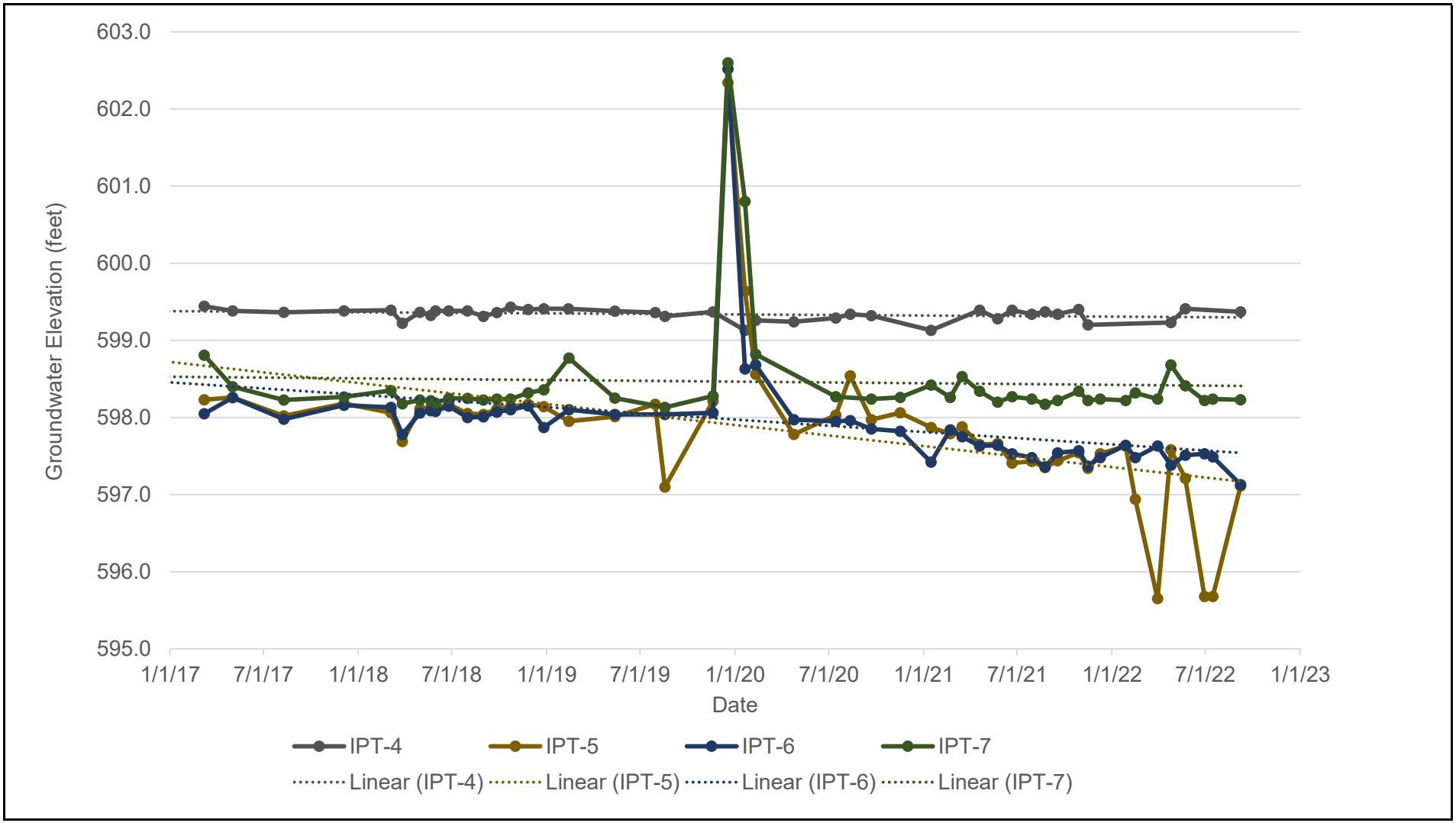
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

11228036

June 18. 2024

HYDROGRAPHS - NORTHERN BEDROCK VALLEY WELLS - OUTSIDE EAST COVER SYSTEM

FIGURE 5.2b



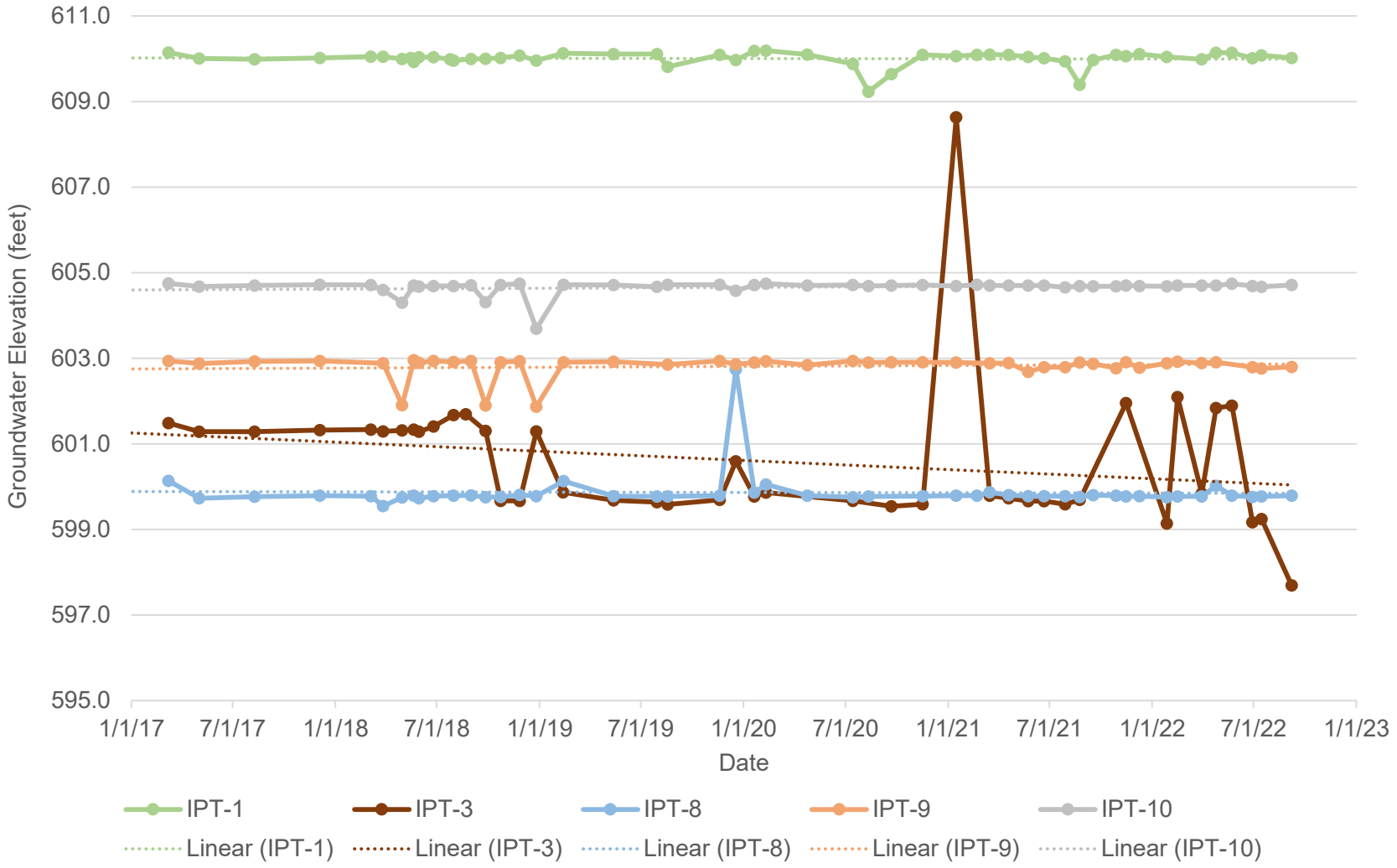
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

11228036

June 18. 2024

HYDROGRAPHS - PILOT TRENCH AREA WELLS - INSIDE EAST COVER SYSTEM

FIGURE 5.3a



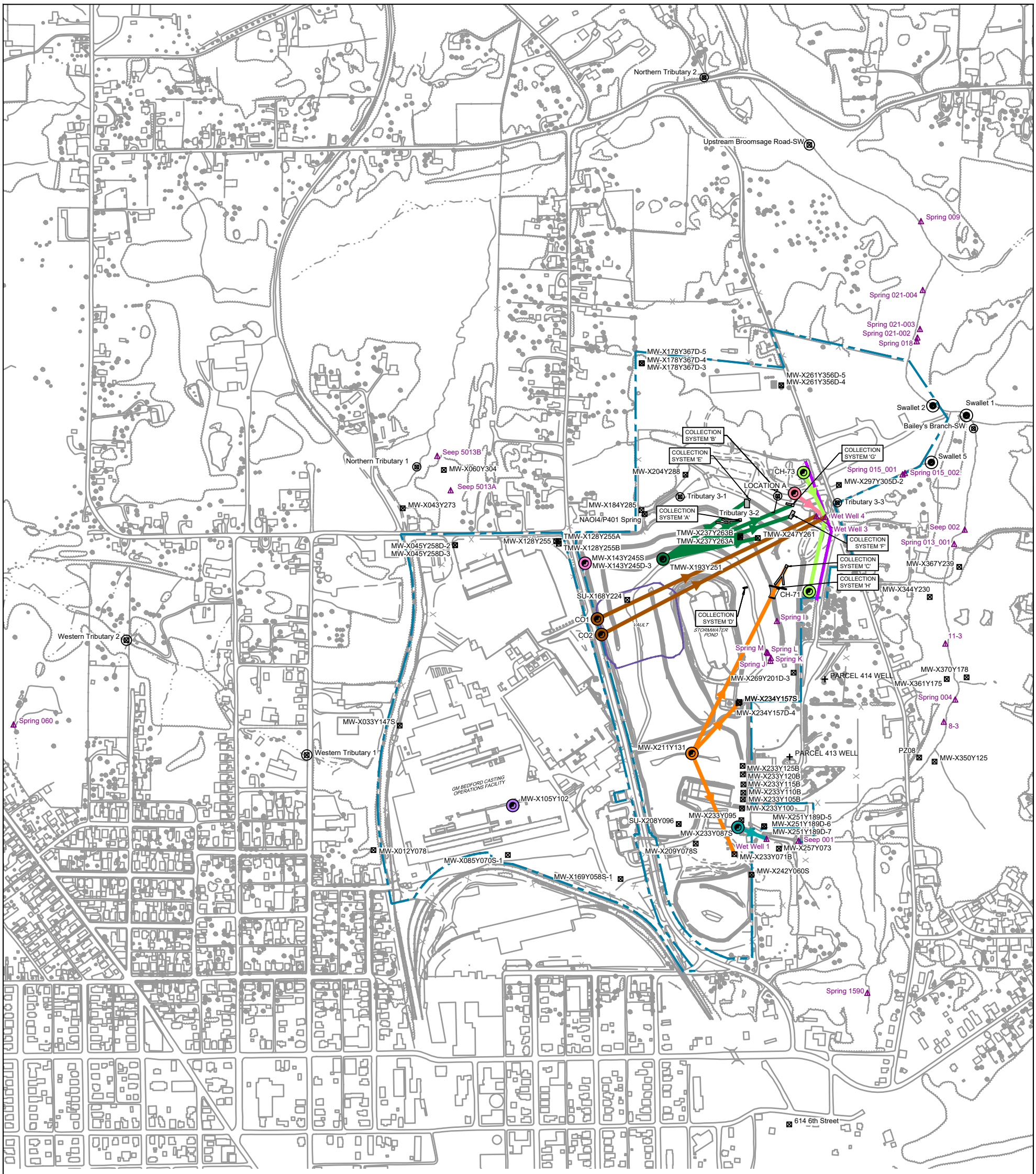
GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

11228036

June 18. 2024

HYDROGRAPHS - PILOT TRENCH AREA WELLS - OUTSIDE EAST COVER

FIGURE 5.3b



LEGEND

- EXISTING BUILDINGS
- RAILROAD TRACKS
- DIRT ROADS
- ROADS / PAVED AREAS
- APPROXIMATE SURFACE WATER LOCATION
- APPROXIMATE FACILITY BOUNDARY
- SSC COLLECTION/EXTRACTION TRENCH
- SSC SUMP STRUCTURE
- PILOT TRENCH ALIGNMENT (INSTALLED 2015/2016)
- SPRING SAMPLE LOCATION
- GRAB AND PORT SAMPLE LOCATIONS
- SURFACE WATER SAMPLE LOCATION
- EOSINE DYE INJECTION LOCATION (2005)
- EOSINE DYE INJECTION LOCATION (2022)
- FLUORESCEIN DYE INJECTION LOCATION (2004)
- FLUORESCEIN DYE INJECTION LOCATION (2005)
- PHLOXINE INJECTION WELL (2006)
- RHODAMINE DYE INJECTION LOCATION (2005)
- RHODAMINE DYE INJECTION LOCATION (2020)
- PYRANINE DYE INJECTION LOCATION (2021)

NOTE:

GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 300 600 ft

1" = 600 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

Project No. **11228036**
Date **March 2024**

ON-SITE DYE TRACE SUMMARY

FIGURE 6.1

Filename: N:\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D122_WA-015.dwg
Plot Date: 29 March 2024 4:35 PM

Data Source: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

MW-X261Y356D-5	03/26/2024 ug/L
PCBs	
Total PCBs	ND
Total PCBs (dissolved)	ND

MW-X261Y356D-1	05/21/2024 ug/L
PCBs	
Total PCBs	ND

MW-X261Y356D-3	08/03/2022 ug/L	01/17/2023 ug/L	05/21/2024 ug/L
PCBs			
Total PCBs	ND	ND	ND
Total PCBs (dissolved)	ND	ND	ND

CH-67	08/08/2022 ug/L	01/17/2023 ug/L	03/25/2024 ug/L
PCBs			
Total PCBs	**1.2 J**	0.15	0.23
Total PCBs (dissolved)	ND	ND	ND

MW-X297Y305D-1	08/02/2022 ug/L	01/17/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-X297Y305D-2	08/02/2022 ug/L	01/19/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-X178Y367D-2	08/03/2022 ug/L	01/17/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

CH-61	08/02/2022 ug/L	01/16/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	ND	0.1	ND
Total PCBs (dissolved)	ND	ND	ND

CH-46	08/02/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	0.3	0.11
Total PCBs (dissolved)	ND	ND

Wet Well 3	08/03/2022 ug/L	08/04/2022 ug/L	01/09/2023 ug/L	01/18/2023 ug/L	03/18/2024 ug/L	05/20/2024 ug/L
PCBs						
Total PCBs	**12**	**14**	**18**	**13 J**	**13**	**9.1/9.8**
Total PCBs (dissolved)	-	ND	-	**0.68**	-	-

CH-62	08/02/2022 ug/L	01/16/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	ND	0.086 J	ND
Total PCBs (dissolved)	ND	ND	ND

CH-48	08/02/2022 ug/L	01/19/2023 ug/L
PCBs		
Total PCBs	0.27	0.22 J
Total PCBs (dissolved)	ND	ND

Wet Well 4	08/03/2022 ug/L	08/04/2022 ug/L	01/09/2023 ug/L	01/18/2023 ug/L	03/18/2024 ug/L	05/20/2024 ug/L
PCBs						
Total PCBs	ND	0.26	ND	ND/ND	ND	ND
Total PCBs (dissolved)	-	ND	-	ND/ND	-	-

CH-49	08/02/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	0.091 J	0.11
Total PCBs (dissolved)	ND	ND

CH-20	08/09/2022 ug/L	01/17/2023 ug/L	05/23/2024 ug/L
PCBs			
Total PCBs	0.12 J	0.17	0.09 J
Total PCBs (dissolved)	ND	ND	ND

CH-69	08/08/2022 ug/L	01/17/2023 ug/L	03/25/2024 ug/L
PCBs			
Total PCBs	**0.77 J**	0.2	0.16
Total PCBs (dissolved)	ND	ND	ND

CH-63	08/02/2022 ug/L	01/16/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	0.075 J	0.088 J	0.15
Total PCBs (dissolved)	ND	ND	ND

CH-73	08/08/2022 ug/L	01/19/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

CH-64	08/03/2022 ug/L	01/17/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-LOC-A	08/08/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-LOC-B	08/08/2022 ug/L	01/18/2023 ug/L
PCBs		
Total PCBs	0.49	**0.34 J/0.74 J**
Total PCBs (dissolved)	ND	ND/ND

CH-65	08/08/2022 ug/L	01/16/2023 ug/L	03/25/2024 ug/L
PCBs			
Total PCBs	0.19 J/0.22 J	0.076 J	ND
Total PCBs (dissolved)	ND/ND	ND	ND

MW-X143Y193	01/18/2023 ug/L
PCBs	
Total PCBs	**3.8**
Total PCBs (dissolved)	ND

CH-66	08/03/2022 ug/L	01/17/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	0.13 J	ND	ND
Total PCBs (dissolved)	ND	ND	ND

9-4	08/08/2022 ug/L	01/18/2023 ug/L	05/23/2024 ug/L
PCBs			
Total PCBs	ND	0.33	0.29
Total PCBs (dissolved)	ND	ND	ND

CH-72	08/03/2022 ug/L	01/17/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	0.32/0.35 J	ND	ND
Total PCBs (dissolved)	ND/0.057 J	ND	ND

CH-22	08/03/2022 ug/L	01/17/2023 ug/L
PCBs		
Total PCBs	ND	0.088 J/0.087 J
Total PCBs (dissolved)	ND	ND/ND

CH-52	08/04/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-X300Y199I-2	08/04/2022 ug/L	01/18/2023 ug/L	05/22/2024 ug/L
PCBs			
Total PCBs	ND	ND	ND
Total PCBs (dissolved)	ND	ND	ND

CH-68	08/04/2022 ug/L	01/17/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	**0.59 J/1.1 J**	ND	0.15
Total PCBs (dissolved)	0.093 J/ND	ND	ND

CH-70	08/03/2022 ug/L	01/17/2023 ug/L	03/26/2024 ug/L
PCBs			
Total PCBs	0.43 J	ND	ND
Total PCBs (dissolved)	ND	ND	ND

MW-X234Y157D-2	08/05/2022 ug/L	01/18/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	ND	ND

MW-X234Y157D-1	08/05/2022 ug/L	01/18/2023 ug/L
PCBs		
Total PCBs	ND	ND
Total PCBs (dissolved)	-	0.2

MW-X234Y157S	08/05/2022 ug/L	01/18/2023 ug/L
PCBs		
Total PCBs	0.18 J/0.19 J	0.16 J
Total PCBs (dissolved)	ND/ND	ND

CH-54	08/05/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	0.27	0.074 J
Total PCBs (dissolved)	ND	ND

CH-53	08/05/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	0.41	0.46
Total PCBs (dissolved)	ND	ND

LEGEND

- GROUND SURFACE ELEVATION CONTOURS (feet AMSL)
- FENCE LINE
- SURFACE WATER
- APPROXIMATE GM PROPERTY BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- STAFF GAUGE LOCATION
- EAST PLANT COVER SYSTEM LIMIT
- EAST PLANT AREA BOUNDARY
- WEST PLANT AREA BOUNDARY
- GM LLC OWNED RESIDENTIAL PROPERTIES
- PILOT TRENCH ALIGNMENT
- WET WELL
- EXISTING COREHOLE AND MONITORING WELL LOCATIONS NEAR PROPOSED BEDROCK TRENCH
- EXISTING PIEZOMETER LOCATION
- EXISTING MONITORING WELL LOCATIONS NOT BEING USED IN INVESTIGATION

CH-63	08/02/2022 ug/L	01/16/2023 ug/L
PCBs		
Total PCBs	**0.075 J**	**0.088 J**
Total PCBs (dissolved)	ND	ND

SAMPLE LOCATION / SAMPLE DATE / UNIT / RESULT / PARAMETER

- SAMPLED LOCATIONS
- **BOLD** DETECTION
- RESULT GREATER THAN 0.5 ug/L

NOTE:
GM PROPERTY BOUNDARY SURVEY BY BLEDSOE RIGGERT GUERRETTAZ RECEIVED OCTOBER 2007. ADJACENT PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. ADJOINING PROPERTY LINES MAY NOT ACCURATELY REPRESENT THE TRUE PROPERTY BOUNDARIES

0 150 300 ft
1" = 300 ft

N

GHD

GM BCO FACILITY
BEDFORD, INDIANA
PILOT TRENCH PERFORMANCE MONITORING REPORT

PMP PCB SAMPLING RESULTS (AUGUST 2022, JANUARY 2023, MARCH 2024 AND MAY 2024)

Project No. **11228036**
Date **June 2024**

FIGURE 7.1

Filename: \\ghdnet\ghd\US\Chicago\Projects\563\11228036\Digital_Design\ACAD\Figures\RPT015\11228036-GHD-00-00-RPT-EN-D108_WA-015.dwg
Plot Date: 26 June 2024 9:35 AM

Data Source: SOURCE: BASE MAP COMPLETED BY AIR-LAND SURVEYS, FLINT, MI, APRIL 2001 AND CRA SURVEYS 2002 TO 2013.

Appendices

Appendix A

New Monitoring Well Installation and Logs

Appendix A
New Monitoring Well Installation

Goal/Background

Following completion of the Pilot Trench, GM installed fifteen groundwater monitoring wells in the vicinity of the Pilot Trench in order to obtain additional sampling locations for monitoring of the Pilot Trench (CH-61 through CH-73, Location A and Location B) as well as injection points for Near Field and Far Field dye trace studies (CH-71, CH-73 and Location A). Monitoring wells CH-61 through CH-70 were installed prior to completion of the PMP and monitoring wells CH-71 through CH-73, Location A and Location B were installed following completion of the PMP. The following section outlines installation methods and construction details for all above-referenced monitoring wells.

Methodology

Seven vertical groundwater monitoring wells (CH-61 through CH-67) were installed using a 6-inch diameter outer steel casing set approximately two feet into the top of the bedrock surface in order to obtain a seal from the overburden materials. The steel casing was then grouted into place using a cement-bentonite grout mixture. Once the grout was set, bedrock coring continued below the depth of the outer steel casing using a HQ core barrel. Upon completion of the corehole, the corehole remained open so the entirety of the cored section of bedrock was open to groundwater, where present. All monitoring wells were completed with a concrete base and a locking cap at the surface. Additional bollards were also installed around the completed monitoring wells.

Eight additional groundwater monitoring wells (CH-68 through CH-73, Location A and Location B) were installed at a 30-degree angle (from vertical) in order to enhance the possibility of locating the same fractures, or fracture system identified in the videos of the completed Pilot Trench. These angled monitoring wells were oriented in a north-south direction in an attempt to intersect the east-west trending vertical fracture. Monitoring wells CH-68, CH-69 and CH-70 were installed using a 5-inch diameter outer steel casing and monitoring wells CH-71, CH-72, CH-73, Location A and Location B were installed using a 4-inch diameter outer steel casing set approximately two feet into the top of the bedrock surface in order to obtain a seal from the overburden materials. The steel casing was then grouted into place using a cement-bentonite grout mixture. Each of these monitoring wells were cored via HQ coring techniques and were completed at depth to a similar elevation as the previously installed wells.

Monitoring wells were installed to be used as additional monitoring locations to assess the performance of the Pilot Trench as well as injection points for Near Field and Far Field dye trace studies. Four of the monitoring wells (CH-71, CH-73, Location A and Location B) were located upgradient and eleven of the monitoring wells (CH-61 through CH-70 and CH-72) were located downgradient of the installed Pilot Trench. Figure 5.1 of the Pilot Trench Performance Monitoring Report illustrates the locations of the monitoring wells. Table 5.1 through Table 7.1 of the Pilot Trench Performance Monitoring Report lists the monitoring wells, the rationale and use of each of the locations, and the monitoring schedule for each location. The monitoring well diagrams for each of the new locations is provided in this Appendix. The wells were developed, and the ground surface and top of casing elevations were surveyed. Total depths at each location were approximately 10 feet below the bottom elevation of the Pilot Trench.

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-61
DATE COMPLETED: July 25, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	611.12 610.52						
0	WOOD CHIPS and GRAVEL			1SS				--
2	CL-CLAY, hard, low plasticity, brown, dry to moist	608.52	Cement/ Bentonite Grout Seal	2SS				0.0
4	No recovery	606.52		3SS				--
6			6" Ø Steel Casing	4SS				--
8				5SS				--
10	CL-CLAY, soft, medium plasticity, gray, wet Top of limestone bedrock	600.72 600.52	10" Ø Borehole	6SS				
12	END OF OVERBURDEN HOLE @ 12.5ft BGS							
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 7/25/18

OVERBURDEN LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-61
DATE COMPLETED: July 25, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
12	Top of limestone bedrock	600.52				
	LIMESTONE, fine grained, thin bedded, gray - porous from 12.5 to 14.0 ft BGS - light brown at 13.2ft BGS - fracture at 13.2ft BGS - fracture at 13.9ft BGS - gray at 14.2ft BGS - stylolite at 14.6ft BGS - stylolite at 14.8ft BGS	598.02		1	100	100
14						
16	LIMESTONE, fine grained, thin bedded, gray - stylolites at 16.05, 18.60, 19.00, 22.60, 23.00, 23.41 ft BGS - vertical fracture at 16.6ft BGS - vertical fracture at 17.1ft BGS - fractures at 18.90, 19.25, 19.41, 19.90, 20.30, 21.00, 21.16, 21.19, 22.15 ft BGS	595.02	3.78" Ø Open Borehole	2	100	83
18						
20						
22						
24	LIMESTONE, fine grained, thin bedded, gray, calcite crystals - stylolite at 23.8ft BGS - fractures at 23.65, 25.38, 26.58, 30.95, 31.05, 31.28 ft BGS - clay infilling from 25.85 to 28.9 ft BGS - coarse grained at 26.2ft BGS	587.02		3	100	73
26						
28	- vertical fracture at 28.9ft BGS					
30	- vertical fracture at 30.45 ft BGS END OF BOREHOLE @ 30.5ft BGS	580.02	WELL DETAILS Material: Open Hole			
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 7/25/18

BEDROCK LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-62
DATE COMPLETED: July 26, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	612.73 611.48						
0	FILL, coarse grained, dry			1SS				0.0
2	CL-CLAY, soft, medium plasticity, reddish brown, moist	609.48	Cement/ Bentonite Grout Seal	2SS				0.0
4	- high plasticity at 5.0ft BGS			3SS				0.0
6	- silty, gray at 6.0ft BGS		6" Ø Steel Casing	4SS				0.0
8				5SS				0.0
10	Top of limestone bedrock	600.98	10" Ø Borehole	6SS				
12								
13	END OF OVERBURDEN HOLE @ 13.0ft BGS							
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-62
DATE COMPLETED: July 26, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
		598.48				
14	LIMESTONE, fine grained, thin bedded, brown and gray - fractures at 13.15, 14.75, 15.32 ft BGS - coarse grained, brown from 13.5 to 14.0ft BGS - stylolites at 13.51, 13.89, 14.02, 14.35 ft BGS			1	91	91
16	- vugs from 15.2 to 15.3ft BGS	595.98				
	LIMESTONE, fine grained, thin bedded, gray - vugs throughout from 15.5 to 15.9 ft BGS - vugs throughout from 16.5 to 16.7ft BGS					
18	- fractures at 16.45, 16.70, 18.57, 20.50 ft BGS - small vertical fracture at 16.7ft BGS - vugs throughout from 17.1 to 17.2ft BGS - stylolites at 18.30, 18.80, 19.37 ft BGS		← 3.78" Ø Open Borehole	2	100	95
20	- vug at 19.9ft BGS	590.98				
	LIMESTONE, fine grained, thin bedded, gray - vug at 20.9ft BGS - vug at 21.0ft BGS					
22	- stylolites at 21.07, 22.65, 23.94 ft BGS - fracture at 22.8ft BGS			3	90	90
24	- vug at 23.6ft BGS - vug at 23.8ft BGS - fracture at 23.9ft BGS - vugs throughout, range from small to large from 24.4 to 25.5ft BGS	585.98				
26	LIMESTONE, fine grained, thin bedded, gray - vugs throughout from 25.50 to 25.85 ft BGS - stylolites at 26.35, 28.64, 29.53 ft BGS					
28	- fracture at 28.6ft BGS			4	99	93
30	- fracture at 29.6ft BGS					
		580.98				
	LIMESTONE, fine grained, thin bedded, gray - stylolites at 30.60, 31.00	580.48		5	100	100
32	END OF BOREHOLE @ 31.0ft BGS		WELL DETAILS Material: Open Hole			
34						
36						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-63
DATE COMPLETED: July 26, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert/Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	625.04 623.64						
0	CL-CLAY, trace roots, hard, brown, dry - no roots at 0.6ft BGS		Cement/ Bentonite Grout Seal	1SS				0.0
2	- reddish brown at 2.0ft BGS		6" Ø Steel Casing	2SS				0.0
4								
	Top of limestone bedrock	618.64	10" Ø Borehole	3SS				
6				4SS				
	END OF OVERBURDEN HOLE @ 7.5ft BGS							
8								
10								
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-63
DATE COMPLETED: July 26, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert/Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
8	LIMESTONE, fine grained, thin bedded, brown - styolite and fracture at 7.8ft BGS	616.14		1	82	70
10	LIMESTONE, fine grained, thin bedded, brown - styolites at 10.75, 10.88, 12.25 ft BGS - coarse grained, gray at 12.6ft BGS	614.14		2	100	100
16	LIMESTONE, coarse grained, thin bedded, gray, calcite crystals - fracture and clay infilling at 19.0ft BGS	609.14	3.78" Ø Open Borehole	3	100	100
20	LIMESTONE, coarse grained, thin bedded, gray, calcite crystals	604.14		4	100	100
26	LIMESTONE, coarse grained, thin bedded, gray, calcite crystals - fine grained at 26.6ft BGS - styolite at 27.0ft BGS - styolite at 27.1ft BGS - fracture at 27.3ft BGS - fracture at 27.8ft BGS - vug at 28.1ft BGS	599.14		5	98	98
30	LIMESTONE, fine grained, thin bedded, gray - vugs throughout from 30.2 to 32.5ft BGS - fracture at 30.2ft BGS	594.14				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-63
DATE COMPLETED: July 26, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Bert/Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
32	- coarse grained at 30.7ft BGS - fracture at 30.7ft BGS			6	100	100
34	- styolite at 33.7ft BGS	589.14				
36	LIMESTONE, fine grained, thin bedded, gray - vugs throughout from 34.50 to 35.47 ft BGS - styolites at 35.52, 36.35, 37.75, 38.35, 38.75 ft BGS			7	100	100
38	- fracture at 37.3ft BGS					
40	LIMESTONE, fine grained, thin bedded, gray - styolites at 40.62, 41.10, 41.70, 42.13 ft BGS	584.14		8	100	100
42	- fracture at 42.1ft BGS					
44	- fracture at 43.7ft BGS END OF BOREHOLE @ 43.7ft BGS	579.94	WELL DETAILS Material: Open Hole			
46						
48						
50						
52						
54						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-64
DATE COMPLETED: July 30, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	638.44 636.68						
	GRAVEL	636.08		1SS				0.0
	CL-CLAY, firm, medium plasticity, brown, dry							
2	- no plasticity at 2.0ft BGS			2SS				0.0
4	- trace gravel, hard, low plasticity, reddish brown at 4.0ft BGS		Cement/ Bentonite Grout Seal	3SS				0.0
6			6" Ø Steel Casing	4SS				0.0
8	- moist at 8.0ft BGS			5SS				0.0
10	- mottled red-brown at 10.0ft BGS		10" Ø Borehole	6SS				0.0
12	- brown at 12.5ft BGS			7SS				0.0
14	- firm, medium plasticity, water table at 14.0ft BGS		▽	8SS				0.0
16	- soft at 16.0ft BGS			9SS				0.0
	Top of limestone bedrock	619.18		10SS				
18								
20	END OF OVERBURDEN HOLE @ 20.0ft BGS							
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 7/30/18

OVERBURDEN LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-64
DATE COMPLETED: July 30, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
20	LIMESTONE, fine grained, thin bedded, brown, calcite crystals - stylolite at 20.3ft BGS	616.68 615.78		1	71	71
22	LIMESTONE, fine grained, thin bedded, brown and gray, calcite crystals - stylolite at 21.05 ft BGS - vug at 21.10 ft BGS - stylolite at 21.8ft BGS - open vertical fracture, sand and clay infilling from 22.0 to 23.4ft BGS			2	89	70
26	LIMESTONE, fine grained, thin bedded, brown and gray, calcite crystals - fractures at 26.72, 27.25, 27.68, 30.00 ft BGS - stylolite at 27.3ft BGS - stylolite at 27.7ft BGS	610.78	3.78" Ø Open Borehole	3	100	100
30	LIMESTONE, fine grained, thin bedded, brown - stylolite at 31.2ft BGS - gray at 31.3ft BGS - brown at 32.4ft BGS - gray at 33.0ft BGS - fracture at 33.0ft BGS - brown at 33.2ft BGS - stylolite at 33.3ft BGS - vug at 34.4ft BGS - fracture at 34.8ft BGS - closed vertical fracture from 35.2 to 35.9ft BGS	605.78 600.78		4	95	95
38	LIMESTONE, coarse grained, thin bedded, brown, trace fossils			5	100	100
42	LIMESTONE, fine to coarse grained, thin bedded, brown - stylolites at 41.5, 43.15, 43.67 ft BGS - fractures at 41.62, 41.85, 43.27 ft BGS	595.78				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

WATER FOUND ▽ 7/30/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-64
DATE COMPLETED: July 30, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
44	- gray at 42.0ft BGS - vugs throughout from 44.0 to 45.9ft BGS			6	96	87
46	LIMESTONE, fine grained, thin bedded, gray, trace fossils - styolites at 46.00, 47.05, 48.98, 49.55, 50.00, 50.55 ft BGS - brown at 47.2ft BGS	590.78				
48	- fractures at 48.17, 48.23, 49.55, 50.02 ft BGS - gray at 48.7ft BGS			7	94	94
50						
52	LIMESTONE, fine grained, thin bedded, gray - vertical fracture from 50.9 to 51.1 ft BGS - vugs throughout from 50.9 to 51.9 ft BGS - fracture at 52.3ft BGS	585.78		8	100	100
54	- styolites at 53.55, 55.65, 53.10 ft BGS					
56	LIMESTONE, fine grained, thin bedded, gray - styolite at 56.2ft BGS - styolite at 56.4ft BGS - fracture and clay infilling at 56.4ft BGS	580.78 580.08	WELL DETAILS Material: Open Hole	9	100	100
58	END OF BOREHOLE @ 56.6ft BGS					
60						
62						
64						
66						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ 7/30/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-65
DATE COMPLETED: July 31, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	648.59 647.48						
0	GRASS and TOPSOIL	646.88	Cement/ Bentonite Grout Seal	1SS				0.0
	CL-CLAY, hard, brown, dry							
2				2SS				0.0
		644.38	6" Ø Steel Casing					
4	- low plasticity, moist at 4.0ft BGS			3SS				0.0
			10" Ø Borehole					
6	Top of limestone bedrock	641.48		4SS				
8	END OF OVERBURDEN HOLE @ 8.0ft BGS							
10								
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-65
DATE COMPLETED: July 31, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
	Top of limestone bedrock	641.48				
8	LIMESTONE, fine grained, thin bedded, brown - fractures at 8.18, 9.90, 10.09, 10.55 ft BGS - styolites at 8.18, 9.18, 9.40, 9.45, 9.62, 9.66 ft BGS	639.48		1	90	78
10	- gray at 8.4ft BGS - clay infilling, brown at 9.9ft BGS - gray at 10.1ft BGS - clay infilling at 10.6ft BGS	636.48				
12	LIMESTONE, fine grained, thin bedded, gray - vertical fracture from 11.5 to 12.1ft BGS - styolites at 11.68, 12.09, 13.66, 13.86, 13.95 ft BGS			2	100	100
14	- fracture at 12.1ft BGS					
16	LIMESTONE, fine grained, thin bedded, gray	631.48		3	98	91
18	- styolite at 17.5ft BGS - styolite at 18.1ft BGS		3.78" Ø Open Borehole			
20	- vug at 19.1ft BGS - fracture at 19.7ft BGS - fracture at 20.7ft BGS					
22	LIMESTONE, fine grained, thin bedded, gray - coarse grained at 21.3ft BGS - styolites at 21.3, 23.27 to 23.47, 24.66 ft BGS - fractures at 21.61, 23.47, 24.77 ft BGS - fine grained at 22.9ft BGS	626.48		4	100	95
24						
26	LIMESTONE, coarse grained, thin bedded, gray	621.48		5	100	100
28						
30	- styolites at 29.73, 29.82, 29.92, 30.00, 30.04, 30.17 ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-65
PROJECT NUMBER: 013968
DATE COMPLETED: July 31, 2018
CLIENT: General Motors LLC
DRILLING METHOD: 8¼" Ø HSA & HQ Core
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
32	LIMESTONE, coarse grained, thin bedded, gray - brown at 31.2 ft BGS	616.48		6	100	100
34						
36	LIMESTONE, coarse grained, thin bedded, brown, trace fossils - gray at 36.7ft BGS - styolite at 36.9ft BGS	611.48		7	100	100
38	- styolite at 37.5ft BGS					
40	- fracture at 39.5ft BGS	606.48		8	89	84
42	LIMESTONE, coarse grained, thin bedded, gray - styolite at 41.8ft BGS					
44	- styolite at 43.2ft BGS - multiple fractures, disc-shaped sand infilling from 44.0 to 44.1ft BGS - fractures at 44.02, 44.70, 45.41, 45.60 ft BGS					
46	- multiple fractures, disc-shaped sand infilling from 45.4 to 45.6ft BGS	601.48		9	100	96
48	LIMESTONE, coarse grained, thin bedded, gray - vertical fracture from 46.0 to 46.38 ft BGS - multiple fractures, disc-shaped sand infilling from 46.9 to 47.0ft BGS - fractures at 46.68, 46.88, 47.63, 50.50 ft BGS					
50		596.48		10	100	100
52	LIMESTONE, fine to coarse grained, thin bedded, gray, calcite crystals - fracture at 52.1ft BGS					
54	- stylolites at 53.55, 54.62, 55.20, 55.73 ft BGS - fracture at 55.3ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-65
DATE COMPLETED: July 31, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
58	LIMESTONE, coarse grained, thin bedded, gray, calcite crystals - numerous vugs from 57.9 to 58.1ft BGS - styolites at 58.10, 58.45, 58.63 ft BGS - fracture at 58.5ft BGS - fracture at 59.3ft BGS	591.48		11	100	100
60						
62	LIMESTONE, fine grained, thin bedded, gray, calcite crystals - styolites at 61.30, 61.55, 62.40, 62.57, 62.80, 62.88, 62.95, 65.39, 66.00 ft BGS - fracture at 63.0ft BGS - vugs from 63.6 to 63.9ft BGS - fracture at 64.3ft BGS	586.48		12	100	100
64						
66	LIMESTONE, fine grained, thin bedded, gray, calcite crystals - styolites at 66.32, 67.22, 67.30 ft BGS - fracture at 67.3ft BGS	581.48		13	100	100
68	END OF BOREHOLE @ 67.8ft BGS	579.68	WELL DETAILS Material: Open Hole			
70						
72						
74						
76						
78						
80						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-66
DATE COMPLETED: August 1, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	641.04 640.14						
0	GRASS and ROOTS	639.54	Cement/ Bentonite Grout Seal	1SS				0.0
	CL-CLAY, trace gravel, firm, brown, dry							
2	CL-SILTY CLAY, firm, low plasticity, gray, moist	638.14	6" Ø Steel Casing	2SS				0.0
4	CL-CLAY, hard, medium plasticity, reddish brown, moist	636.14		3SS				0.0
	Top of limestone bedrock	635.14	10" Ø Borehole	4SS				
8	END OF OVERBURDEN HOLE @ 8.0ft BGS							
10								
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-66
DATE COMPLETED: August 1, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
8	LIMESTONE, fine grained, thin bedded, brown - gray, styolite at 8.6ft BGS	632.14		1	100	87
10	- fracture at 10.2ft BGS - brown at 10.2ft BGS	629.64				
12	LIMESTONE, fine grained, thin bedded, brown - fracture, clay infilling at 10.67 ft BGS - fracture at 10.9ft BGS - gray at 11.6ft BGS - styolite at 13.4ft BGS			2	96	83
14	- fracture at 14.1ft BGS					
	- fracture at 15.1ft BGS	624.64				
16	LIMESTONE, fine grained, thin bedded, gray - styolites from 16.4 to 16.6ft BGS - styolite at 16.9ft BGS - fractures at 16.63, 18.23, 19.61 ft BGS					
18	- coarse grained at 18.2ft BGS		3.78" Ø Open Borehole	3	98	98
20		619.64				
22	LIMESTONE, coarse grained, thin bedded, gray, trace fossils - vug at 21.2ft BGS - styolites at 21.70, 23.45, 25.09 ft BGS			4	97	90
24	- fracture at 25.1ft BGS					
26	LIMESTONE, coarse grained, thin bedded, gray - styolite at 25.62 ft BGS - blue from 25.62 to 26.1 ft BGS	614.64				
28	- vug at 25.9ft BGS - styolite at 26.1ft BGS - fracture at 26.8ft BGS - fracture at 28.7ft BGS			5	96	96
30		609.64				
	LIMESTONE, coarse grained, thin bedded,					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-66
PROJECT NUMBER: 013968
DATE COMPLETED: August 1, 2018
CLIENT: General Motors LLC
DRILLING METHOD: 8¼" Ø HSA & HQ Core
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
32	gray			6	100	100
34	- stylolite at 35.3ft BGS - stylolite at 35.4ft BGS	604.64				
36	LIMESTONE, coarse grained, thin bedded, gray - clay infilling at 35.5 ft BGS			7	100	100
38	- stylolites at 33.75, 35.80, 40.40 ft BGS					
40	- fracture at 40.0ft BGS - vertical fracture at 40.3ft BGS	599.64				
42	LIMESTONE, coarse grained, thin bedded, gray			8	100	100
44	- vug at 43.6ft BGS - fine grained at 43.7ft BGS					
46	- stylolite at 44.7ft BGS - stylolite at 45.2ft BGS - stylolite at 45.3ft BGS	594.64				
48	LIMESTONE, fine grained, thin bedded, gray - vugs at 45.90, 46.00, 46.25, 46.40, 48.40, 48.50, 48.72 ft BGS - stylolites at 46.68, 47.65, 48.10, 50.15 ft BGS - numerous vugs from 48.2 to 48.7ft BGS - numerous vugs from 48.7 to 49.0ft BGS			9	94	87
50	- fractures at 49.04, 49.30, 49.39, 49.45, 49.84 ft BGS					
52	LIMESTONE, coarse grained, thin bedded, gray, trace fossils - vugs throughout from 50.5 to 52.45 ft BGS - stylolite at 50.8ft BGS	589.64		10	97	97
54	- stylolite at 53.7ft BGS - stylolite at 54.0ft BGS - vug at 54.6ft BGS - fracture at 55.0ft BGS					
	LIMESTONE, fine grained, thin bedded, gray,	584.64				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-66
DATE COMPLETED: August 1, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
58	calcite crystals - stylolite at 55.65 ft BGS - stylolite at 57.6ft BGS - fracture, clay infilling at 58.0ft BGS			11	100	100
60	- stylolite at 59.4ft BGS - fracture, clay infilling at 59.42 ft BGS - stylolite at 59.43 ft BGS END OF BOREHOLE @ 60.0ft BGS	580.14	WELL DETAILS Material: Open Hole			
62						
64						
66						
68						
70						
72						
74						
76						
78						
80						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 013968.GPJ CRA_CORP.GDT 9/5/18

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-67
DATE COMPLETED: August 2, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOP OF CASING GROUND SURFACE	648.59 647.41						
0	CL-SILTY CLAY, trace roots, hard, brown, dry - no roots at 0.6ft BGS		Cement/ Bentonite Grout Seal	1SS				0.0
2	- reddish brown at 2.0ft BGS		6" Ø Steel Casing	2SS				0.0
4				3SS				0.0
	LIMESTONE	642.41	10" Ø Borehole	4SS				
6								
	CL-CLAY, hard, low plasticity, reddish brown, moist	640.41		5SS				0.0
8	END OF OVERBURDEN HOLE @ 8.0ft BGS							
10								
12								
14								
16								
18								
20								
22								
24								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-67
DATE COMPLETED: August 2, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
		640.41				
	CL-CLAY, hard, low plasticity, reddish brown, moist	639.41				
8	LIMESTONE, fine grained, thin bedded, brown - gray at 8.9ft BGS			1	72	72
10		636.91				
	LIMESTONE, fine grained, thin bedded, brown - crushed pebble-size rock from 10.5 to 10.6 ft BGS					
12	- fractures, multiple discs from 12.7 to 12.9ft BGS - fractures at 12.61, 12.71, 13.07, 15.07 ft BGS			2	100	80
14	- stylolite at 14.1ft BGS - fractures, clay infilling at 14.6ft BGS	631.91				
16	LIMESTONE, fine grained, thin bedded, gray					
18	- fracture, stylolite at 17.7ft BGS		3.78" Ø Open Borehole	3	100	100
20	- stylolite at 19.2ft BGS - fracture at 19.8ft BGS - brown at 20.1ft BGS	626.91				
22	LIMESTONE, coarse grained, thin bedded, brown - stylolite at 20.5 ft BGS					
24	- vug at 23.0ft BGS - vug, stylolite at 23.1ft BGS - clay infilling at 23.4ft BGS			4	58	58
26	LIMESTONE, coarse grained, thin bedded, brown, calcite crystals throughout - clay infilling at 25.5 ft BGS	621.91				
28				5	88	88
30		616.91				
	LIMESTONE, coarse grained, thin bedded,					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-67
PROJECT NUMBER: 013968
DATE COMPLETED: August 2, 2018
CLIENT: General Motors LLC
DRILLING METHOD: 8¼" Ø HSA & HQ Core
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
32	brown - fracture at 30.55 ft BGS -fracture and styolite at 30.63 ft BGS			6	99	97
34	- vertical fracture at 35.3ft BGS	611.91				
36	LIMESTONE, coarse grained, thin bedded, brown - vertical fracture from 35.5 to 36.23 ft BGS			7	100	86
38	- open vertical fracture from 38.9 to 39.3ft BGS - open vertical fracture from 39.3 to 39.8ft BGS					
40	- vertical fracture from 40.3 to 40.5ft BGS	606.91				
42	LIMESTONE, coarse grained, thin bedded, brown - vertical fracture from 40.5 to 40.75 ft BGS - fracture at 42.4ft BGS - vugs throughout from 42.5 to 42.7ft BGS - closed vertical fracture from 43.0 to 43.5ft BGS			8	100	100
44	- styolites at 42.78, 43.65, 44.75 ft BGS - vertical fracture from 43.8 to 44.0ft BGS - open vertical fracture from 44.0 to 44.3ft BGS					
46	- gray at 44.4ft BGS LIMESTONE, fine grained, thin bedded, gray, trace fossils, calcite crystals - styolites at 45.63, 46.80, 48.76 ft BGS - fractures at 45.68, 46.92, 49.75 ft BGS	601.91		9	100	97
48						
50						
52	LIMESTONE, fine grained, thin bedded, gray - vug at 50.7 ft BGS - styolites at 51.69, 54.55, 54.65, 55.50 ft BGS	596.91		10	100	100
54	- fracture, clay infilling at 54.2ft BGS					
	LIMESTONE, coarse grained, thin bedded,	591.91				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-67
DATE COMPLETED: August 2, 2018
DRILLING METHOD: 8¼" Ø HSA & HQ Core
FIELD PERSONNEL: J. Luzwick
DRILLER: Jerry

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
58	gray - fracture, clay infilling at 56.0ft BGS - styolites at 56.40, 57.46, 60.40 ft BGS - fracture at 58.2ft BGS			11	98	97
60	- fracture at 59.9ft BGS	586.91				
62	LIMESTONE, coarse grained, thin bedded, gray, calcite crystals - styolites at 61.35, 61.70, 62.00, 62.53, 63.05, 63.10, 63.80, 64.44 ft BGS - fine grained at 63.1ft BGS			12	100	97
64	- fractures at 63.80, 64.44, 64.80 ft BGS	581.91				
66	LIMESTONE, fine grained, thin bedded, gray, calcite crystals - fracture at 65.8ft BGS - fracture at 66.2ft BGS			13	100	54
68	- stylolite at 66.3ft BGS - stylolite at 67.1ft BGS - stylolite at 67.2ft BGS	579.91	WELL DETAILS Material: Open Hole			
70	END OF BOREHOLE @ 67.5ft BGS					
72						
74						
76						
78						
80						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-68
DATE COMPLETED: April 9, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	TOP OF CASING	648.7				
0	CL-SILTY CLAY, firm, medium plasticity, brown, moist		Cement/ Bentonite Grout Seal; 5" Ø Black Iron Pipe; 11" Ø Borehole			
5	LIMESTONE (Salem Formation), fine grained, thin bedded, light gray/brown	5.0				
8.8	END OF OVERBURDEN HOLE @ 8.8ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 5/7/19

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-68
DATE COMPLETED: April 9, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
8						
	LIMESTONE (Salem Formation), fine grained, thin bedded, light gray/brown	8.8		1	88	88
10	- fracture, oxidized at 9.2ft BGS - stylolite, open at 9.5ft BGS - stylolites at 9.7, 10.6, 14.6, 18.2 ft BGS					
12				2	92	100
14						
16						
18			3.78" Ø Open Borehole			
20				3	100	100
	- stylolites at 21.0, 23.0, 26.0 ft BGS					
22						
	- fracture at 23.3ft BGS					
24						
26						
	- stylolite, open at 26.7ft BGS					
28						
	- stylolite at 29.8ft BGS					
30				4	100	100
32						
34						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-68
DATE COMPLETED: April 9, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
38	- styolite, open at 37.7ft BGS			5	100	100
40						
42						
44						
46				6	100	100
48	- styolite, open at 47.6ft BGS					
50						
52						
54						
56				7	100	100
58	- light brown at 58.0ft BGS					
	- fracture at 59.3ft BGS					
60	- light blue to light gray at 60.5ft BGS					
		61.5				
62	LIMESTONE (Harrodsburg Formation), fine grained, thin bedded, vuggy, styolites, light gray - styolite at 62.0ft BGS - fracture, silt infilling, oxidized at 62.3ft BGS - styolite at 62.4ft BGS - fracture, silt infilling, oxidized at 63.0ft BGS - styolite at 63.3ft BGS					
64						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-68
DATE COMPLETED: April 9, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
68	- vuggy, open at 64.0ft BGS - fracture at 67.3ft BGS					
70	- fracture at 69.6ft BGS			8	100	100
72						
74						
76				9	100	100
78	END OF BOREHOLE @ 77.5ft BGS	77.5	WELL DETAILS Material: Open Hole			
80	Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical).					
82	Overburden pilot boring advanced utilizing 7¼ inch Ø hollow stem augers and samples collected by STP method.					
84	Ground surface elevation of 646.44 ft. AMSL. Top of riser elevation of 648.69 ft. AMSL.					
86	Water lost per run: 1 Lost all water 2 Lost 50 gallons 3 Lost 75 gallons 4 Lost 350 gallons 5 Lost 275 gallons					
88	6 Lost 250 gallons 7 Lost 250 gallons 8 Lost 250 gallons 9 Lost 75 gallons					
90						
92						
94						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-69
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	TOP OF CASING	645.6				
0	TOPSOIL	0.3	Cement/ Bentonite Grout Seal			
	CL-SILTY CLAY, firm, medium plasticity, brown, moist		5" Ø Black Iron Pipe			
		5.0	11" Ø Borehole			
	LIMESTONE (Salem Formation), thin bedded, fine grained, light gray/brown					
12	END OF OVERBURDEN HOLE @ 12.0ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 5/7/19

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-69
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
12	LIMESTONE (Salem Formation), thin bedded, fine grained, light gray/brown - styolite, open at 13.3ft BGS - fracture, oxidized at 13.7ft BGS - fracture at 14.6ft BGS	12.0				
14						
16				1	100	100
18	- fracture at 17.8ft BGS - fracture, oxidized at 18.3ft BGS - fracture, oxidized at 19.3ft BGS		3.78" Ø Open Borehole			
20						
22	- fracture at 21.3ft BGS - fracture, void with clay from 22.0 to 23.1ft BGS			2	80	70
24						
26						
28						
30				3	100	100
32						
34	- styolite at 33.7ft BGS					
36	- styolite at 35.5ft BGS					
38	- styolite, open at 39.0ft BGS			4	100	100

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-69
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
42						
44						
46						
48						
50	LIMESTONE (Harrodsburg Formation), thin bedded, fine grained, vuggy, granular, light gray - styolite, open at 50.7ft BGS - very vuggy, many open from 51.5 to 56.0ft BGS - styolite, open at 51.7ft BGS	49.0		5	100	100
52						
54						
56	- at 55.4ft BGS - styolite, open at 56.2ft BGS					
58	- styolite at 58.3ft BGS			6	100	100
60						
62	- styolite at 61.0ft BGS - styolite, open at 61.2ft BGS					
64	- styolite at 64.4ft BGS					
66						
68	- fracture at 67.5ft BGS			7	100	100

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-69
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
72	- styolite, open at 71.2ft BGS						
74	- styolite, open at 73.3ft BGS						
	END OF BOREHOLE @ 74.7ft BGS	74.7	WELL DETAILS Material: Open Hole				
76	Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical).						
78	Overburden pilot boring advanced utilizing 7¼ inch Ø hollow stem augers and samples collected by STP method.						
80	Ground surface elevation of 643.62 ft. AMSL. Top of riser elevation of 645.57 ft. AMSL.						
82	Water lost per run: 1 No water loss 2 No return 3 Lost 300 gallons 4 Lost 250 gallons 5 Lost 200 gallons 6 Lost 150 gallons 7 Lost 300 gallons, no return						
84							
86							
88							
90							
92							
94							
96							
98							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-70
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	TOP OF CASING	654.8				
0	CL-SILTY CLAY, firm, medium plasticity, brown, moist		Cement/ Bentonite Grout Seal; 5" Ø Black Iron Pipe; 11" Ø Borehole			
8	LIMESTONE (Salem Formation), thin bedded, fine grained, light gray	7.5				
12	END OF OVERBURDEN HOLE @ 11.5ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-70
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
12	LIMESTONE (Salem Formation), thin bedded, fine grained, light gray - stylolite at 12.1ft BGS	11.5		1	100	100
14	- stylolite at 14.6ft BGS - stylolite at 15.3ft BGS					
16	- medium grained at 15.8ft BGS					
18			← 3.78" Ø Open Borehole	2	100	100
20						
22						
24						
26						
28	- stylolite at 28.5ft BGS			3	100	100
30	- stylolite at 31.0ft BGS					
32	- stylolite, open at 33.1ft BGS					
34						
36	LIMESTONE (Harrodsburg Formation), thin bedded, fine grained, brown/gray	35.6				
38	- fracture from 37.7 to 38.3ft BGS - fracture, oxidized, brown from 39.3 to 41.3ft BGS			4	100	100

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-70
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
42							
44							
46							
48				5	100	100	
50							
52							
54							
56							
58				6	100	100	
60							
62							
64							
66							
68	- styolite at 69.2ft BGS			7	100	100	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-70
DATE COMPLETED: April 11, 2019
DRILLING METHOD: 7¼" Ø HSA & HQ Core
FIELD PERSONNEL: K. Vander Meulen
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
72	- styolite from 70.3 to 70.6ft BGS - styolite at 71.3ft BGS					
74	- styolite at 73.6ft BGS					
76						
78	- styolite, open at 77.0ft BGS - styolite at 78.3ft BGS			8	100	100
80	- styolite at 80.1ft BGS					
82	- styolite, open at 81.3ft BGS					
84	END OF BOREHOLE @ 83.3ft BGS	83.3	WELL DETAILS Material: Open Hole			
86	Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical). Overburden pilot boring advanced utilizing 7¼ inch Ø hollow stem augers and samples collected by STP method.					
88	Ground surface elevation of 653.35 ft. AMSL. Top of riser elevation of 654.80 ft. AMSL.					
90	Water lost per run: 1 No water loss 2 No water loss 3 No water loss					
92	4 Start losing water 5 Lost 75 gallons 6 Lost 75 gallons					
94	7 Lost 75 gallons 8 Lost 75 gallons					
96						
98						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-71
DATE COMPLETED: October 8, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1323992.98 EASTING: 3124966.76 TOP OF RISER	643.32				
0	TOPSOIL, grass	0.60	Cement/ Bentonite Grout Seal	1GP		
	CL-SILTY CLAY, very soft, no plasticity, brown, dry		4" Ø Steel Casing			
2						
4			10" Ø Borehole			
5	LIMESTONE, weathered	5.50		2HSA		
6						
8						
10	END OF OVERBURDEN HOLE @ 9.9ft BGS					
12						
14						
16						
18						
20						
22						
24						
26						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-71
PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
10	LIMESTONE, fine grained, thin bedded, tan and gray mixed - styolite at 10.8ft BGS	9.90		1	100	86
12	- styolite and fracture at 11.2ft BGS LIMESTONE, fine grained, thin bedded, tan and gray mixed	11.45		2	100	86
14	- fractures at 12.00 and 12.24 ft BGS LIMESTONE, fine grained, thin bedded, gray - fractures at 13.24, 13.45, and 16.98 ft BGS	13.24				
16						
18	- vertical fractures at 17.33 and 18.45 ft BGS - fractures at 17.84 and 18.00 ft BGS		3.78" Ø Open Borehole	3	80	66
20	- vertical fractures at 19.03-19.05, and 20.09 ft BGS					
22						
24	LIMESTONE, fine grained, thin bedded, gray	23.24				
26						
28	- styolites at 28.16, 29.80, and 30.10 ft BGS			4	100	96
30						
32	- tan at 31.3ft BGS - gray at 32.4ft BGS					
34	LIMESTONE, medium grained, thin bedded, tan	33.24		5	104	104
36						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-71

PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020

CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"

LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick

DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
		38.24					
40	END OF BOREHOLE @ 38.2ft BGS Note: Possibly void 16.5-18.5 ft BGS; 8 ft of recovery during Run 3 Began to lose water at 12 ft BGS Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical). Ground surface elevation of 641.323 ft. AMSL.		WELL DETAILS Material: Open Hole				
42							
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-72
DATE COMPLETED: October 8, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1323978.28 EASTING: 3125054.1 TOP OF RISER	648.15				
0	TOPSOIL, grass					
	CL-CLAY, firm, medium plasticity, brown, moist	0.60	Cement/ Bentonite Grout Seal; 4" Ø Steel Casing	1GP		
2						
4						
	LIKMESTONE, weathered	5.00	10" Ø Borehole	2HSA		
6						
8						
	END OF OVERBURDEN HOLE @ 9.3ft BGS					
10						
12						
14						
16						
18						
20						
22						
24						
26						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 11/9/20

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-72
PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
10	LIMESTONE, fine grained, thin bedded, calcite crystals - stylolites at 10.11, 11.35, and 15.65 ft BGS	9.30				
12	- porous from 13.0 to 13.5ft BGS - fractures at 13.5ft BGS					
14				1	92	92
16						
18	- stylolites at 16.98, 17.41, and 16.00 ft BGS - fractures at 17.9ft BGS - fractures at 18.0ft BGS		← 3.78" Ø Open Borehole			
20	LIMESTONE, fine grained, thin bedded, gray	19.30				
22						
24	- fractures at 23.52, 24.31, and 26.12 ft BGS - stylolites at 23.52, 24.03, and 24.31 ft BGS			2	100	100
26						
28	- fractures at 26.80 and 28.95 ft BGS - stylolites at 27.40, 28.57, and 20.00 ft BGS - calcite crystals, trace fossils, tan at 29.0ft BGS					
30	LIMESTONE, fine grained, thin bedded, tan - vertical fracture at 30.1ft BGS	29.60				
32	- gray at 31.2ft BGS - stylolites at 31.00, 33.58, and 36.15 ft BGS - fractures at 31.90, 33.42, and 35.25 ft BGS					
34				3	100	100
36	- fractures at 36.15 and 37.83 ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-72
PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
	- styolites at 37.75 and 39.35 ft BGS					
40	LIMESTONE, fine grained, thin bedded, tan	39.78				
42	- fracture at 41.8ft BGS - horizontal fracture at 42.4ft BGS			4	104	102
44	- fracture at 43.4ft BGS - GRAY at 44.2ft BGS					
46	END OF BOREHOLE @ 44.9ft BGS Note: Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical). Ground surface elevation of 645.919 ft. AMSL.	44.91	WELL DETAILS Material: Open Hole			
48						
50						
52						
54						
56						
58						
60						
62						
64						
66						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-73
DATE COMPLETED: October 6, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1324703.18 EASTING: 3124932.8 TOP OF RISER	637.68				
0	TOPSOIL, grass					
0.6	CL-CLAY, firm, medium plasticity, brown, moist	0.60	Cement/ Bentonite Grout Seal	1GP		
2						
4			4" Ø Steel Casing			
4.5	LIMESTONE, weathered	4.50	10" Ø Borehole	2HSA		
6						
8						
9.7	END OF OVERBURDEN HOLE @ 9.7ft BGS					
10						
12						
14						
16						
18						
20						
22						
24						
26						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-73
PROJECT NUMBER: 013968
DATE COMPLETED: October 6, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
10	LIMESTONE, fine grained, thinly bedded, light gray - closed horizontal fracture from 10.5 to 10.2ft BGS - open styolite from 10.7 to 10.9ft BGS - styolite at 12.3ft BGS - fracture at 12.8ft BGS - tan at 12.8ft BGS	9.70		1	100	100
16	- fracture at 17.0ft BGS					
18	LIMESTONE, fine grained, thinley bedded, tan - fractures at 18.53 and 22.50 ft BGS	17.80	3.78" Ø Open Borehole	2	99	99
20	- styolite at 20.4ft BGS					
22	- horizontal fracture at 22.50 to 23.30 ft BGS					
24	- styolite at 24.4ft BGS - fractures at 24.50 and 25.85 ft BGS					
26	- horizontal fracture at 25.20 to 25.46 ft BGS					
28	LIMESTONE, fine grained, thin bedded, gray - gray and tan at 28.6ft BGS - styolite at 29.3ft BGS - tan at 29.3ft BGS	27.80		3	95	84
30	- fractures at 30.70 and 30.92 ft BGS					
32	- vertical fracture at 31.9ft BGS - clay and sand infilling from 32.4 to 32.8ft BGS - fractures at 32.35 and 32.51 ft BGS	32.80	WELL DETAILS Material: Open Hole			
34	END OF BOREHOLE @ 32.8ft BGS Note: Water lost at 18.4 ft BGS					
36	Water lost at approximately 30 ft BGS Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical).					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-73
PROJECT NUMBER: 013968
DATE COMPLETED: October 6, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
	Ground surface elevation of 635.030 ft. AMSL.						
40							
42							
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: MW-LOC-A
DATE COMPLETED: October 7, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1324579.25 EASTING: 3124879.07 TOP OF RISER	625.36				
0	BACKFILL, grass		Cement/ Bentonite Grout Seal			
1.00	CL-CLAY, firm, low to medium plasticity, brown, moist	1.00	4" Ø Steel Casing	1GP		
2						
4			10" Ø Borehole			
6		6.00		2GP		
6.00	LIMESTONE, weathered					
8						
10				3HSA		
12						
12.4	END OF OVERBURDEN HOLE @ 12.4ft BGS					
14						
16						
18						
20						
22						
24						
26						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 11/9/20

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: MW-LOC-A
PROJECT NUMBER: 013968
DATE COMPLETED: October 7, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
12						
	LIMESTONE, fine grained, thin bedded, tan, trace calcite crystals - fractures at 12.63 and 13.23 ft BGS	12.40		1	85	73
14						
16	- clay infilling at 15.8ft BGS - vertical fractrues at 15.83 and 16.37 ft BGS - clay infilling at 16.4ft BGS	17.10				
18	LIMESTONE, fine grained, thin bedded, trace calcite crystals - clay and sand infilling at 17.1 ft BGS - horizontal fracture at 17.1 ft BGS		3.78" Ø Open Borehole			
20	- stylolite at 18.0ft BGS - trace fossils, gray at 19.6ft BGS			2	88	92
22						
24	- stylolite at 24.3ft BGS - clay and sand infilling at 24.4ft BGS - horizontal fracture at 24.68 ft BGS					
26	- stylolite at 25.1ft BGS	26.00				
	LIMESTONE, fine grained, thin bedded, calcite crystals, gray - stylolites at 26.35, 28.05, and 28.34 ft BGS					
28	- horizontal fractures at 38.34, 29.21, and 28.60 ft BGS - stylolites at 28.90, 28.97, and 31.70 ft BGS					
30	- fracture at 30.77 ft BGS			3	100	99
32	- vugs at 31.70-32.00 ft BGS - stylolites at 32.00 and 34.55 ft BGS					
34						
36	- vugs at 35.55 to 35.75 ft BGS	36.00				
	END OF BOREHOLE @ 36.0ft BGS		WELL DETAILS Material: Open Hole			
38	Note: Water lost at 16 ft BGS Lost approximately 1,200 gallons of water throughout coring					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: MW-LOC-A

PROJECT NUMBER: 013968
DATE COMPLETED: October 7, 2020

CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"

LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick

DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
	Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical). Ground surface elevation of 622.725 ft. AMSL.						
42							
44							
46							
48							
50							
52							
54							
56							
58							
60							
62							
64							
66							
68							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: MW-LOC-B
DATE COMPLETED: October 6, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1324233.83 EASTING: 3125055.7 TOP OF RISER	634.09				
0	BACKFILL, grass					
1	CL-CLAY, firm, medium plasticity, reddish brown, moist	1.00	Cement/ Bentonite Grout Seal	1GP		
2						
3			4" Ø Steel Casing			
4	LIMESTONE, weathered	4.00				
5			10" Ø Borehole	2HSA		
6						
7						
8	END OF OVERBURDEN HOLE @ 7.7ft BGS					
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: MW-LOC-B
PROJECT NUMBER: 013968
DATE COMPLETED: October 6, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
8	LIMESTONE, fine grained, thin bedded, tan, trace fossils, calcite crystals - fractures at 8.22, 8.40, and 9.45 ft BGS	7.70				
10						
12	- styolite at 11.60 ft BGS - clay infilling at 11.6ft BGS - fractures at 11.60, 12.32, and 12.95 ft BGS			1	100	92
14	multiple styolites 11.7 to 13.7 ft BGS - clay infilling at 13.6ft BGS - clay infilling at 13.7ft BGS - fractures at 13.49 and 13.62 ft BGS					
16	- fractures at 13.70 and 16.95 ft BGS - multiple styolites at 15.80 and 17.40 ft BGS - vug at 16.3ft BGS					
18	- vug at 17.4ft BGS LIMESTONE, fine grained, thin bedded, gray, trace fossils and calcite crystals - numerous vugs from 17.70-18.20 ft BGS	17.70	← 3.78" Ø Open Borehole			
20						
22	- styoilites at 21.27, 21.40, and 23.12 ft BGS			2	100	100
24						
26						
28	- fractures from 27.40-27.82 ft BGS - vertical fracture from 27.52-27.75 ft BGS	27.98				
30	LIMESTONE, medium grained, thin bedded, gray - tan at 30.2ft BGS - horizontal fracture at 30.2ft BGS					
32	- vertical fracture from 31.63-32.33 ft BGS - styolite at 32.3ft BGS			3	100	100
34	- vertical fracture at 35.00-35.20 ft BGS					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: MW-LOC-B

PROJECT NUMBER: 013968
DATE COMPLETED: October 6, 2020

CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"

LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick

DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
38	- vertical fracture at 36.94-37.30 ft BGS					
	LIMESTONE, medium grained, thin bedded, tan, trace fossils and calcite crystals - styolite at 39.1ft BGS	38.53		4	100	100
40	END OF BOREHOLE @ 40.5ft BGS	40.51	WELL DETAILS Material: Open Hole			
42	Note: Boring drilled on a 30 degree angle from vertical (all depths not in relation to vertical). Ground surface elevation of 632.485 ft. AMSL.					
44						
46						
48						
50						
52						
54						
56						
58						
60						
62						
64						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

BEDROCK LOG 013968-CO.GPJ GHD_Corp 11/9/20

Appendix B

Far-Field/Near-Field Dye Trace Report from Hydrogeology Inc.

hydrogeology inc.
1211 S Walnut St
Bloomington, IN 47401

Pilot Trench Performance Monitoring Dye Trace Study Report

RCRA Corrective Action
GM – Bedford Casting Operations
Bedford, Indiana
EPA ID# IND006036099

Prepared for:
GHD Services Inc.
6300 N. River Road, Suite 302
Rosemont, IL 60018

March 7, 2023 (Revised December 20, 2024)

hydrogeology inc.

Jason Krothe, LPG
Senior Hydrogeologist, President

Pilot Trench Performance Monitoring Dye Trace Study Report

RCRA Corrective Action
GM – Bedford Casting Operations
Bedford, Indiana
EPA ID# IND006036099

Prepared for:
GHD Services Inc.
6300 N. River Road, Suite 302
Rosemont, IL 60018

Prepared by:
Hydrogeology, Inc.
1211 S. Walnut Street
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Tel 812.339.3560
Fax 812.339.3557

Date:
March 7, 2023 (Revised December 20, 2024)

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Executive Summary

On behalf of GHD Services Inc. (GHD), Hydrogeology Inc. (HGI) conducted a dye trace study consisting of several dye traces in the area of the Pilot Trench groundwater collection interim measure at the General Motors LLC Bedford Casting Operations facility, located at 105 GM Drive, Bedford, Indiana (Facility). The dye trace study is part of the Pilot Trench Performance Monitoring Plan (PMP) that has been conducted within the ongoing RCRA Corrective Action program. Overall objectives of the PMP are to determine whether (1) groundwater above the competent bedrock in the northern portion of the East Plant Area preferentially flows into the northern bedrock drainage valley and towards the Pilot Perimeter Groundwater Trench Collection System (Pilot Trench) and (2) groundwater just upgradient of the Pilot Trench is captured by the trench (i.e., no significant vertical or horizontal by-pass). Additionally, the dye traces helped to enhance the understanding of the karst flow system upgradient of the Pilot Trench. The results of this study present individual lines of evidence used in evaluating trench performance and have been included in the overall evaluation of the Pilot Trench performance that include other lines of evidence, as described in the PMP.

HGI conducted two separate dye trace phases (Near-field and Far-field) at the Facility between November 2020 and August 2022. The Near-field traces were conducted at three angled monitoring wells (CH-71, CH-73, and Location A).

The following results were achieved through the Near-field dye traces:

- Dyed water introduced in front (west) of the Pilot Trench on both the north and south ends as well as in the middle area was captured by the Pilot Trench;
- Dyed groundwater migrates quickly and directly towards the Pilot Trench and into Wet Well 4 (WW-4);
- Dyed groundwater has not been detected in any monitored location to the north, west, or south and has not migrated off of the Facility;
- No evidence of dyed groundwater by-passing the Pilot Trench, neither horizontally nor vertically;
- Dye trace study conclusions are consistent with inferred groundwater flow paths based on groundwater elevations.

The Far-field dye trace was conducted at two clean-out pipes for the Gravel Underdrain System (GUS).

The following results were achieved through the Far-field dye trace:

- Dyed groundwater in the western portion of the East Plant Area flows quickly in an easterly direction into the northern bedrock valley and into WW-3 and WW-4 at the Pilot Trench;
- Dyed groundwater has not been detected in any monitored location to the north, west, or south and has not migrated off of the Facility;
- The study yielded no evidence of dyed groundwater by-passing the Pilot Trench, neither horizontally nor vertically;
- Dye trace study conclusions are consistent with inferred groundwater flow paths based on groundwater elevations.

The study results indicate the Pilot Trench is performing as designed and is collecting targeted groundwater. The conclusions from the study are consistent with the conceptual flow model developed for the Facility as presented in the RCRA Facility Investigation Report (GHD, 2020).

Contents

Executive Summary **i**

1. Introduction **1**

2. 2.0 Facility Overview **1**

2.1 Facility History 1
2.2 Geology 2
2.3 Groundwater Movement 2
2.4 Historical Facility Dye Tracing 3

3. Dye Trace Field Methodology **4**

3.1 Sampling Network Development 4
3.2 Dye Trace Sampling Methods 5
3.3 Sampling Locations 5
3.4 ACS Field Collection 5
3.5 Background Fluorescence 6
3.6 Sampling Schedule 6
3.7 Geologic Limitations 6
3.8 Facility Activities 6

4. Dye Trace Laboratory Methodology **7**

4.1 Fluorescent Dyes 7
4.2 Sample Analysis 7
4.3 Dye Standards 7
4.4 ACS Limitations 7
4.5 Criteria for Dye Positive 7

5. Near-field Dye Trace **8**

5.1 Sampling Network 9
5.2 Location A – Dye Trace 9
5.3 CH-73 – Dye Trace 12
5.4 CH-71 – Dye Trace 14

6. Far-field Dye Trace **16**

6.1 Sampling Network 16
6.2 GUS Dye Trace 16

7. Conclusions **18**

8. References **19**

List of Tables

Table 1 Dye Trace Sampling Locations
Table 2 Variations from Performance Monitoring Plan – Dye Trace Sampling Locations

List of Insets

Inset 1 Bedrock geology map with topographic contours
Inset 2 Block diagram
Inset 3 Rhodamine WT injection at Location A
Inset 4 Rhodamine WT flowing out of Catch Basin 4
Inset 5 Pyranine injection at CH-73
Inset 6 Pyranine injection at CH-71

List of Figures

Figure 1 Project Location
Figure 2 Pilot Trench
Figure 3 AOI 4 Dye Trace
Figure 4 Near-Field Sampling Locations
Figure 5 Location A
Figure 6 Location A Dye Detections
Figure 7 WW-4 Rhodamine WT Breakthrough Curve
Figure 8 Dye Arrival Conceptual Model
Figure 9 Rhodamine WT Surface Release
Figure 10 Rhodamine WT WW-4 v Spring 018C
Figure 11 Rhodamine WT WW-4 vs Tributary 3-4
Figure 12 CH-73
Figure 13 CH-73 Dye Detections
Figure 14 WW-4 Pyranine Breakthrough Curve
Figure 15 CH-71
Figure 16 CH-71 Dye Detections
Figure 17 WW-4 Pyranine Breakthrough Curve CH-73 and CH-71
Figure 18 Far-Field Sampling Locations
Figure 19 GUS Cleanouts 1 & 2
Figure 20 GUS Dye Detections
Figure 21 Eosine Breakthrough Curve WW-3 and WW-4
Figure 22 WW-3 Inlet Pipes
Figure 23 WW-3 Inlet Pipes Site Conceptual Model
Figure 24 WW-3 Eosine Emission Shift
Figure 25 Dye Trace Summary

Appendices

Appendix A Historical Dye Traces
Appendix B Dye Trace Procedures
Appendix C Injection Well Logs
Appendix D GHD Facility Activities
Appendix E Analytical Results
Appendix F Analytical Narrative

1. Introduction

On behalf of GHD Services Inc. (GHD), Hydrogeology Inc. (HGI), conducted a dye trace study in the area of the Pilot Trench groundwater collection interim measure at the General Motors LLC (GM LLC) Bedford Casting Operations facility located at 105 GM Drive, Bedford (Lawrence County), Indiana (the "Facility"; **Figure 1**). The dye trace study is required as part of the Pilot Trench Performance Monitoring Plan (GHD, 2019)) that was designed to evaluate and monitor the groundwater collection hydraulic performance of the Pilot Perimeter Groundwater Trench Collection System (Pilot Trench). The Pilot Trench was installed as part of the Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) activities being conducted under the Administrative Order on Consent (AOC) (effective date 8/4/2014) between the United States Environmental Protection Agency (U.S. EPA) and GM LLC for the Facility (Docket No. RCRA-005-2014-0011) (GHD, 2019).

The Pilot Trench, located in the northeastern portion of the Facility, is part of a perimeter groundwater control system. The Pilot Trench was installed through the karst bedrock and designed to collect the shallow, PCB -impacted groundwater beneath the northern portion of the East Plant Area, thereby preventing it from migrating offsite (Figure 2). The Pilot Trench extends into competent bedrock across the east-west trending bedrock valley drainage feature in the northern portion of the Facility. The conceptual groundwater flow model for the Facility indicates that groundwater flow in the northern portion of the East Plant Area converges and flows along this northern bedrock valley and offsite. The placement of this Pilot Trench is intended to take advantage of this flow regime in order to accentuate the existing hydraulic gradients and broaden its hydraulic capture. Thus, the Pilot Trench may have a practical horizontal collection zone that exceeds the mere length of the trench by producing an inward flow path upgradient of the trench location (GHD, 2019).

The PMP was designed to further define and assess prior monitoring information that indicates (1) overall groundwater flow in the northern portion of the East Plant Area is controlled by an east-west trending bedrock valley that conducts groundwater towards the Pilot Trench, and (2) horizontal and vertical hydraulic capture of groundwater above the competent bedrock at the Pilot Trench effectively prevents contaminated groundwater from migrating off-site at levels which may result in unacceptable risk to human health and the environment. The PMP presented a range of data and information gathering steps that are to be constructed into a multiple lines of evidence approach in evaluating trench performance. For example, monitoring wells located in select areas in the vicinity of the Pilot Trench, and periodically monitored throughout the various seasons, were used to monitor and measure the hydraulic performance of the capture zone of the Pilot Trench. (GHD, 2019). The dye trace study results and hydraulic head monitoring are some of the primary lines of evidence that will be assessed and included in the overall assessment of the Pilot Trench performance.

2. Facility Overview

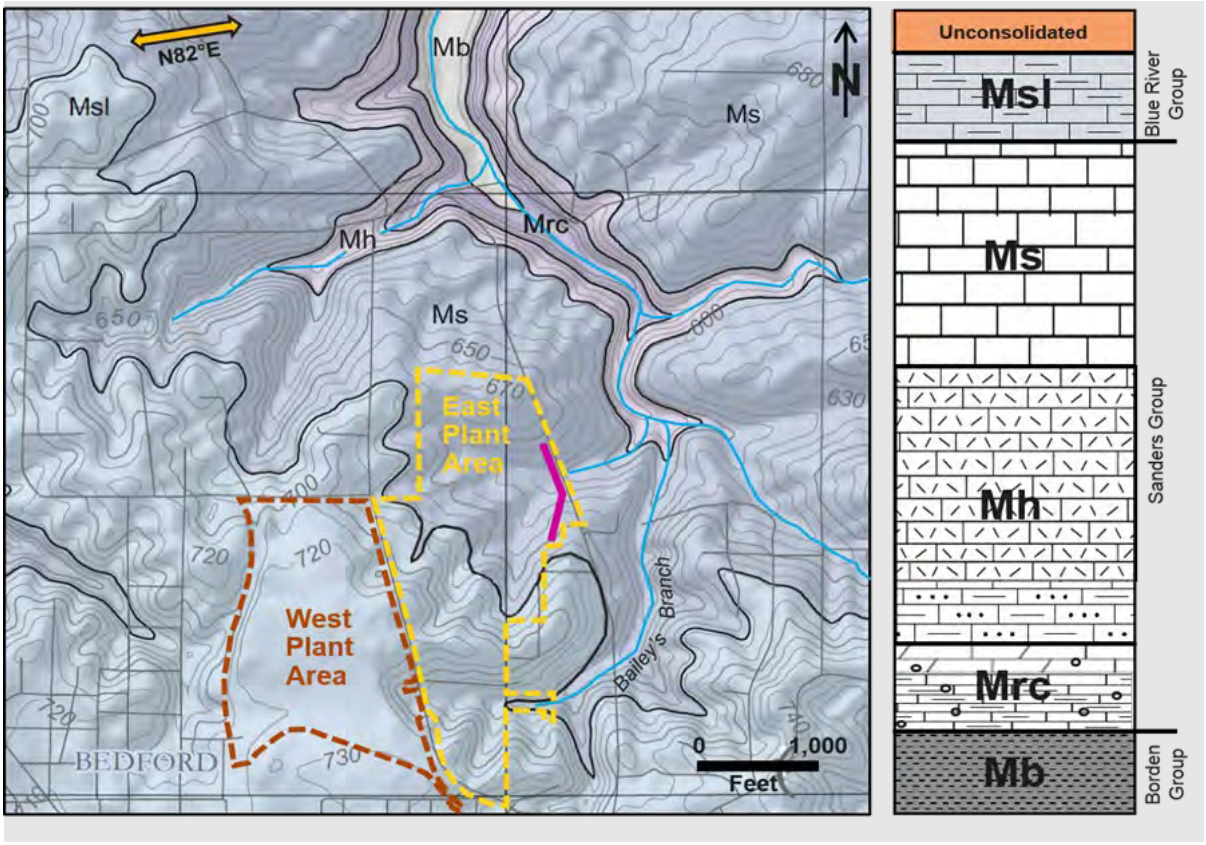
2.1 Facility History

The Facility remediation project is being conducted under a Resource Conservation and Recovery Act (RCRA) Corrective Action Agreement (on-site) and a time-critical Removal Action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Due to the extent of the contamination and the geology of the area, sediment and soil with more elevated levels of PCBs had previously been excavated throughout much of the East Plant Area of the Facility as well as portions of the West Plant Area. Soil and sediment with relatively low levels of PCBs were also placed in the East Plant Area from the creek removal action as grading material for a multi-layer

cover system was then installed over the East Plant Area. The cover system was completed in 2014. The Pilot Trench installation was completed in the northeastern portion of the East Plant Area in 2016.

2.2 Geology

The Facility is in the Mitchell Plateau physiographic region, which is known for extensive karst development. The geology of the Facility consists of a thin veneer of unconsolidated clay-rich and finer grained material overlying several Mississippian geologic bedrock formations (Inset 1). In descending order (youngest to oldest), these are the St. Louis Limestone (Msl) of the Blue River Group, the Salem Limestone (Ms), the Harrodsburg Limestone (Mh), the Ramp Creek Formation (Mrc) of the Sanders Group, and the Edwardsville Formation of the Borden Group (Mb). Karst can form in all these formations except the Borden, which is predominantly siltstone and shale (Inset 1, GHD, 2019).

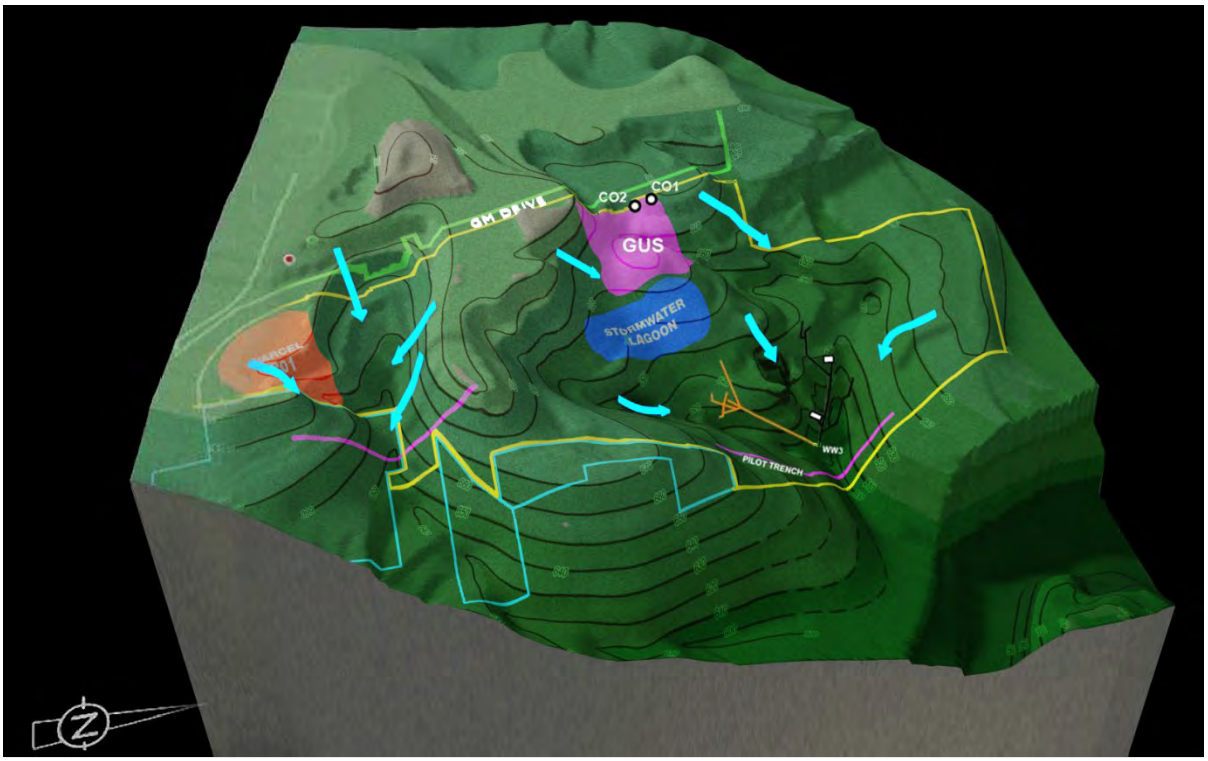


Inset 1. (Left) Bedrock geology map with topographic contours (after Thompson et al., 2008, with adjustments based on site-specific data); **(Right)** generalized stratigraphic column showing unit relationships. The thickness of the Blue River and Sanders Group Formations shown are relative to the approximate average thickness of formations penetrated at the Facility. Unit abbreviations explained in text. Yellow arrow denotes strike of regionally dominant joint set. Pilot trench shown in magenta. (GHD, 2019).

2.3 Groundwater Movement

Groundwater elevations at the Facility have been monitored since the early 2000s. In the northern portion of the East Plant Area, where the Pilot Trench is located, potentiometric surface mapping of groundwater in the shallow bedrock has been conducted using data collected from monitoring wells. Based on these data, the potentiometric surface in the

vicinity of the Pilot Trench suggests that shallow groundwater generally flows from west to east along the bedrock valley and towards the Pilot Trench (See Inset 2). This groundwater flow direction has also been supported by previous dye trace studies at the Facility (See Section 2.4).



Inset 2. Block diagram showing top of bedrock and groundwater flow directions based on hydraulic head measurements from groundwater monitoring wells since installation of the Pilot Trench.

2.4 Historical Facility Dye Tracing

On 3/22/2005, HGI conducted two dye injections at the Facility in the northern portion of the East Plant Area (Area of Interest 4 (AOI4)), prior to construction of the Pilot Trench. At the time of the March 2005 injections, Site Source Control (SSC) systems A through H were installed. SSC systems J through M were install after dye injection took place. The purpose of these traces was to identify groundwater flow-paths at the Facility. Injections were conducted in monitoring wells (bedrock and overburden). Below is a description of the results from the 2005 dye traces.

- AOI4 dye trace showed groundwater flow predominantly to the east, in the direction of where the Pilot Trench is now located.
- AOI4 dye trace highlighted the complicated nature of injecting dye into wells as no dye was recovered from injections at one well. The lack of detections was likely due to poor communication with existing conduits through the system at the injection location, resulting in inconclusive testing results.

AOI4 – Dye Trace Summary (Figure 3)

Injection Well 1: TMW-X193Y251.

Formation: Overburden.

Injection Elevation: 659.5 ft to 654.5 ft.

Dye Used: Fluorescein

Injection Date: 3/22/05

Detections: 12 locations

Travel Time Range: 18.6 ft/day (SSC System F) to 1.5 ft/day (SSC System B).

Arrival Time Range: 36 days (SSC System E) to 1 year 7 months (SSC System B).

Travel Direction: Predominantly east, slight northerly component.

Injection Well 2: MW-X145Y245S.

Injection Formation: St Louis Limestone.

Injection Elevation: 681.35 ft to 670.35 ft.

Dye Used: Rhodamine WT

Injection Date: 3/22/05

Detections: None. Inconclusive results.

Travel Time Range: NA.

Travel Direction: NA.

Other Dye Traces

HGI completed other dye traces at or adjacent to the Facility between 2005 and 2012 (Appendix A), prior to the installation of the Pilot Trench. The dye traces confirmed a connection between karst swallets in both Tributary 3 and Baileys Branch to Spring 018C. The dye traces also show eastward movement of groundwater in Area of Interest 3 (AOI3). Eosine, Fluorescein, and Rhodamine WT were used for these dye traces.

3. Dye Trace Field Methodology

The following sections provide the details of the overall dye trace test field methodology.

3.1 Sampling Network Development

The development of the sampling network is critical to successful dye traces. Utilizing a wide geographical monitoring network is important as groundwater in karst areas can travel to unexpected locations. Some sampling locations were included as catchalls to identify any off-site sources of fluorescent dyes. These locations were often higher in elevation than the injection location, thereby making it physically impossible for the dye from the injection to travel to the sampling location. The sampling network consisted of monitoring wells, wet wells, springs, and surface water locations. The Near-field sampling network consisted of 73 locations, while the Far-field consisted of 96 locations. The Far-field sampling network included all locations included in the Near-field sampling network.

3.2 Dye Trace Sampling Methods

The primary sampling method for all dye traces was activated carbon samples (ACSs). Water samples were only collected from the multi-port Waterloo wells, which cannot accommodate an ACS.

The components of the ACS include fiberglass screen, stainless steel staples, and/or plastic zip ties and approximately 10 grams of granular activated carbon (charcoal). HGI assembled the ACS packets in the following manner:

- The fiberglass screen was cut into approximately 4-inch squares, folded and stapled to make a pouch.
- Ten grams of activated carbon was placed into the pouch and then folded and stapled to enclose the activated carbon.
- The ACS packets were then placed in individual plastic jars for transport.

3.3 Sampling Locations

Sampling was conducted in general accordance with the PMP (GHD, 2019). Changes to sampling locations are discussed below and summarized in Table 2. The type and sampling method for each sampling location are discussed below:

Monitoring Wells

A minimum of one ACS was installed in each monitoring well. Drilling logs for monitoring wells were reviewed to identify intervals with fractures and potentially high transmissivity. If a fracture zone was identified from the log, the ACS was placed within that interval. In some wells, two ACSs were placed to target different fracture zones. If no intervals with fractures were noted in the well log, the ACS was deployed at approximately the midpoint of the screened interval. The ACS packets were deployed using a nylon string and stainless-steel bolts as weights, or attached to plastic tubing or transducer cables.

Springs and Surface Water

ACSs deployed at springs and surface water locations were connected to a weighted line or wire and submerged at the location with the estimated highest flow.

Wet Wells

ACSs were deployed into the wet wells with nylon string.

Waterloo Wells

The structure of the multi-port Waterloo wells does not allow for the installation of an ACS. Grab water samples were collected as an alternative. Based on discussions with GHD, it was determined that direct fill was acceptable for the Waterloo Wells due to the low yield of the wells.

3.4 ACS Field Collection

Sediment accumulation is common in surface water sampling locations (springs, streams, wet wells). ACS packets with sediment accumulation were submerged in the source water and agitated to remove as much sediment as possible. Next, the ACS packets were opened at the sampling location with gloved hands and the charcoal was poured back into the plastic collection container. New gloves were used for each ACS. If there was insufficient flow at

a sampling location to adequately rinse sediment from the ACS, the sample was rinsed with deionized water in the laboratory. Collected samples were placed in disposable plastic sampling cups with a screw top lid and marked with a permanent marker. HGI maintained possession of all ACS samples collected for this dye trace study.

3.5 Background Fluorescence

The dyes typically used for groundwater tracing are readily available and used in a variety of products (automotive, foods, cosmetics, etc.). Many natural substances also fluoresce, including natural organic materials such as chlorophyll, humic acids, and fluvic acids (Leenheer and Croué, 2003). As noted in Section 2.4, HGI had conducted multiple dye traces at the Facility between 2005 and 2012. The fluorescent dyes typically used for groundwater tracing can remain at detectable levels many years after a dye injection (White, 2015). Additionally, personnel at the GM Powertrain Facility have used fluorescent dyes for pipe testing and other uses (William Steinman, GHD, personal communication). For these reasons, three background samples were taken at most sampling locations prior to dye injection to characterize existing fluorescence. Any peak within the typical range for the dyes used was documented and used to confirm dye detections in post-injection samples.

3.6 Sampling Schedule

After dye injection, samples were collected daily from all locations for two weeks, followed by weekly sampling, then bi-monthly sampling. This sampling schedule was restarted after each dye injection, so daily sampling was conducted for two weeks post-injection for all dye traces. While transitioning from the Near-field to Far-field dye traces there was a one-month break in sampling for the Near-field locations while background fluorescence sampling was conducted at the additional sampling locations for the Far-field dye trace.

3.7 Geologic Limitations

In general, the interconnection of subsurface karst flow pathways is not easily confirmed. Despite efforts to connect the drilling logs to a suitable injection or monitoring point, there remains the possibility that dissolution features at one location are not connected to the primary pathways controlling subsurface groundwater flow. In consideration of this fact, if dye was injected into a feature that is either isolated or just partially in communication with the surrounding pathways of the surrounding formation, the dye could effectively be stored in isolated dissolution features proximal to the injection point without any further migration. The potential lack of interconnected karst features at any one injection point may present a limitation to the dye trace study.

3.8 Facility Activities

Other activities were occurring at the Facility during the dye trace program, including work by GHD and other contractors. This work included manual water level measurements, pressure transducer installations and downloads, and groundwater sampling. These activities had the potential to affect the ACS position within a well such as when the water level probe became tangled with the string used to deploy the ACS. GHD activities at the site are summarized in Appendix D and ACSs which were missing or had been disturbed are noted in Appendix E of this report. Ten locations within the Facility were missing ACS on a single sampling event throughout the dye trace program. All ten locations had ACS collected before and after the missing ACS that were negative for dye. These ten locations also had no dye detected in any other ACS collected throughout the duration of the dye trace program. WW-4 was missing an ACS on 12/11/20 but had ACS collected on 12/10/20 and 12/12/20, which were both positive for Rhodamine WT. One location, Outfall 003/004 had ACS missing on multiple dates (10/1/21, 10/19/21, 10/24/21, 4/1/22, 5/24/22, and 6/17/22). Results from those dates were compared to the Trib 3-3 which is 50 ft downstream and all ACS from that location

were negative for dye. Based on these data there is no evidence or assessment by Hydrogeology Inc., that the facility activities listed above impacted the results or interpretation of the dye trace tests

4. Dye Trace Laboratory Methodology

The following sections provide general details of the dye study laboratory methodology. For complete laboratory procedures see Appendix B.

4.1 Fluorescent Dyes

The dyes typically used groundwater tracing include eosine, fluorescein (uranine), pyranine, rhodamine WT, and sulphorhodamine B. These dyes have been used safely for this purpose for over fifty years. A review of these dye by Malcom Field of the U.S. EPA determined the commonly used dyes present no toxic threat at or significantly above a concentration of 2 mg/L (Field et al, 1995)

4.2 Sample Analysis

All post-injection ACS and water samples were analyzed by HGI using a Shimadzu RF-6000 spectrofluorophotometer. Charcoal packets were eluted with Smart Solution (i.e., solution containing 5 parts alcohol, 3 parts water and 2 parts ammonium hydroxide). Approximately 10 mL of Smart Solution was poured over the charcoal and allowed to rest for one hour. After one hour, 4 mL of the solution was poured into a cuvette. Cuvettes were then placed in a constant temperature cell block design to maintain temperatures at 4 degrees Celsius. Additional sample analyses were as follows:

- Water samples collected from the sampling stations were poured directly into the 4-mL cuvette for analysis.
- Blank eluting solution and water were analyzed for every laboratory run.
- Duplicate ACS or water were analyzed for each sampling event.

4.3 Dye Standards

Standards of known concentration were prepared for each dye and used for quantification of all positive dye detections. Dye standards were prepared using deionized water and eluting solution. The typical dye standards prepared were 0.1 ppb and 1 ppb. These standards are analyzed prior to and after any samples were analyzed with the Shimadzu RF-6000.

4.4 ACS Limitations

It is important to note that ACS results do not represent a direct quantitative value. Dye adsorbs onto the charcoal surface over time and a variety of factors including water flow and turbidity can affect the absorption of dye onto the ACS. ACS concentrations are best described as semi-quantitative, in that a large fluorescence peak in an ACS is indicative of a high concentration of dye in the water passing through the ACS in-situ. It is also important to note that the time between sample collection at each location varied (i.e., sometimes daily, weekly, or bi-weekly). The longer an ACS packet is in place, the more opportunity there is for dye to adsorb to the charcoal surface, which would result in a higher concentration when the ACS is analyzed. The ACS analytical results are listed with concentrations based off calibration curves and are intended for comparative purposes as opposed to a true concentration.

4.5 Criteria for Dye Positive

The following attributes were required of any sample designated a dye positive:

1. Fluorescence peak within +/- 5 nanometers of accepted emission range for the dye in question.
2. Fluorescence peak must have a typical sharp symmetrical peak exhibited by fluorescent dyes.
3. Fluorescence peak must be ten times greater than the detection limit for the dye in question.
4. Fluorescence peak must be ten times greater than any fluorescent peak within the typical range observed in the background samples for that location.
5. It must be reasonable that the dye detection came from the dye injection and no other source. Factors such as local hydrogeology are considered as part of this step. The following are factors considered for criteria 5:
    - Local hydrogeology. This includes factors, such as: Is it physically possible for the dye to travel from the injection well to the possible detection location? (i.e., is the detection location higher in elevation than the dye injection elevation?) If dye were detected at locations higher in elevation than the injection location, it would be physically impossible for the dye from the injection site to travel to that sampling location. For example, the Location A dye trace had maximum water elevation recorded during dye injection of 615.21 ft. Therefore, dye would not be able to physically move to a location where the ACS was higher in elevation than 615.21, such as BB-7 (623.4 ft). Injection water elevation was based on surveyed elevation of the injection well and the measured depth to water during dye injection. Elevation for all locations that were not surveyed (all surface water locations, including BB-7) were based on Indiana 3DEP LiDAR data, with ≤ 0.196 (m) / 0.643 (ft) accuracy.
    - Other questionable detections in the same timeframe. Similar, isolated detections at disparate locations in the same timeframe suggest the possibility of cross contamination during sample collection or analysis that would be further evaluated.
    - Time since dye injection. The longer the time lapse after dye injection, the less likely the new detection is the result of the dye injection if the detection is isolated in time and space. A valid detection long after injection would be expected to be repeated in consecutive samples from the location and in the case of a surface water or spring location, would be expected to be detected in downstream locations. The extended duration of sampling and number of samples collected for the dye traces increased the possibility of a false positive from a dye source other than the injection. In general, the longer a fluorescent peak occurs after injection the less likely the new detection is the result of the dye injection in question, particularly where it is an isolated detection in time and space.
    - Downstream confirmation of surface water sampling locations. In a surface water detection, it would be expected that a proximal downstream sampling location would have a similar detection.
    - Does not meet the high-confidence result determination as outlined in Section 6.0 of Appendix B – Dye Trace Procedures, where two positive detections are confirmed in corresponding days.
    - Also does it meet criteria #4 in Section 6.0 of Appendix B – Dye Trace Procedures.
6. A minimum of two results meeting criteria 1-5. Due to the nearly two-year duration of sampling, it would be expected that the two results would occur relatively close to each other. For example, a fluorescent peak detected in December 2020 and second peak in July 2022 are unlikely to be related.

5. Near-field Dye Trace

The purpose of this phase of the dye trace study was to identify and evaluate the subsurface flow regimes within the limestone bedrock immediately upgradient of the Pilot Trench, both vertically and laterally. These injections will assist in evaluating whether groundwater immediately upgradient of the Pilot Trench may by-pass it and migrate off of the Facility. Three dye injections were conducted as part of the Near-field study.

5.1 Sampling Network

The sampling network for the Near-field dye traces consisted of 73 total locations (Figure 4, Table 1), including:

- 34 wells (ACS)
- 7 Waterloo wells (grab water)
- 11 springs (ACS)
- 17 stream locations (ACS)
- 4 wet wells (ACS)

5.2 Location A – Dye Trace

Injection Well

In the PMP, CH-20 was listed as the first injection well for the Near-field dye trace. On December 12, 2019, a potable water injection was conducted at CH-20. A minimum injection rate for a well is 0.5 gallons per minute (gpm) is recommended, with water level stabilization within the historical range for the well. The water level in CH-20 did not stabilize at a rate of 0.1 gpm and was deemed unsuitable for dye injection. CH-22 was proposed as an alternative injection point and a potable water injection was conducted at CH-22 on 12-20-19. The water level in CH-22 also failed to stabilize at 0.1 gpm and was deemed unsuitable for dye injection. Due to the lack of other alternative injections wells in the vicinity of CH-20, GHD drilled angled well Location A on October 7, 2020. A potable water injection was conducted at Location A on 10-30-20, with water level stabilization at 2 gpm, above the acceptable range for a well injection. With an acceptable injection rate, Location A was selected as the injection point for the first Near-field dye trace. Location A is located 130 ft west of the Pilot Trench (Figure 5). Location A has a total depth of 35.75 ft with the bottom at an elevation of 586.73 ft (Appendix C).

Background Sampling

Prior to dye injection, three rounds of background fluorescence sampling were attempted at most sampling locations. Some sampling stations were added after dye injection, based on field observations and therefore have no associated background data. All locations without background samples are noted in Table 1. Background sampling involved three sampling events conducted over a short time period compared to the long duration of the test program, in an environment that likely has various sources for fluorescent dyes. Background analytical data are provided in Appendix E and a discussion of background results is provided in Appendix F.

Several locations were found to have background fluorescence in the range of Fluorescein, likely due to prior dye trace studies conducted as part of the RCRA CA. This included Spring 018C, which was shown from previous dye traces, to receive drainage from Tributary 3, which flows across and down-gradient of the Pilot Trench. Due to this, it was determined that Fluorescein would not be used for the Near-field dye injections.

Dye Selection

Based on the results of the background fluorescence sampling, it was determined that Rhodamine WT would be used for the Location A injection. Rhodamine WT has a long history as a successful dye for groundwater tracing. Four pounds of liquid Rhodamine WT was chosen for the dye injection, which is sufficient to achieve positive dye recovery several miles from the injection location.

Dye Injection

On 12/2/20, 4 lbs. of Rhodamine WT liquid dye and 200 gallons of potable water were injected into Location A (Inset 3). A Proactive Hurricane SS pump was used for the injection. Prior to dye injection, a 50 -gallon water flush was performed, followed by a mixture of 150 gallons of potable water and 4 lbs. of Rhodamine WT dye. The dye water mixture was injected over the course of 4 hours. The maximum rise in water level observed during the dye injection was 3.39 ft.



Inset 3. Rhodamine WT injection at Location A.

Results (Figure 6, Appendix E and F)

Wet Well 4 (WW-4) – The first Rhodamine WT detection at WW-4 occurred on 12/3/2020, one day after dye injection. Dye travel time for the first detection at WW-4 was 227 ft/day. The initial detection at WW-4 was likely the result of conduits in the epikarst being activated during the rise in water level as a result of the injection. A second concentration peak occurred two weeks after injection, which is likely the result of normal groundwater flow from

Location A to the Pilot Trench (Figures 7 and 8). Analysis for Rhodamine WT continued for all samples collected at WW-4 through the end of the Far-field dye trace sampling on 8/15/2022. Every sample collected after the initial Rhodamine WT detection on 12/3/2020 through the final sample collected on 8/15/2022, were positive for Rhodamine WT. A total of 111 samples were collected at WW-4 with positive recovery for Rhodamine WT. Rhodamine was not detected in any monitoring well, spring, seep or surface water sample within the sampling network not attributed to the inadvertent discharge from the catch basin, as described below.

Dye Surface Release

Dyed water was observed flowing from Detention Basin 4 on 12/3/2020 (Figure 9, Inset 4), the day after injection. It was later determined that the dye entered Catch Basin 3, located near the injection well, through damaged seals between pipe segments within that catch basin. The dyed water flowed from Detention Basin 4 into Tributary 3 over land, resulting in Rhodamine WT detections at Trib 3-3, Trib 3-4, Spring 018C, Spring 021-004, BB-10, and NT-2. The visible presence of Rhodamine WT made Tributary 3 and Baileys Branch a likely source of cross-contamination. For this reason, no samples were collected downstream of Bailey Scales Rd. until the dye was no longer visible on 12/12/2020. Temporary repairs were made to the seals within Catch Basin 3 in mid-December 2020, with limited effectiveness, until permanent repairs were completed in May 2021.



Inset 4. Rhodamine WT flowing out of Catch Basin 4.

Spring 018C is a critical sampling location for these dye trace studies, due to known hydrologic connection to upstream swallets in Tributary 3 and Baileys Branch. The last detection for Rhodamine WT at Spring 018C was on

3/1/2021, while Rhodamine WT was still being detected in WW-4 on 8/15/2022, almost 2 years later (Figure 10). If the Rhodamine WT detected at Spring 018C immediately after the injection was in fact a result of groundwater flow around or under the Pilot Trench, these detections would not have ceased when the catch basin was permanently fixed in May of 2021. Due to these factors, Rhodamine WT detections at Spring 018C, and other downstream locations, are indicative of the inadvertent release to surface water flow from Catch Basin 3 and then the subsequent loss to swallets recharging Spring 018C as opposed to groundwater flow from Location A.

Of the surface locations with Rhodamine WT detections, Tributary 3-4 (Trib 3-4) had the latest detection in November 2021 (Figure 11). With these detections, especially Trib 3-4, it is important to note that for two weeks there was concentrated dye flowing in Tributary 3 and Baileys Branch resulting from the damaged catch basin. There was also almost 6 months before the permanent fix to Catch Basin 3 was in place so there was a long period where water with Rhodamine WT was flowing down the tributary. Upstream of both Trib 3-3 and Trib 3-4 is a large area with riprap and sediment where dye could easily be sequestered. It would not be unusual to periodically have low concentration Rhodamine WT detections at any of these locations for months or even years following the inadvertent release.

Location A Dye Trace Major Takeaways

- Dyed water introduced in front (west) of the Pilot Trench was captured by the Pilot Trench;
- Dyed groundwater migrates quickly and directly towards the Pilot Trench and into Wet Well 4 (WW-4);
- Dyed groundwater has not been detected in any monitored location to the north, west, or south and has not migrated off the Facility;
- No evidence of dyed groundwater by-passing the Pilot Trench, neither horizontally nor vertically;
- Dye trace study conclusions are consistent with inferred groundwater flow paths based on groundwater elevations.

5.3 CH-73 – Dye Trace

Injection Well

The angled well CH-73 was selected as the injection point for the second Near-field dye trace. CH-73 was installed on October 6, 2020, for the purpose of dye injection. CH-73 is located 50 ft. west of the Pilot Trench and on the north end (Figure 12). CH-73 has a total depth of 32.8 ft. with the bottom at an elevation of 602.23 ft (Appendix C). This injection point will assist in evaluating whether groundwater adjacent to the northern end of the Pilot Trench may flow around the trench and beyond the Facility boundary. On 10/30/2020, a potable water test was conducted to determine the suitability of CH-73 for dye injection. At an injection rate of 4 gallons per minute (gpm), the water level in CH-73 stabilized to a rise of 0.01 ft/minute. Based on the potable water test it was determined that CH-73 was suitable for dye injection.

Background Sampling

At the time of injection at CH-73, a total of 35 sampling events had been conducted for the Location A dye trace. In addition to being analyzed for Rhodamine WT, all samples collected for the Location A dye trace were analyzed for the presence of commonly used dyes (See Section 4.1).

Dye Selection

Based on the results of the background fluorescence sampling, it was determined that Pyranine would be used for the CH-73 injection. Pyranine and Rhodamine WT have the widest spacing in emission wavelengths of the commonly used dyes. Fluorescein had already been ruled out for use in the Near-field dye traces due to high concentrations at

Spring 018C from prior studies. Eight pounds of liquid Pyranine was chosen for the dye injection, which is sufficient to achieve positive dye recovery several miles from the injection location.

Dye Injection

On 6/3/21, 8 lbs. of Pyranine dye and 400 gallons of potable water were injected into CH-73. A Proactive Hurricane SS pump was used for the injection. Prior to dye injection, a 100-gallon water flush was performed, followed by a mixture of 300 gallons of potable water and 8 lbs. of Pyranine dye. The dye water mixture was injected over the course of 5 hours. The maximum rise in water level observed during the dye injection was 1.09 ft.



Inset 5. Pyranine injection at CH-73.

Results (Figure 13, Appendix E and F)

WW-4 – The first Pyranine detection at WW-4 occurred on 6/3/2021, 3 hours after dye injection (Figure 14). Dye travel time for the first detection at WW-4 was 2,823 ft/day. Pyranine was detected in all 26 post-injection samples collected at WW-4 prior to the CH-71 injection. The last confirmed Pyranine detection at WW-4 was on 2/15/22.

No other Pyranine detections have occurred for this dye trace through the completion of sampling on 8/15/2022.

CH-73 Dye Trace Major Takeaways

- Dyed water introduced in front (north) of the Pilot Trench was captured by the Pilot Trench;

- Dyed groundwater migrates quickly and directly towards the Pilot Trench and into Wet Well 4 (WW-4);
- Dyed groundwater has not been detected in any monitored location to the north, west, or south and has not migrated off the Facility;
- No evidence of dyed groundwater by-passing the Pilot Trench, neither horizontally nor vertically;
- Dye trace study conclusions are consistent with inferred groundwater flow paths based on groundwater elevations.

5.4 CH-71 – Dye Trace

Injection Well

The angled well CH-71 was installed on October 8, 2020, for the purpose of dye injection. CH-71 is located 50 ft. west of the Pilot Trench and on the south end (Figure 15). CH-71 has a total depth of 38.2 ft. with the bottom at an elevation of 603.08 ft (Appendix C). This injection point will assist in evaluating whether groundwater adjacent to the southern end of the Pilot Trench may flow around the trench and beyond the Facility boundary. On 10/30/2020, a potable water injection was conducted to determine the suitability of CH-71 for dye injection. At an injection rate of 4 gallons per minute (gpm) the water level in CH-71 stabilized to a rise of 0.01 ft/minute. Based on the potable water test it was determined that CH-71 was suitable for dye injection.

Background Sampling

At the time of injection at CH-71, a total of 62 sampling events had been conducted between the Location A and CH-73 dye traces. In addition to being analyzed for Pyranine and Rhodamine WT, all samples were analyzed for the presence of all commonly used dyes (See Section 4.1).

Dye Selection

Based on the results of the background fluorescence sampling, it was determined that Pyranine would be used for the CH-71 injection. Pyranine and Rhodamine WT have the widest spacing in emission wavelengths of the commonly used dyes. Fluorescein had already been ruled out for use in the Near-field dye traces due to high concentrations at Spring 018C from prior studies. Twelve pounds of liquid Pyranine was chosen for the dye injection, which is sufficient to achieve positive dye recovery several miles from the injection location. This volume of dye was also selected to produce a discernible Pyranine fluorescent peak from the Pyranine injected at CH-73.

Dye Injection

On 9/8/21, 12 lbs. of Pyranine dye and 410 gallons of potable water were injected into CH-71. A Proactive Hurricane SS pump was used for the injection. Prior to dye injection, a 100-gallon water flush was performed, followed by a mixture of 310 gallons of potable water and 12 lbs. of Pyranine dye. The dye water mixture was injected over the course of 6 hours. The maximum rise in water level observed during the dye injection was 1.86 ft.



Inset 6. Pyranine injection at CH-71.

Results (Figure 16, Appendix E and F)

WW-4 – The first Pyranine detection at WW-4 occurred on 9/9/2021, one day after dye injection (Figure 17). The Pyranine breakthrough curve was easily discernible from the Pyranine from the CH-73 injection. Dye travel time for the first detection at WW-4 was 381 ft/day. Pyranine was detected in all 24 post-injection samples collected at WW-4 prior to the Far-field dye trace. The last confirmed Pyranine detection at WW-4 was on 2/15/22. Pyranine was not detected in any monitoring well, spring, seep or surface water sample within the sampling network.

No other Pyranine detections have occurred from this dye trace through the completion of sampling on 8/15/2022.

CH-71 Dye Trace Major Takeaways

- Dyed water introduced in front (south) of the Pilot Trench was captured by the Pilot Trench;
- Dyed groundwater migrates quickly and directly towards the Pilot Trench and into Wet Well 4 (WW-4);
- Dyed groundwater has not been detected in any monitored location to the north, west, or south and has not migrated off the Facility;
- No evidence of dyed groundwater by-passing the Pilot Trench, neither horizontally nor vertically;
- Dye trace study conclusions are consistent with inferred groundwater flow paths based on groundwater elevations.

6. Far-field Dye Trace

The purpose of this dye trace study was to identify and evaluate the subsurface bedrock flow farther upgradient of the Pilot Trench in an area hydraulically connected to the northern bedrock valley, the Gravel Underdrain System (GUS). This injection point will assist in evaluating whether groundwater remote from the Pilot Trench may flow around the trench to the north, south or west beyond the Facility boundary. During the TSCA Vault[1] construction the GUS was installed over, and partially into, the upper bedrock, due to the irregularity of the bedrock surface beneath the footprint of the Vault (i.e., the bedrock surface is uneven due to differential weathering). The purpose of the GUS was to isolate the Vault from potential effects of fluctuations in the groundwater table within the bedrock beneath the Vault (e.g., uplift, piping of clay material, etc.) during construction. The GUS consists of a minimum of 12 inches (more was often required to address the undulating rock surface) of gravel drainage material, overlain by an 8-ounce non-woven geotextile fabric. In addition, PCBs have been detected in groundwater samples collected within the GUS.

The bedrock surface beneath the GUS included distinct bedrock valleys that were incorporated into the GUS. The most prominent drainage pathway was a northeasterly trending bedrock valley located within the western half of the Vault excavation. Where bedrock topography did not provide suitable drainage, rock breaking was completed to create man-made channels. The most extensive rock breaking was completed to connect an isolated low area in the southeast corner of the Vault excavation to the northeasterly trending bedrock valley in the western half of the Vault. The bedrock valleys/channels were filled with drainage stone, such that subsurface drainage was directed to the GUS sump. No pumping from the GUS occurred during the Near and Far Field dye traces.

6.1 Sampling Network

The sampling network for the Far-field dye trace consisted of 96 locations (Figure 18, Table 1), including:

- 50 wells (ACS)
- 11 Waterloo wells (grab water)
- 11 springs (ACS)
- 20 stream locations (ACS)
- 4 wet wells (ACS)

6.2 GUS Dye Trace

Injection Points

Two cleanouts within the GUS were selected as the injection points for the Far-field dye trace. The cleanouts are located 1550 ft. southwest of the Pilot Trench (Figure 19). GUS cleanout #1 has a total length of 169 ft. with a surface elevation of 701 ft and an outlet elevation of 665 ft, and GUS cleanout #2 has a total length of 237 ft. with a surface elevation of 701 ft and an outlet elevation of 664 ft. (Appendix C). On 2/7/2022, a potable water injection was conducted to determine the suitability of the GUS cleanouts for dye injection. Two hundred gallons of potable water was drained into each GUS cleanout over the course of 15 minutes, with no measurable rise in water level. Based on the potable water test it was determined GUS cleanout #1 and #2 were suitable for dye injection.

[1] The TSCA Vault is a permitted vault for storage of soil containing PCB concentrations greater than or equal to 50 milligrams per kilogram (mg/kg).

Background Sampling

Seven rounds of background samples were collected for each of the sampling locations added for the Far-field dye trace. Prior to dye injection at the GUS, a total of 87 sampling events had been conducted for the Near-field sampling locations. In addition to being analyzed for Pyranine and Rhodamine WT, all samples were analyzed for the presence of all commonly used dyes (See Section 4.1).

Dye Selection

Based on the results of the background fluorescence sampling, it was determined that Eosine would be used for the GUS injection. Fluorescein had been ruled out for use in these traces due to the high concentrations observed at Spring 18C and WW-3. It should be noted that over the course of the Near-field dye traces, fluorescence in the range of Eosine and Fluorescein was observed at multiple sampling locations (Appendix F). A total of 24 pounds of liquid Eosine was chosen for the dye injection volume, which is sufficient to achieve positive dye recovery several miles from the injection location.

Dye Injection

On 2/9/22, 12 lbs. of Eosine dye and 430 gallons of potable water were injected into both GUS cleanouts 1 and 2 (total of 24 lbs. Eosine and 860 gallons of potable water). A Proactive Hurricane SS pump was used for the injection.

Results (Figure 20, Appendix D and E)

WW-3 – The first Eosine detection occurred at WW-3 on 2/10/22, one day after dye injection (Figure 21). Dye travel time for the first detection at WW-3 was 1291 ft/day. An increase in dye concentration was observed in samples collected between 6/17/22 and 7/15/22. The concentration increases corresponded to the switch from weekly to biweekly sampling. ACS function by adsorbing dye over time, so the longer an ACS is in place the higher the concentration should be, which likely explains the concentration increase seen between 6/17/22 and 7/15/22. WW-3 has two inlet pipes within the northern bedrock valley, one entering from the south and one to the west. The southern pipe is the combined flow from former Collection System C and H, while the western pipe is the combined flow from former Collection Systems A, B, D, E, F, and G (Figure 22 and 23). The water level in WW-3 is typically above the inlet pipe level. The water in WW-3 was pumped to the groundwater treatment plant to lower the water level in the wet well and twice (4/29/22 and 5/24/22) to allow grab water samples to be collected from the inlet pipes. Both samples collected from the southern inlet pipe (which includes flow from Collection System H, which is seated in bedrock) were positive for Eosine, while samples from the western pipe did not contain Eosine.

WW-4 – The first Eosine detection occurred at WW-4 on 2/11/22, two days after dye injection (Figure 21). Dye travel time for the first detection at WW-4 was 698 ft/day. As with WW-3, the concentrations of Eosine at WW-4 increased in June and July 2022, which corresponded to the switch from weekly to biweekly sampling.

Eosine detections only occurred at WW-3 and WW-4 through the completion of this dye trace sampling on 8/15/2022. Eosine was not detected in any monitoring well, spring, seep or surface water sample.

Eosine Emission Wavelength Shift

A shift in the emission wavelength of Eosine dye was observed over the course of the Far-field dye trace. The first 16 samples collected at WW-3 had Eosine detections within the acceptable emission wavelength (536 nm, +/- 5nm). However, beginning with samples collected on 3/9/2022, a downward shift in the wavelength began to occur, with an eventual stabilization of the emission wavelength at 521 nm (Figure 24). WW-3 had no previous fluorescence in the 521 nm range prior to the Far-field dye injection and the fluorescent peaks seen in these samples often required a 1000:1 dilution in order to be quantified. Ralph Ewers, President of Ewers Water consultants, Inc. and professor emeritus at Eastern Kentucky University has indicated that he has observed a similar emission shift in several dye

traces using Eosine (personal communication). Additionally, daily Eosine standards showed no change in the typical emission wavelength. Based on these observations, the fluorescence peaks observed after March 2, 2002 at WW-3 are attributed to the Eosine injected into the GUS, but the dye underwent chemical alteration due to an unknown condition in the subsurface.

Prior to the Far-field injection, WW-4 consistently had a fluorescent peak at 520 nm. The source of the fluorescence at 520 nm is not clear, but could be degraded eosine from the AOI6 dye trace conducted in 2005. Despite the pre-existing fluorescent peak at 520 nm, the intensity of the peaks at 523 nm after Eosine injection were on average 10 times stronger in intensity, which indicates these peaks are also likely from the Eosine injected at the GUS. It is also important to note that Rhodamine WT was still being detected at WW-4 throughout the Far-field dye trace and no emission shift was observed in any samples. Additionally, no changes were seen in the emission wavelength of the daily laboratory standards. Both facts rule out a mechanical issue with the Shimadzu RF-6000 as the cause of the emission shift.

Despite the emission shift observed at WW-3 and WW-4, both locations are still considered to have dye positives due to the number of samples within the acceptable range for Eosine. All other sampling locations were reviewed for fluorescent peaks around 521 nm, with no location having such a fluorescent peak.

Far-Field Dye Trace Major Takeaways

- Dyed groundwater went quickly and directly to the Pilot Trench from the GUS.
- Dyed groundwater concentration is higher in WW-3 than WW-4.
- No groundwater dye went around the Pilot Trench to the north or south.
- No dyed groundwater went below the Pilot Trench.
- No dyed groundwater went through the Pilot Trench.
- No dyed groundwater went to the west, south or north beyond the Facility boundary.

7. Conclusions

A series of dye traces were conducted at the Facility as part of the PMP. The traces consisted of Near-field and Far-field injections with respect to distance from the Pilot Trench. The Near-field study dye injection points were immediately west and hydrologically upgradient from the Pilot Trench. All three injections demonstrated rapid movement (less than 1 day travel time) of dyed water to the Pilot Trench. The Far-field study consisted of injections into two of the GUS cleanouts (CO1 and CO2). Both Far-field injections demonstrated rapid movement of dye to the WW-4 through the Pilot Trench and WW-3. The Near-field, Far-field, and previous dye trace studies within AOI4 (2005) all show a consistent eastern movement of groundwater towards the Pilot Trench (Figure 25) within the northern bedrock valley. Furthermore, these studies indicate the Pilot Trench is performing as designed and prohibiting groundwater flow beneath, around or through the trench.

- Dyed groundwater in the western portion of the East Plant Area migrated into the northern bedrock valley.
- Dyed groundwater within the northern bedrock valley travelled quickly and directly to the Pilot Trench.
- Dye traces verified the site conceptual model and the implied direction of groundwater flow from water elevation measurements at monitoring wells.
- No evidence of dyed groundwater by-passing the Pilot Trench or the northern bedrock valley system within the East Plant Area.

- No evidence of any groundwater migration off the Facility in the northern portion of the East Plant Area.
- The conclusions from the dye trace studies are consistent with the conceptual flow model developed for the Facility as presented in the RCRA Facility Investigation Report (GHD, 2020).

8. References

Field MS, Wilhelm RG, Quinlan JF, Aley TJ. 1995. “An assessment of the potential adverse properties of fluorescent tracer dyes used for groundwater tracing”. Environmental Monitoring and Assessment 38: 75-96.

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Leenheer, J.A. and J-P Croué. 2003. “Characterizing dissolved aquatic organic matter – Understanding the unknown structures is key to better treatment of drinking water”. Environmental Science and Technology, January 1, 2003, 19A-26A.

White, Keith A., Thomas Aley, Michael K. Cobb, Ethan O. Weikel, and Shiloh Beeman. 2015. “Tracer Studies Conducted Nearly Two Decades Apart Elucidate Groundwater Movement Through a Karst Aquifer in The Frederick Valley of Maryland.” Proc. 14th Sinkhole Conference, National Cave and Karst Research Institute Symposium 5, pp.101-11

Tables

Table 1
Dye Trace Sampling Locations

Location	Location Type	Sample Type	Comments
WW-1	Collection Sump	Charcoal	Evaluate existing SSC systems for dye migration. Multiple SSC systems were dye positive locations for AOI4 Dye Trace
WW-2	Collection Sump	Charcoal	Evaluate existing SSC systems for dye migration. Multiple SSC systems were dye positive locations for AOI4 Dye Trace
WW-3	Collection Sump	Charcoal	Confirm extraction location of dyed water from injection location
WW-4	Collection Sump	Charcoal	Confirm extraction location of dyed water from injection location
9-4	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-20	Monitoring Well	Charcoal	To evaluate actual operations of the middle of installed Pilot Trench
CH-20	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-22	Monitoring Well	Charcoal	Evaluate potential northerly migration from injection location
CH-22	Monitoring Well	Charcoal	Evaluate potential northerly migration from injection location
CH-22	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-45	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-46	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-47	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-48	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-49	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-52	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
CH-52	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
CH-52	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-53	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-54	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-61	Monitoring Well	Charcoal	Evaluate potential downgradient northerly migration from injection location
CH-61	Monitoring Well	Charcoal	Evaluate potential downgradient northerly migration from injection location
CH-61	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-62	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-62	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-62	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-63	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-63	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-63	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-64	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-64	Monitoring Well	Charcoal	Evaluate potential downgradient migration from injection location
CH-64	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-65	Monitoring Well	Charcoal	Evaluate potential downgradient southerly migration from injection location
CH-65	Monitoring Well	Charcoal	Evaluate potential downgradient southerly migration from injection location
CH-65	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-66	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
CH-66	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
CH-66	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-67	Monitoring Well	Charcoal	Evaluate potential northerly migration from injection location
CH-67	Monitoring Well	Charcoal	Evaluate potential northerly migration from injection location
CH-67	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-68	Monitoring Well	Charcoal	To evaluate actual operations of the south portion of installed Pilot Trench
CH-68	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-69	Monitoring Well	Charcoal	To evaluate actual operations of the north portion of installed Pilot Trench
CH-69	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
CH-70	Monitoring Well	Charcoal	Angle well location to evaluate potential downgradient southerly migration
CH-70	Monitoring Well	Charcoal	Angle well location to evaluate potential downgradient southerly migration
CH-70	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-234Y157S	Monitoring Well	Charcoal	Dye positive location for AOI4 dye trace. To evaluate overall flow within the north-eastern portion of the Facility
MW-X033Y147S	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X128Y255	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X184Y285	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X209Y078S	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233095	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233100	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233110	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233115B	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233120B	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X233125B	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X242Y060S	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X257Y073	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-X344Y230	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
MW-X344Y230	Monitoring Well	Charcoal	Evaluate potential southerly migration from injection location
MW-X344Y230	Monitoring Well	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BDFD A	Spring Water	Charcoal	Spring identified from thermal survey
BDFD I	Spring Water	Charcoal	Spring identified from thermal survey
BDFD W	Spring Water	Charcoal	Spring identified from thermal survey
BDFD X	Spring Water	Charcoal	Spring identified from thermal survey
Spring 018C	Spring Water	Charcoal	Dye positive location for Swallet 1, 2 and 5 dye traces. To evaluate overall flow within the north-eastern portion of the Facility
Spring 021-002	Spring Water	Charcoal	Dye positive location for Swallet 1, 2 and 5 dye traces. To evaluate overall flow within the north-eastern portion of the Facility
Spring 021-003	Spring Water	Charcoal	Dye positive location for Swallet 1, 2 and 5 dye traces. To evaluate overall flow within the north-eastern portion of the Facility
Spring 021-004	Spring Water	Charcoal	Dye positive location for Swallet 1, 2 and 5 dye traces. To evaluate overall flow within the north-eastern portion of the Facility
BB-1	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-10	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-11	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-12	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-13	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-14	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-2	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-3	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-4	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water
BB-4	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water

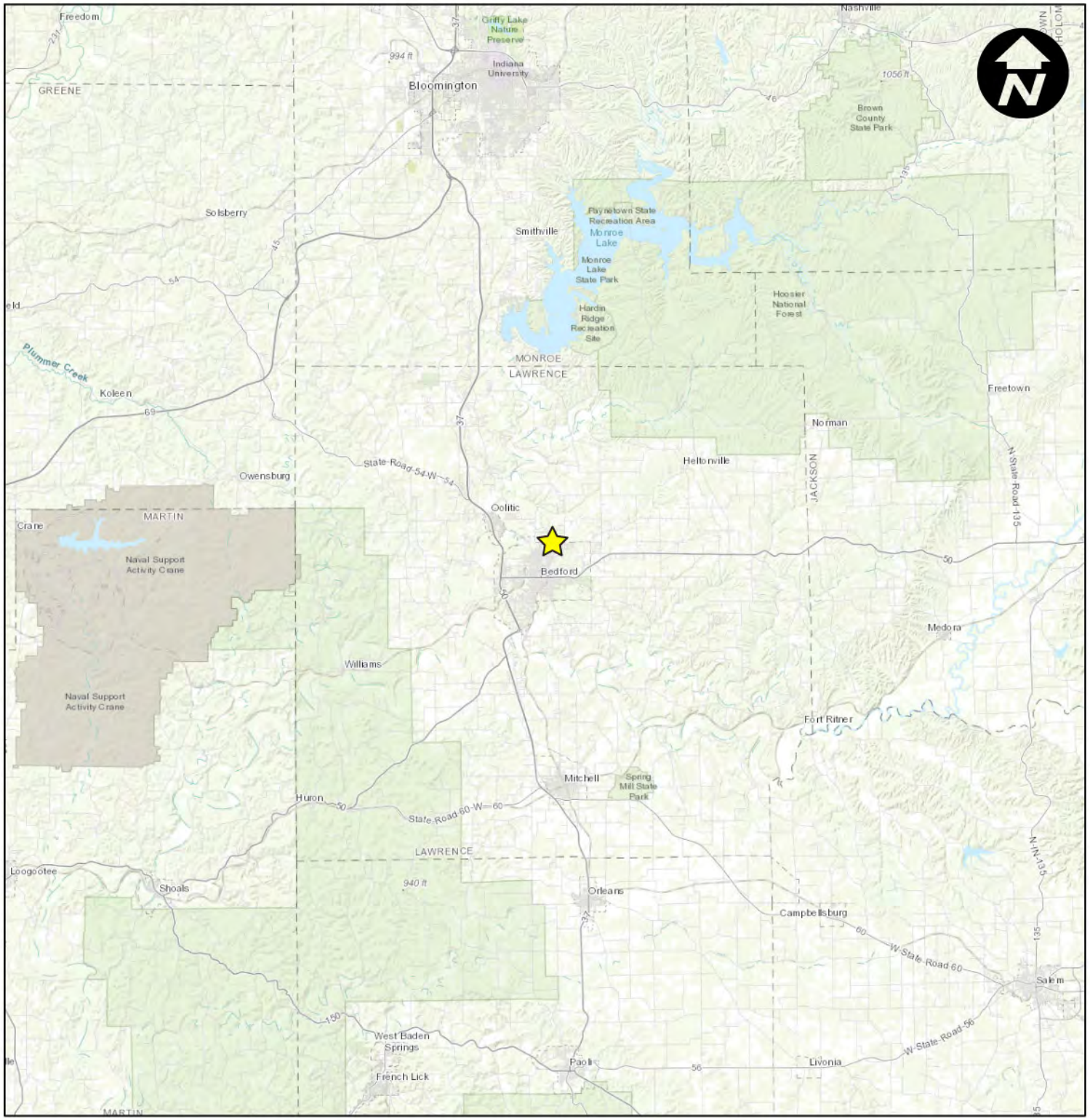
Table 1
Dye Trace Sampling Locations

Location	Location Type	Sample Type	Comments
BB-4	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-5	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water
BB-5	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water
BB-5	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-6	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-7	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-8	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
BB-9	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
Northern Tributary 2	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
Outfall 003/004	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
Tributary 3-3	Surface Water	Charcoal	Dye positive location for AOI4 Dye Trace. Evaluate potential downgradient migration to surface water
Tributary 3-3	Surface Water	Charcoal	Dye positive location for AOI4 Dye Trace. Evaluate potential downgradient migration to surface water
Tributary 3-3	Surface Water	Charcoal	Dye positive location for AOI 4 Dye Trace. To evaluate overall flow within the north-eastern portion of the Facility
Tributary 3-4	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water
Tributary 3-4	Surface Water	Charcoal	Evaluate potential downgradient migration to surface water
Tributary 3-4	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
Western Tributary 1	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
Western Tributary 2	Surface Water	Charcoal	To evaluate overall flow within the north-eastern portion of the Facility
MW-234Y157D-4	Waterloo	Hand Collection	Dye positive location for AOI4 dye trace. To evaluate overall flow within the north-eastern portion of the Facility
MW-X178Y367D-2	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X178Y367D-5	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X251Y189D-7	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X261Y356D-4	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X261Y356D-5	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X269Y201D-3	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X297Y305D-2	Waterloo	Hand Collection	Evaluate potential vertical and horizontal downgradient migration
MW-X297Y305D-2	Waterloo	Hand Collection	Evaluate potential vertical and horizontal downgradient migration
MW-X297Y305D-2	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X297Y305D-2	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility
MW-X318Y217D-5	Waterloo	Hand Collection	Evaluate potential southerly migration from injection location
MW-X318Y217D-5	Waterloo	Hand Collection	Evaluate potential southerly migration from injection location
MW-X318Y217D-5	Waterloo	Hand Collection	To evaluate overall flow within the north-eastern portion of the Facility

Table 2
Variations from Performance Monitoring Plan
Dye Trace Sampling Locations

Location	Variation	Location Type	Sample Type	Rationale for Change
Near Field Trace				
BB-6	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-7	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-8	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-9	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-10	Location Added	Surface Water	Charcoal	Bailey's Branch control point.
BB-11	Location Added	Surface Water	Charcoal	Replaced NT-1 due to access.
BB-12	Location Added	Surface Water	Charcoal	Northern tributary control point.
BB-13	Location Added	Surface Water	Charcoal	Surface water point to north.
BB-14	Location Added	Surface Water	Charcoal	Captures BDFD Q, R, S, T, U, V due to no access.
BDFD A	Location Added	Spring	Charcoal	Added from thermal anomaly survey.
BDFD W	Location Added	Spring	Charcoal	Added from thermal anomaly survey.
BDFD X	Location Added	Spring	Charcoal	Wet weather spring not previously identified.
CH-47	Location Added	Monitoring Well	Charcoal	Added to detect possible dye migration to the north.
CH-71	Location Added	Monitoring Well	Charcoal	Angled well installed after PMP report.
CH-72	Location Added	Monitoring Well	Charcoal	Angled well installed after PMP report.
CH-73	Location Added	Monitoring Well	Charcoal	Angled well installed after PMP report.
Spring 009	Location Added	Spring	Charcoal	Downgradient karst spring.
Spring 020_002	Location Added	Spring	Charcoal	Downgradient karst spring.
WW-1	Location Added	Surface Water	Charcoal	Upstream Bailey's Branch monitoring point.
WW-2	Location Added	Surface Water	Charcoal	Upstream Bailey's Branch monitoring point.
Far Field Trace				
8-3	Location Not Sampled	Spring Water	Charcoal	No flow observed. Captured downstream at BB-3.
11-3	Location Not Sampled	Spring Water	Charcoal	No flow observed. Captured downstream at BB-4.
B-X143Y193CG	Location Added	Monitoring Well	Charcoal	Added to detect possible dye migration to the west.
BB-6	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-7	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-8	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-9	Location Added	Surface Water	Charcoal	Additional Bailey's Branch monitoirng point.
BB-10	Location Added	Surface Water	Charcoal	Bailey's Branch control point.
BB-11	Location Added	Surface Water	Charcoal	Northern tribtuary control point.
BB-12	Location Added	Surface Water	Charcoal	Northern tribtuary control point.
BB-13	Location Added	Surface Water	Charcoal	Off-site catch-all.
BB-14	Location Added	Surface Water	Charcoal	Captures BDFD Q, R, S, T, U, V due to no access.
BDFD I	Location Added	Spring Water	Charcoal	Added from thermal anomaly survey.
BDFD X	Location Added	Spring Water	Charcoal	Wet weather spring not previously identified.
CH-72	Location Added	Monitoring Well	Charcoal	Downgradient of Pilot Trench.
Spring 013-001	Location Not Sampled	Spring Water	Charcoal	No flow observed. Captured downstream at Trib 3-4.
Spring 015-001	Location Not Sampled	Spring Water	Charcoal	No flow observed. Captured downstream at Trib 3-4.
Spring 015-002	Location Not Sampled	Spring Water	Charcoal	No flow observed. Captured downstream at Trib 3-4.
Spring Well 1	Location Not Sampled	Spring Water	Charcoal	No longer present.

Figures



LEGEND

SITE

0 2.5 5 10 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

PROJECT LOCATION

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FIGURE
1



LEGEND

PILOT TRENCH
(not to scale)

0 125 250 500 Feet

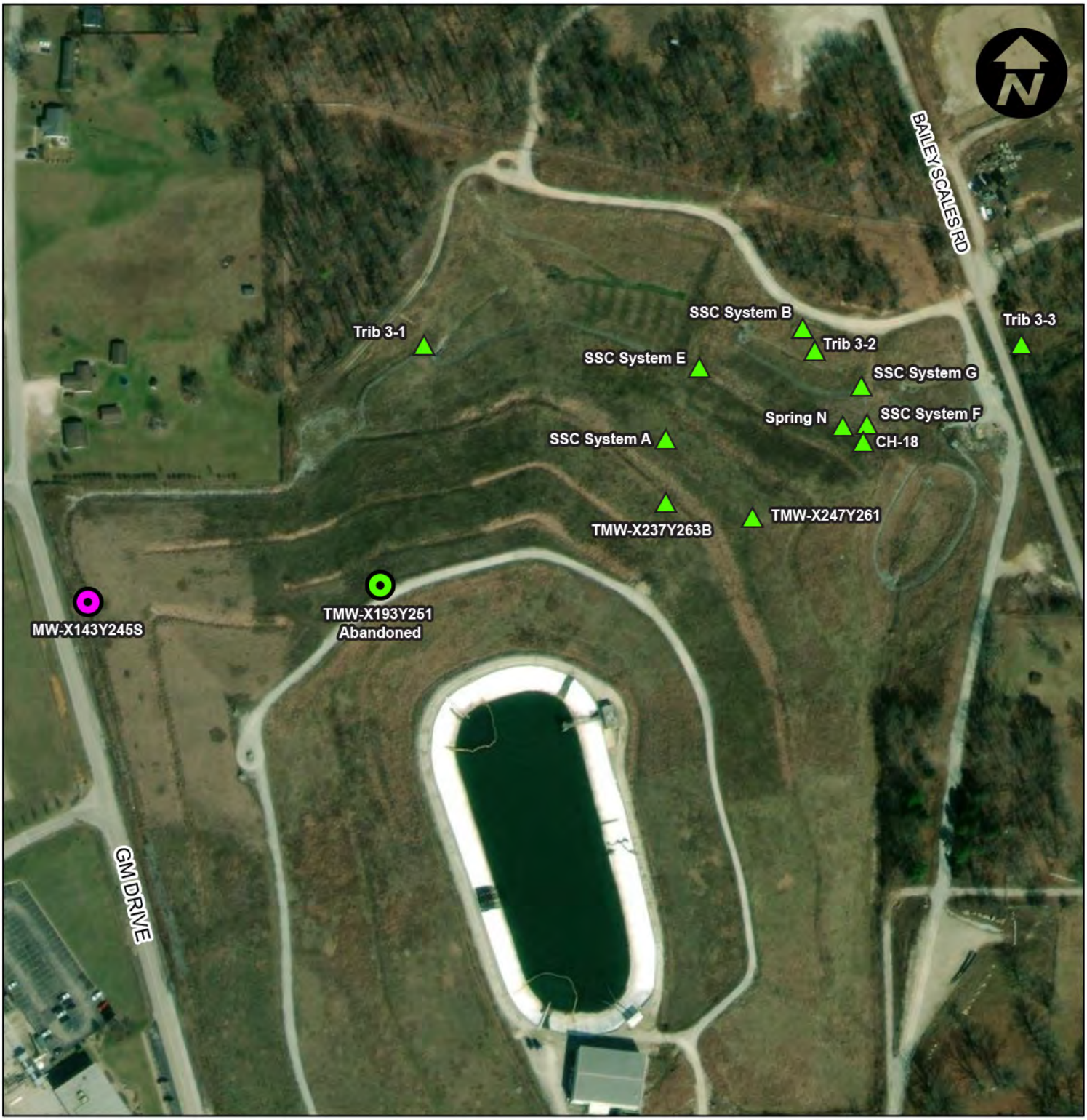
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

PILOT TRENCH

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FIGURE
2



LEGEND

- Fluorescein injection point
- Fluorescein detection point
- Rhodamine WT injection point

0 125 250 Feet

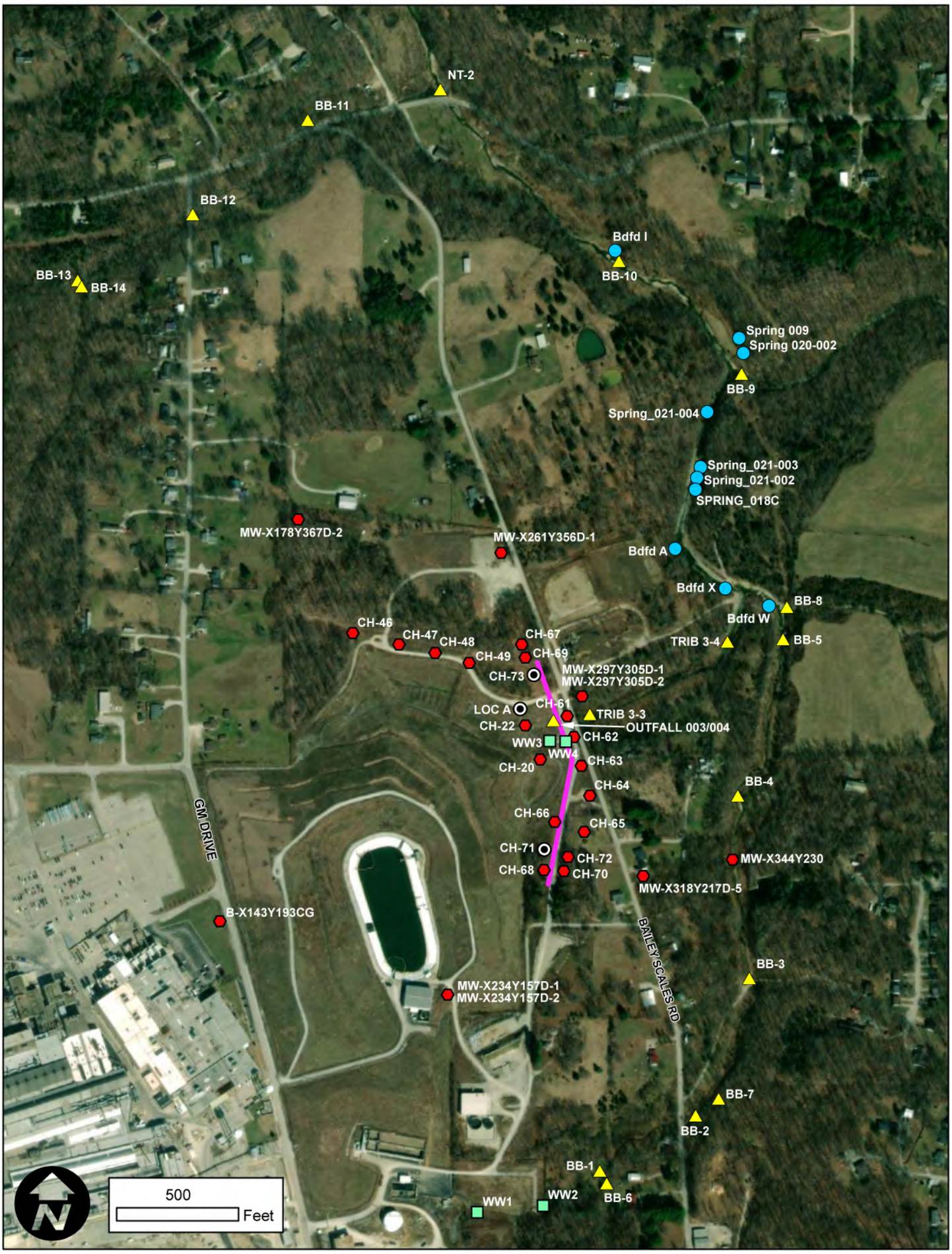
Source: Esri

PMP DYE TRACE STUDY
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AOI 4 DYE TRACE

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FIGURE
3



LEGEND

- PILOT TRENCH
- INJECTION WELL
- SPRING
- WELL
- WET WELL
- STREAM

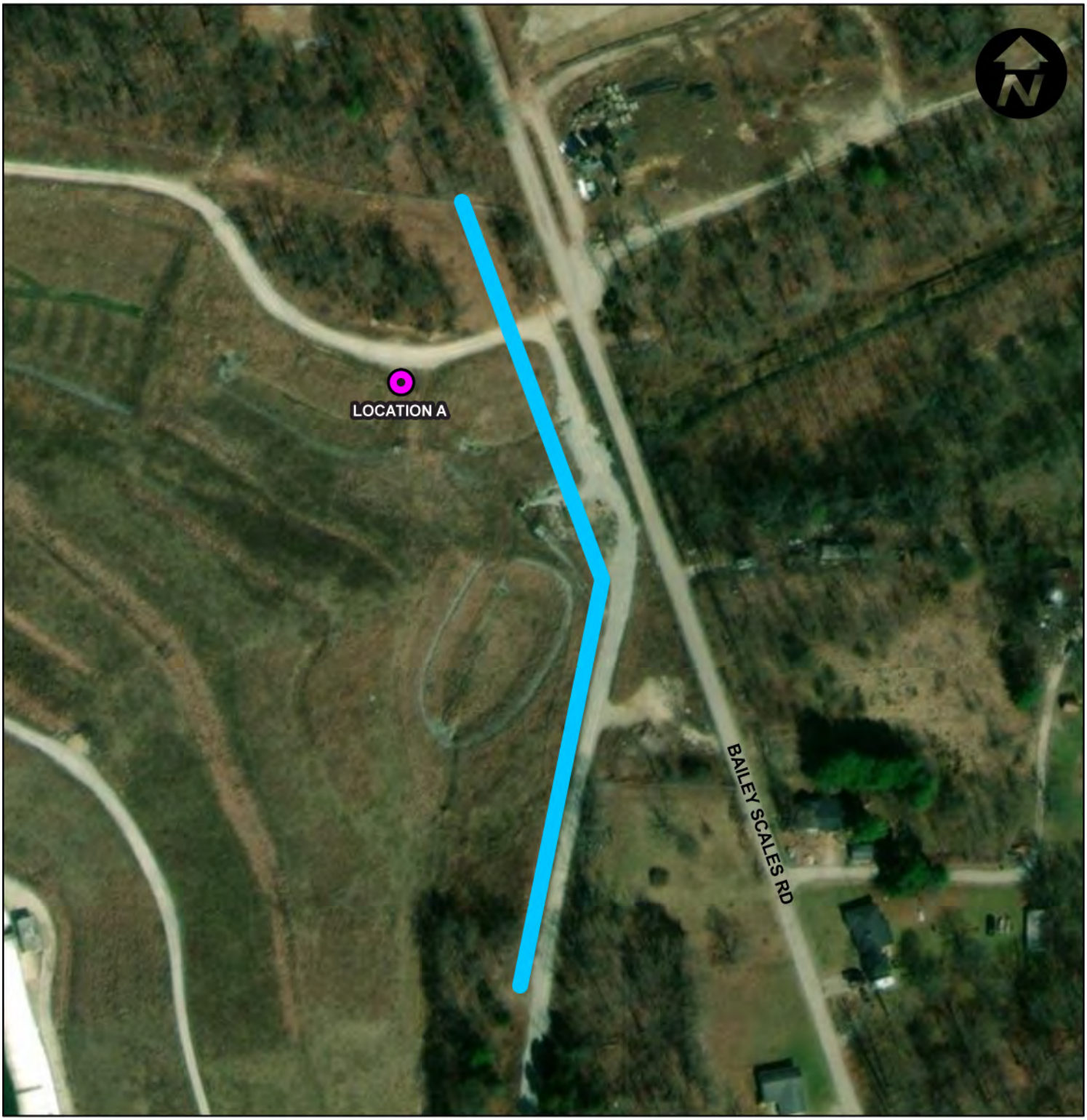
Source: Esri

PMP DYE TRACE STUDY
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NEAR-FIELD SAMPLING LOCATIONS

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FIGURE
4



LEGEND

Rhodamine WT injection point

Pilot Trench (not to scale)

0 50 100 200 Feet

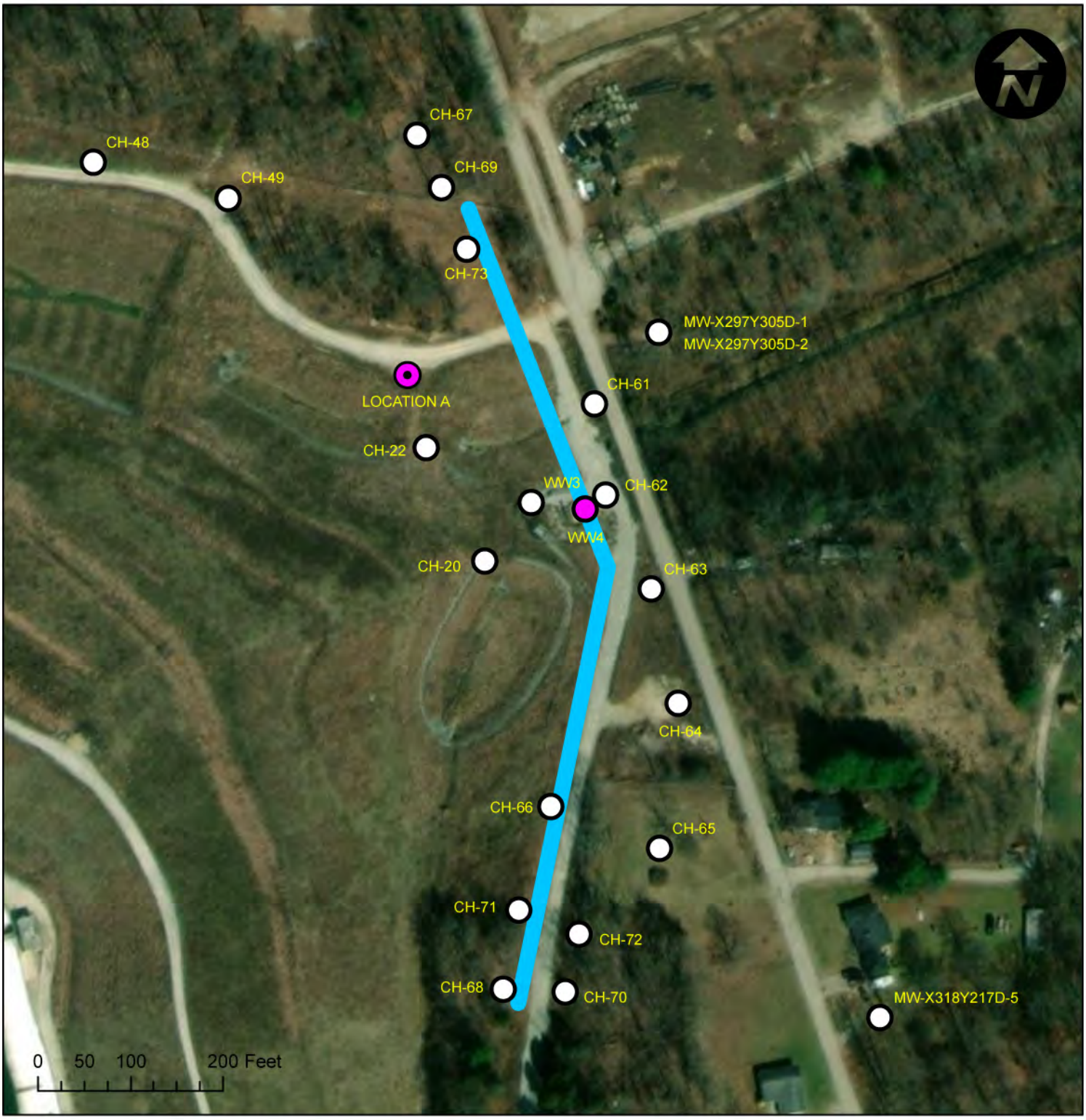
Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

LOCATION A

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FIGURE
5



LEGEND

- Rhodamine WT injection point
- Rhodamine WT detection location
- Non-detect sampling location
- Pilot Trench (not to scale)

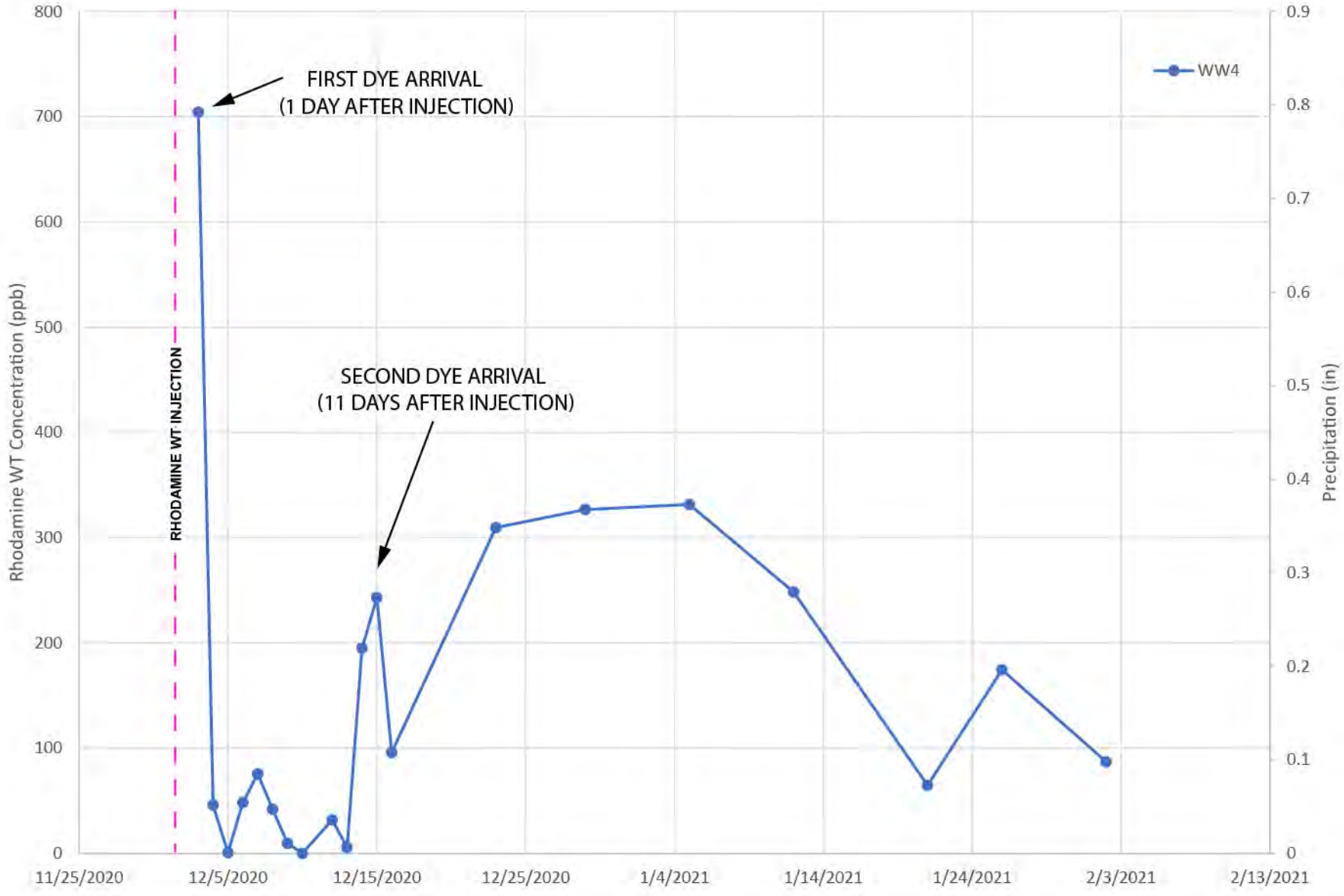
Source: Esri

PMP DYE TRACE STUDY
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LOCATION A DYE DETECTIONS

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FIGURE
6

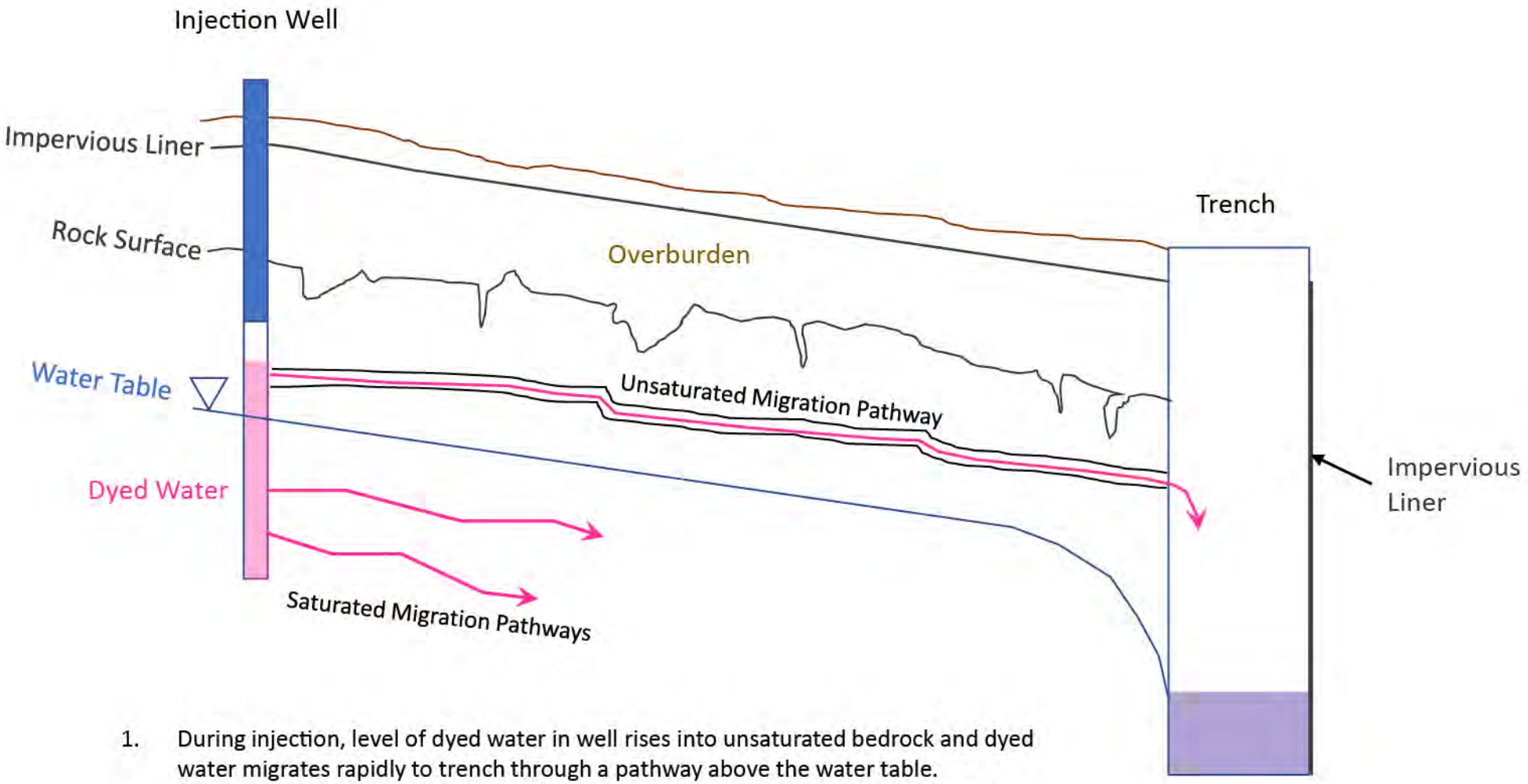


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FIGURE 7

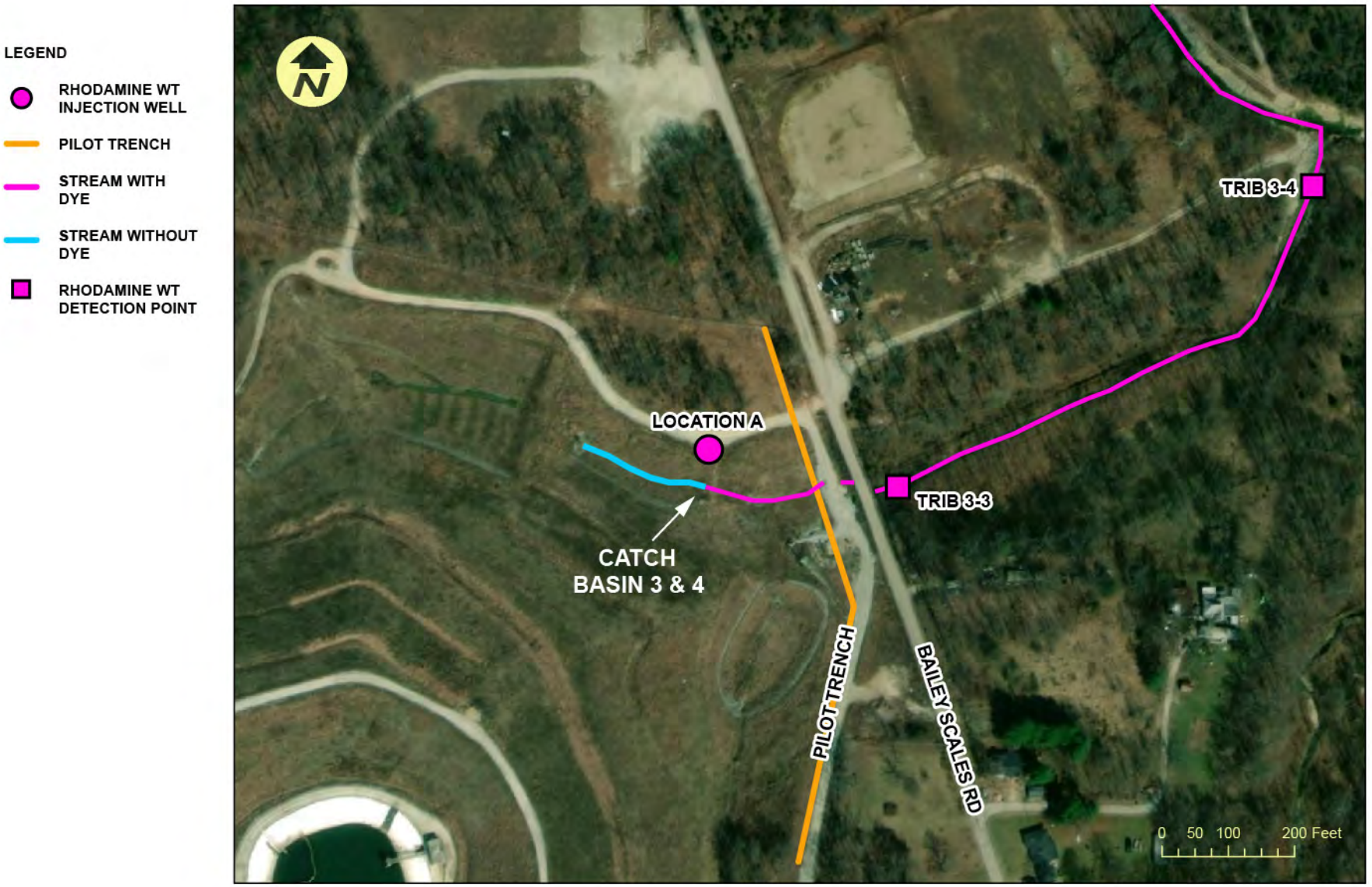
WW-4 RHODAMINE WT BREAKTHROUGH CURVE

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

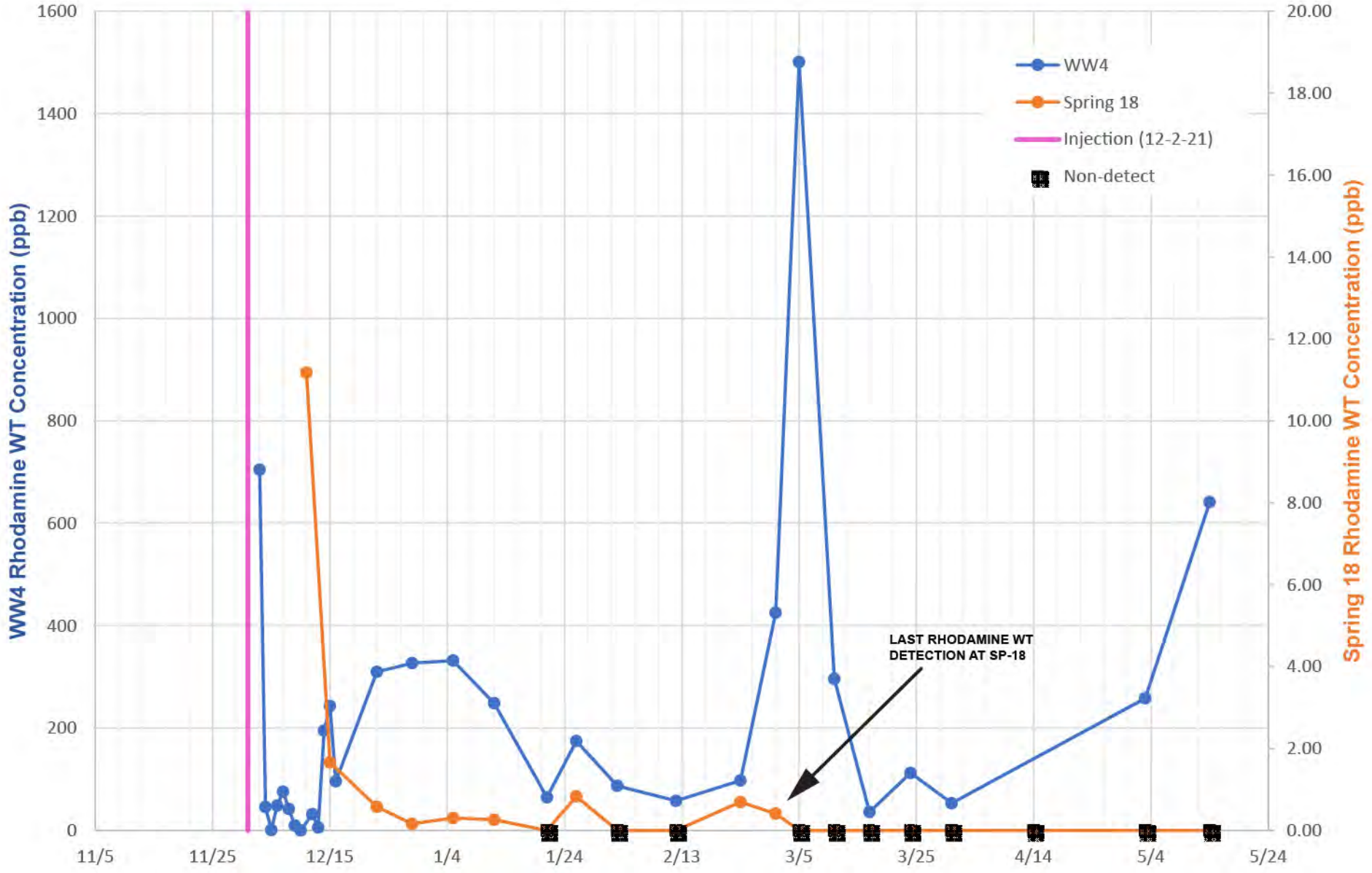


1. During injection, level of dyed water in well rises into unsaturated bedrock and dyed water migrates rapidly to trench through a pathway above the water table.
2. Meanwhile, dyed water moves more slowly toward the trench though saturated pathways (beneath the water table).

hydrogeology inc.	FIGURE 8	DYE ARRIVAL CONCEPTUAL MODEL	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



hydrogeology inc.	FIGURE 9	RHODAMINE WT SURFACE RELEASE	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA

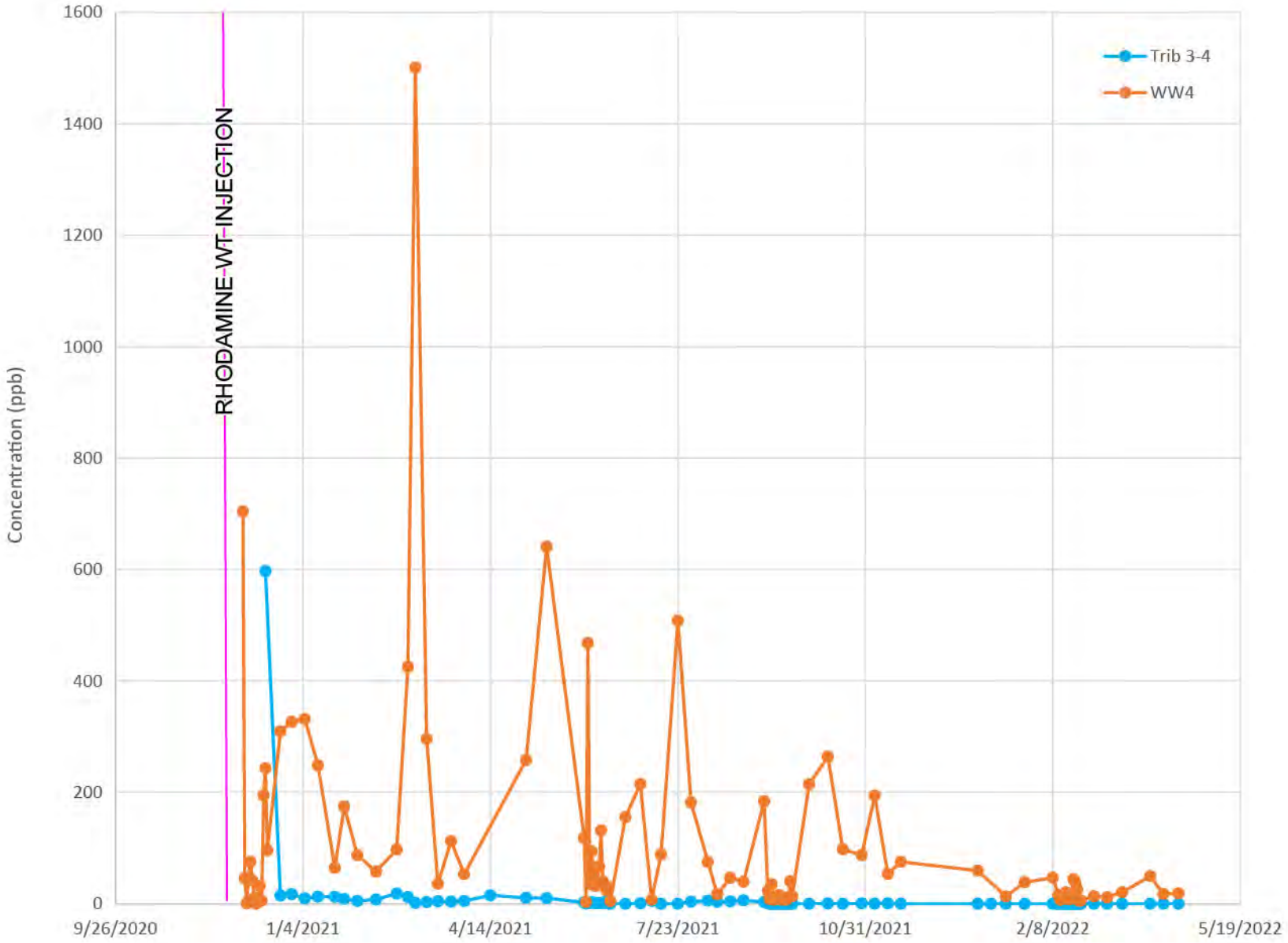


hydrogeology inc.

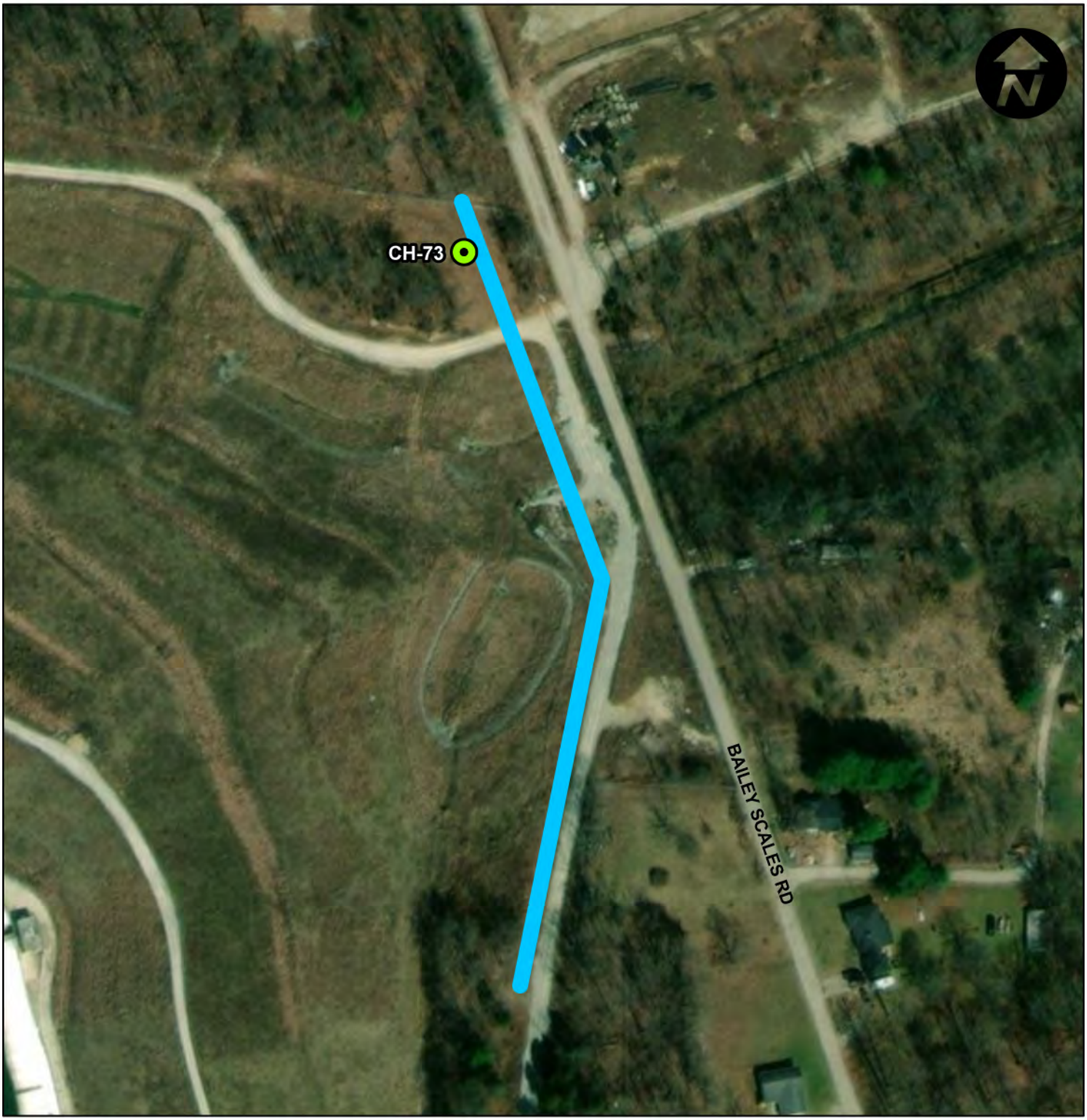
FIGURE 10

RHODAMINE WT
WW-4 vs Spring 018C

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA



hydrogeology inc.	FIGURE 11	RHODAMINE WT WW-4 vs Tributary 3-4	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



LEGEND

- Pyranine injection point
- Pilot Trench (not to scale)

0 50 100 200 Feet

Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

CH-73

hydrogeology inc.

FIGURE
12



LEGEND

- Pyranine injection point
- Pyranine detection location
- Non-detect sampling location
- Pilot Trench (not to scale)

0 50 100 200 Feet

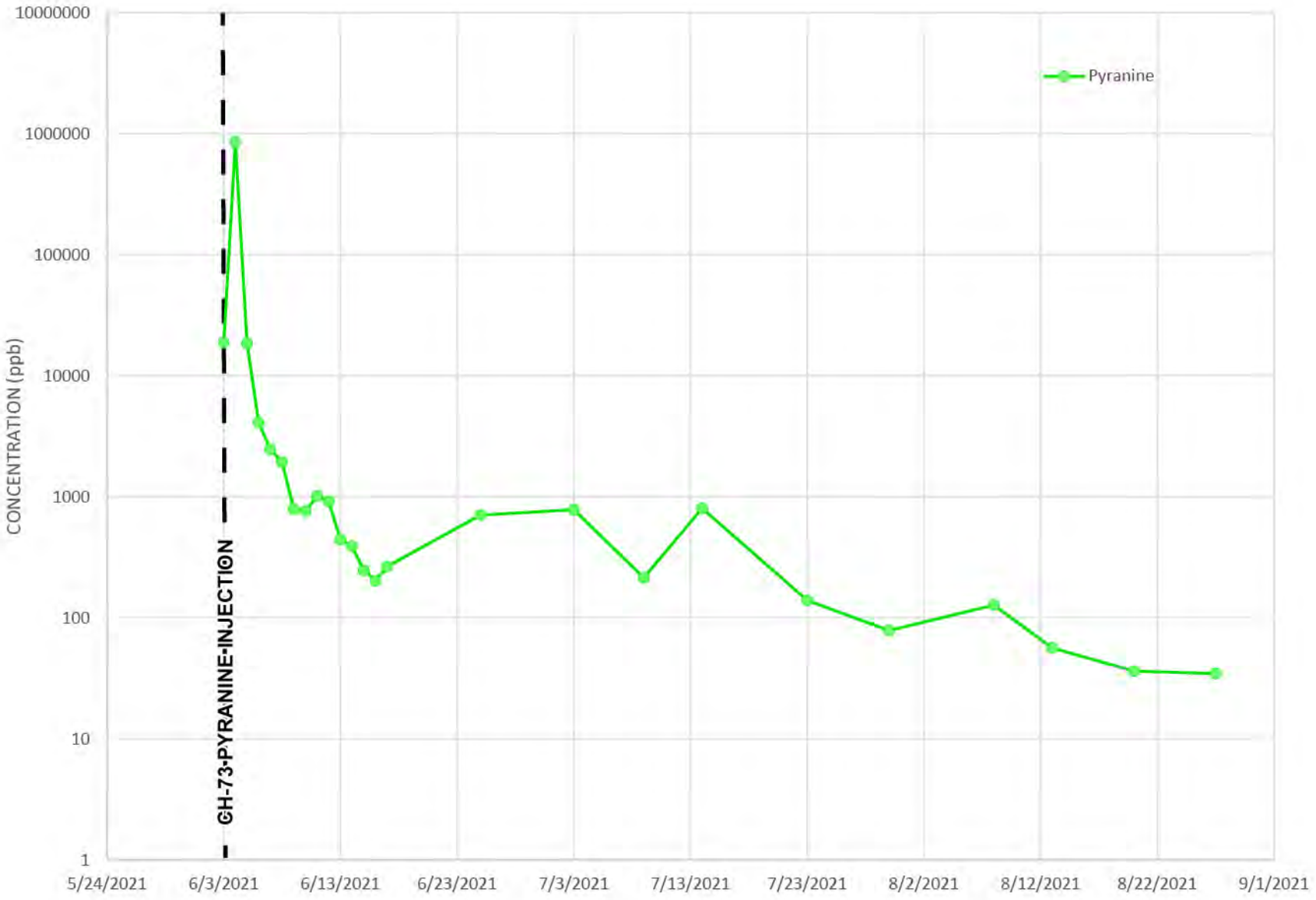
Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

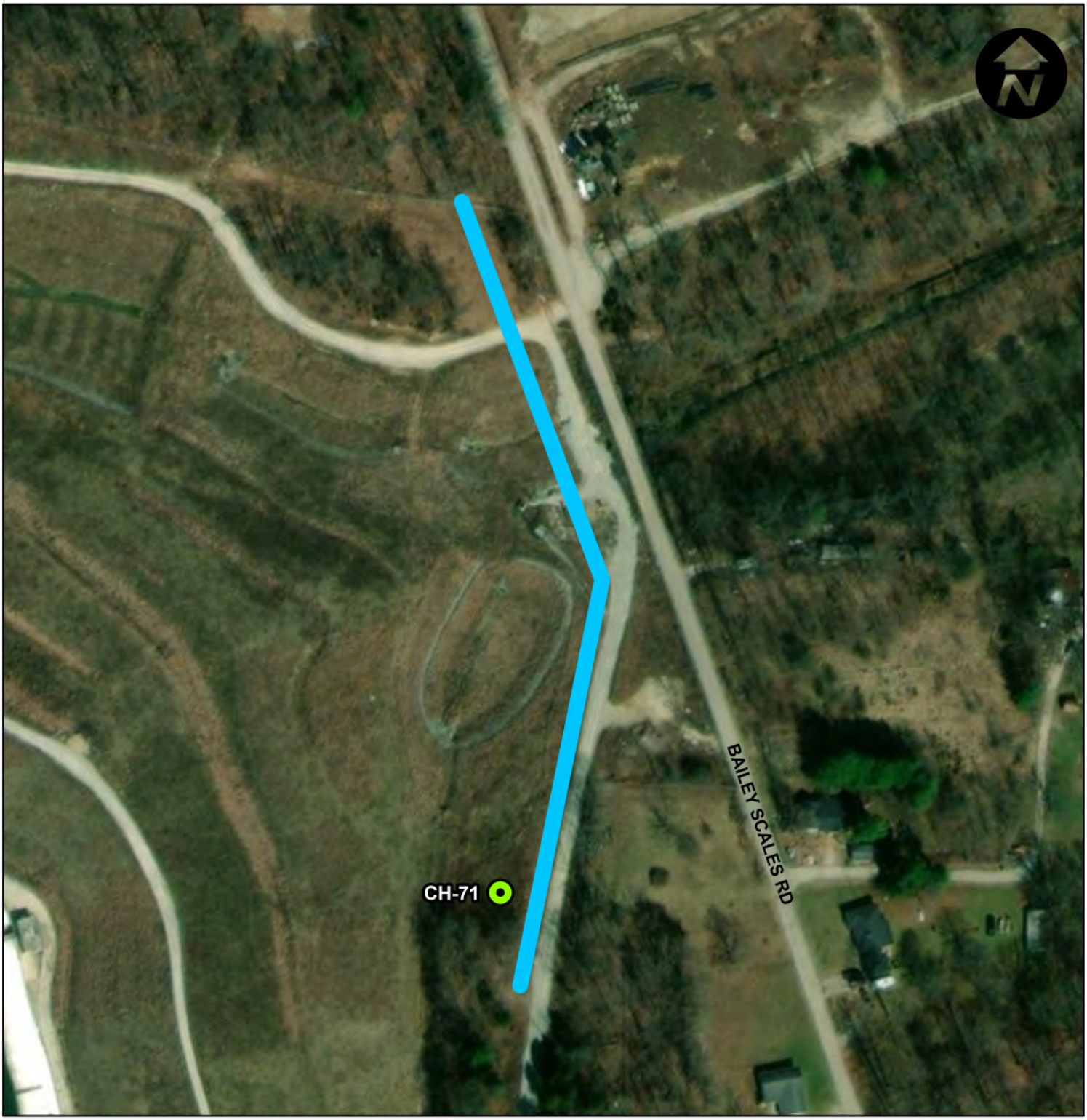
CH-73 DYE DETECTIONS

hydrogeology inc.

FIGURE
13



hydrogeology inc.	FIGURE 14	WW-4 PYRANINE BREAKTHROUGH CURVE	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



LEGEND

Pyranine injection point

Pilot Trench (not to scale)

0 50 100 200 Feet

Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

CH-71

hydrogeology inc.

FIGURE
15



LEGEND

- Pyranine injection point
- Pyranine detection location
- Non-detect sampling location
- Pilot Trench (not to scale)

0 50 100 200 Feet

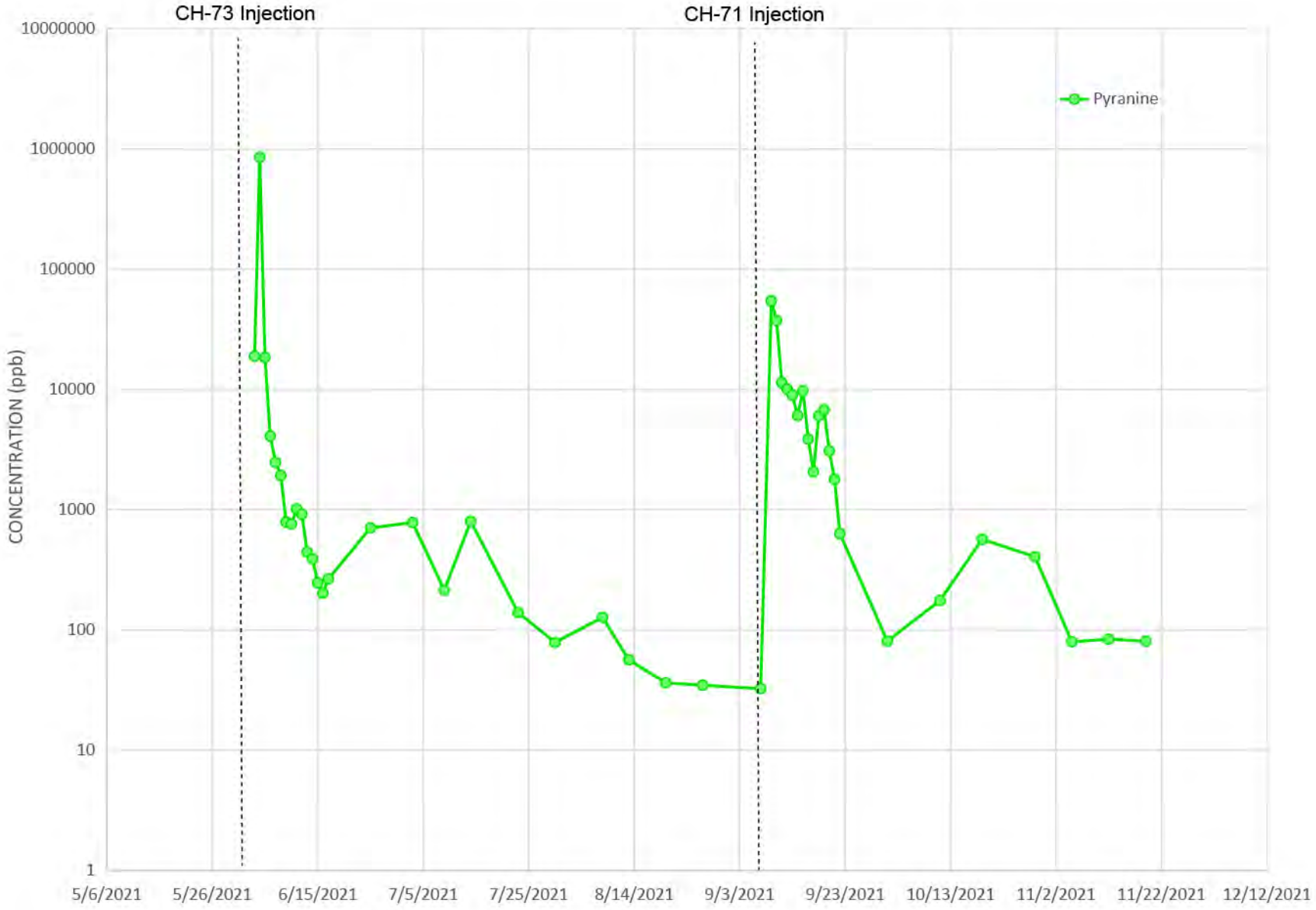
Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

CH-71 DYE DETECTIONS

hydrogeology inc.

FIGURE
16

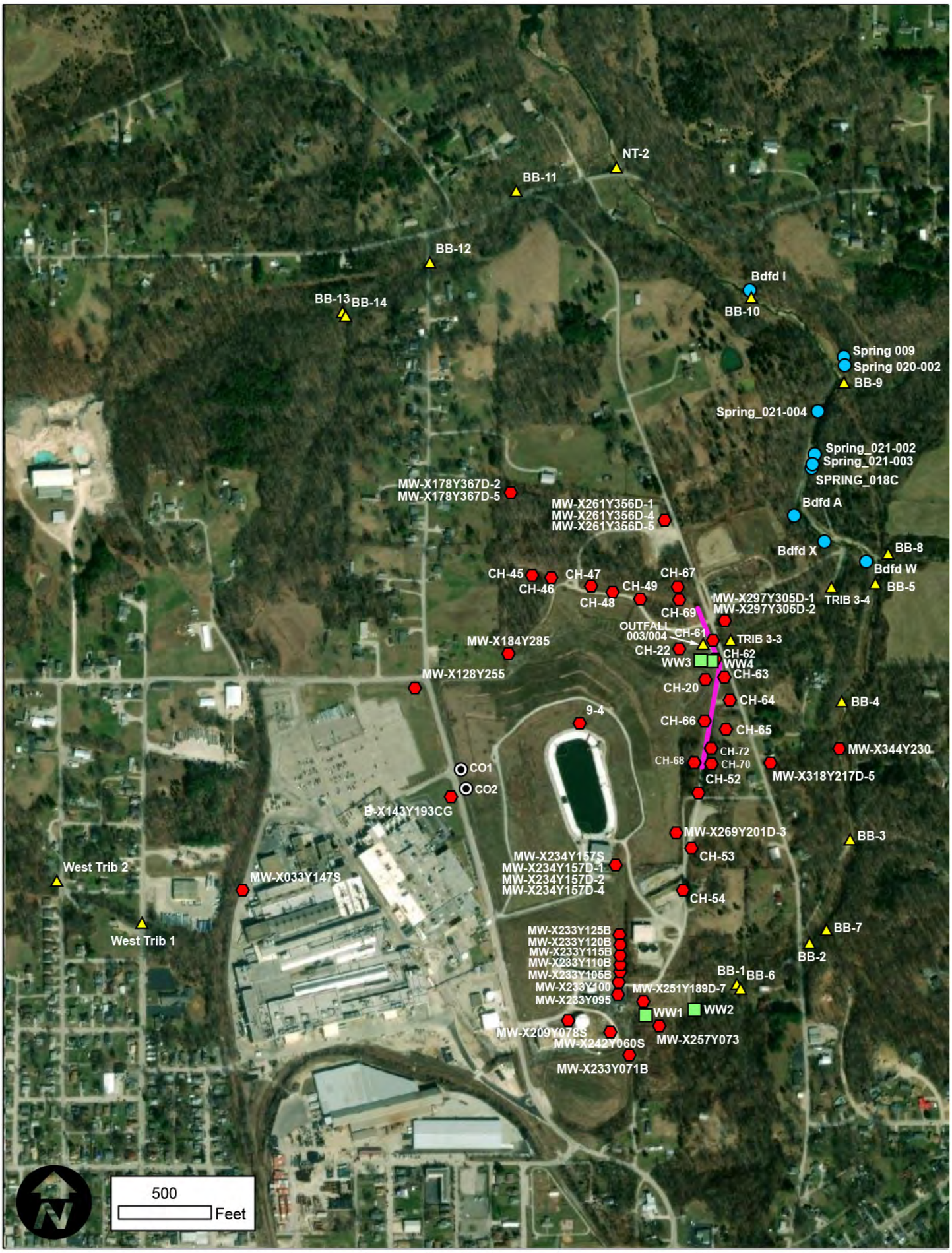


hydrogeology inc.

FIGURE 17

WW-4 PYRANINE BREAKTHROUGH CURVE CH-73 and CH-71

PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



LEGEND

- PILOT TRENCH
- INJECTION WELL
- SPRING
- WELL
- WET WELL
- STREAM

Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

FAR-FIELD SAMPLING LOCATIONS

hydrogeology inc.

FIGURE
18



LEGEND

- Pyranine injection point
- GUS (not to scale)

0 50 100 200 Feet

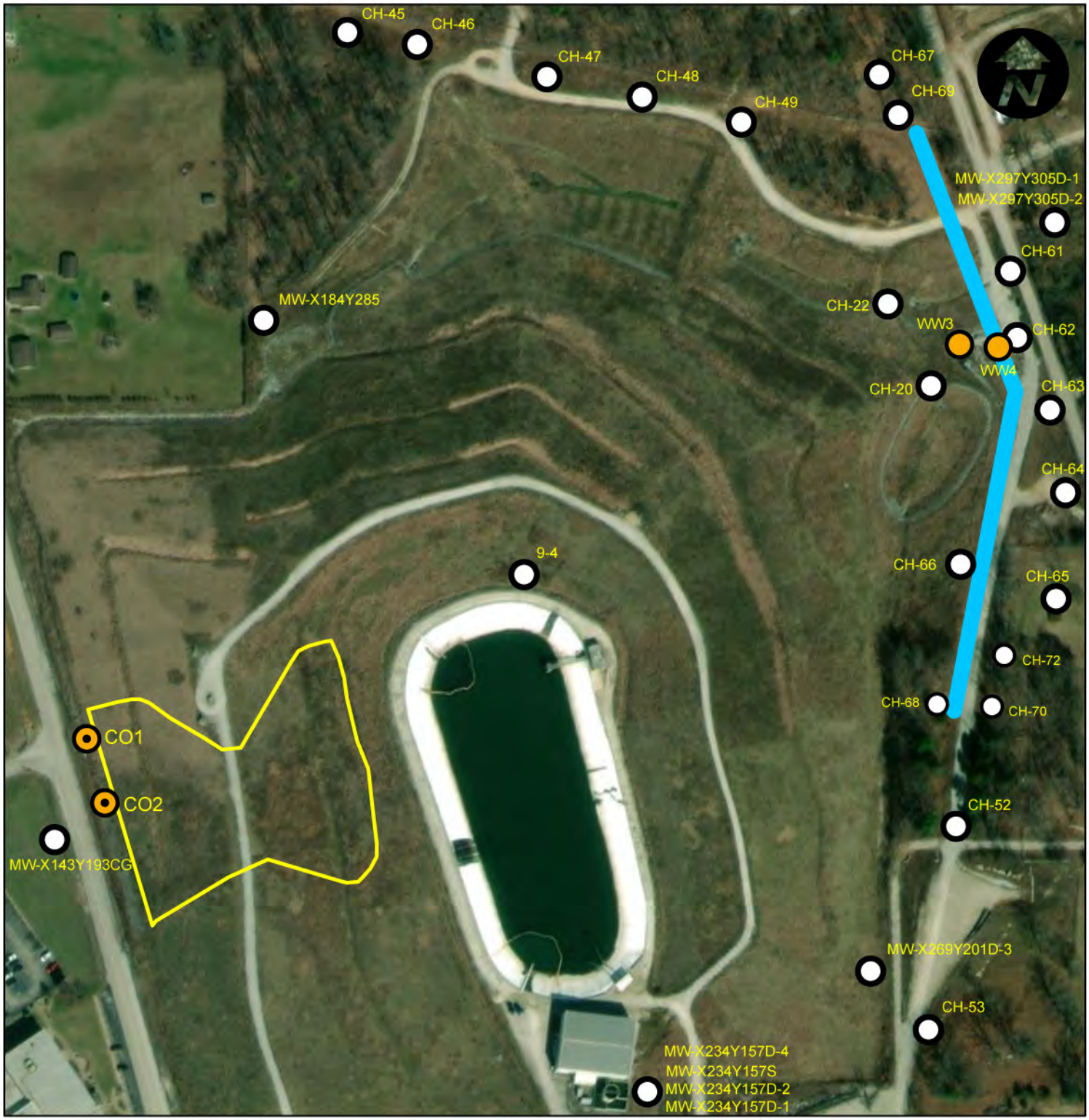
Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

GUS CLEANOUTS 1 & 2

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FIGURE
19



LEGEND

- Eosine injection point
- Eosine detection location
- Non-detect sampling location
- Pilot Trench (not to scale)

0 50 100 200 Feet

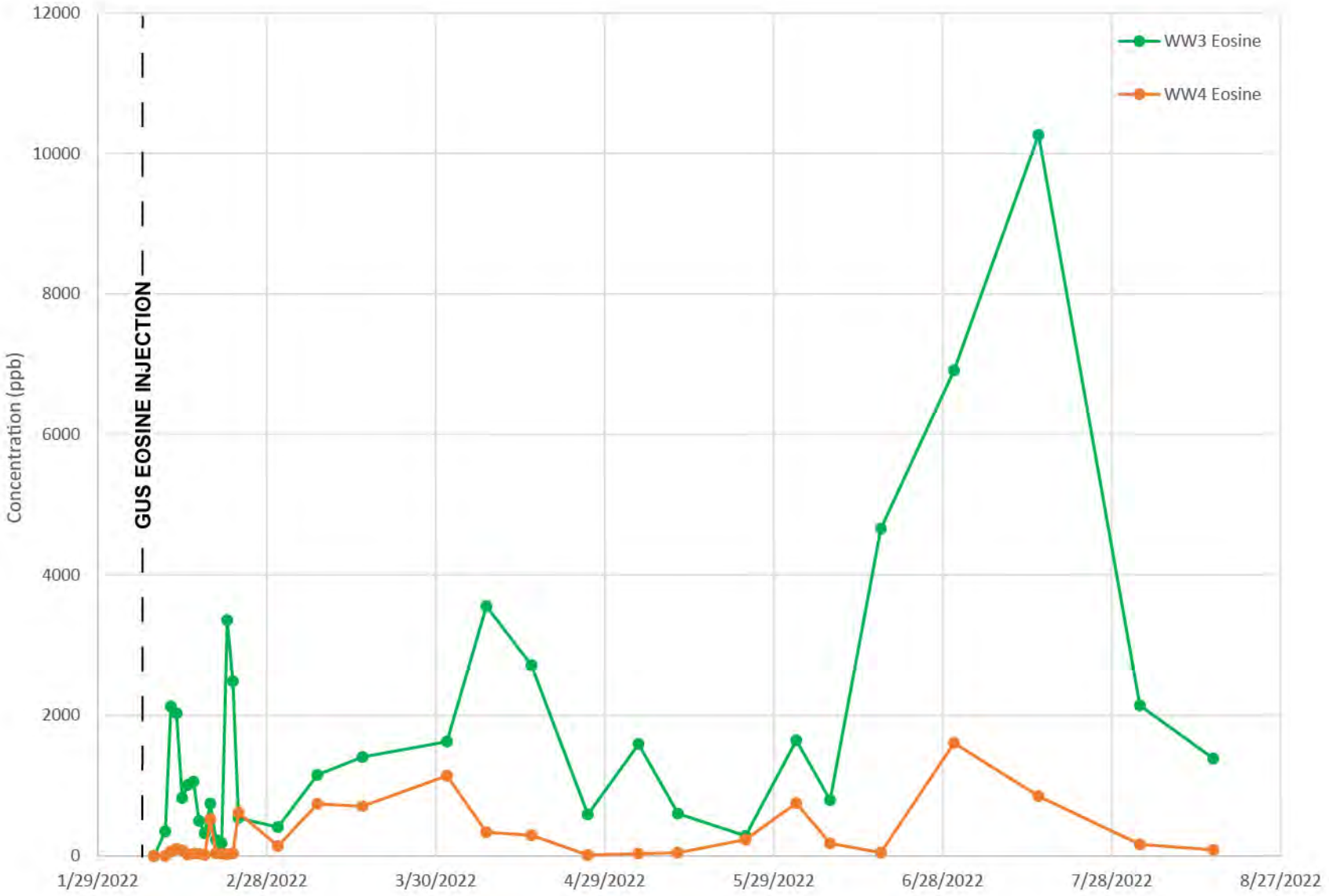
Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

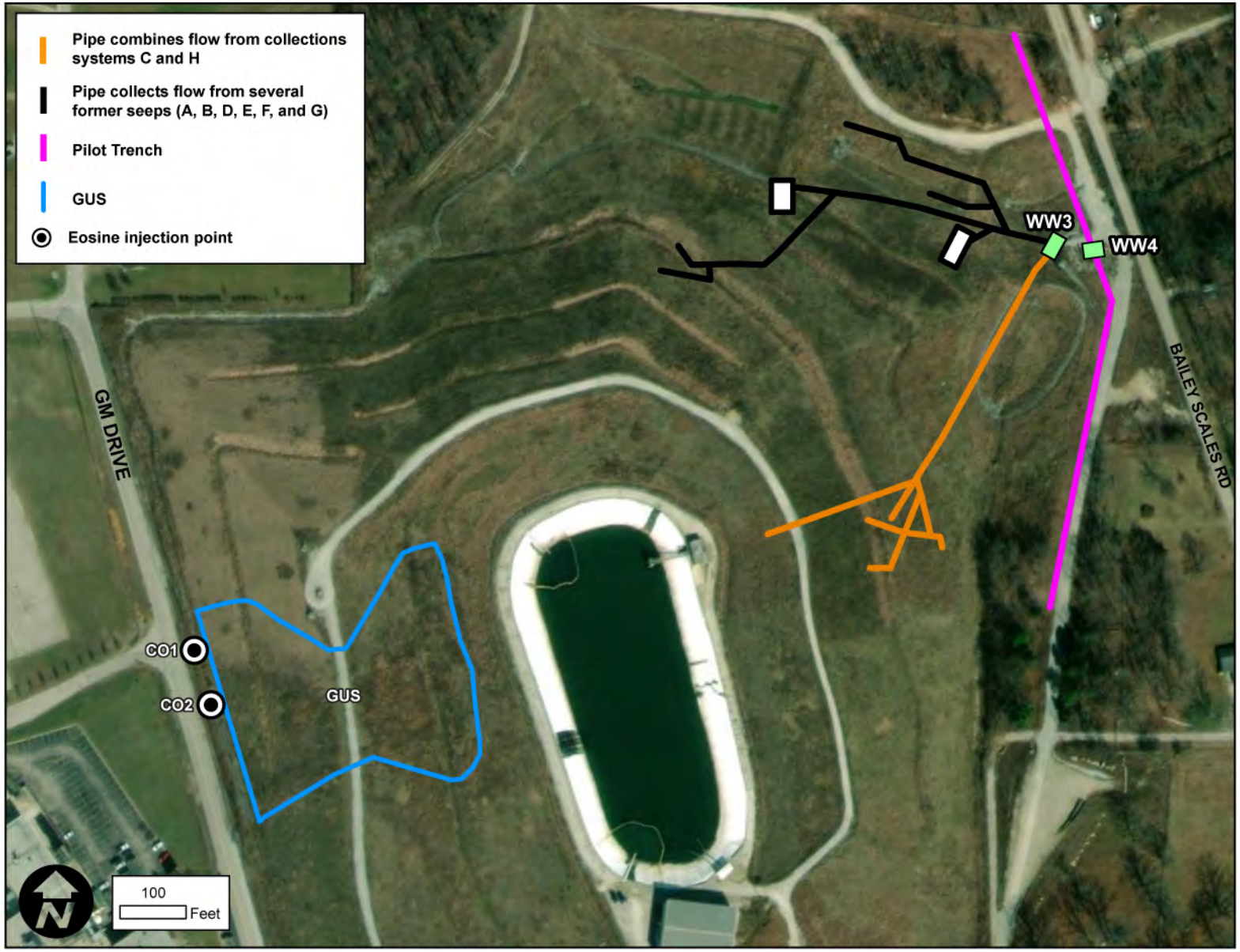
GUS DYE DETECTIONS

hydrogeology inc.

FIGURE
20



hydrogeology inc.	FIGURE 21	EOSINE BREAKTHROUGH CURVE WW-3 and WW-4	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



hydrogeology inc.

FIGURE 22

WW-3 INLET PIPES

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

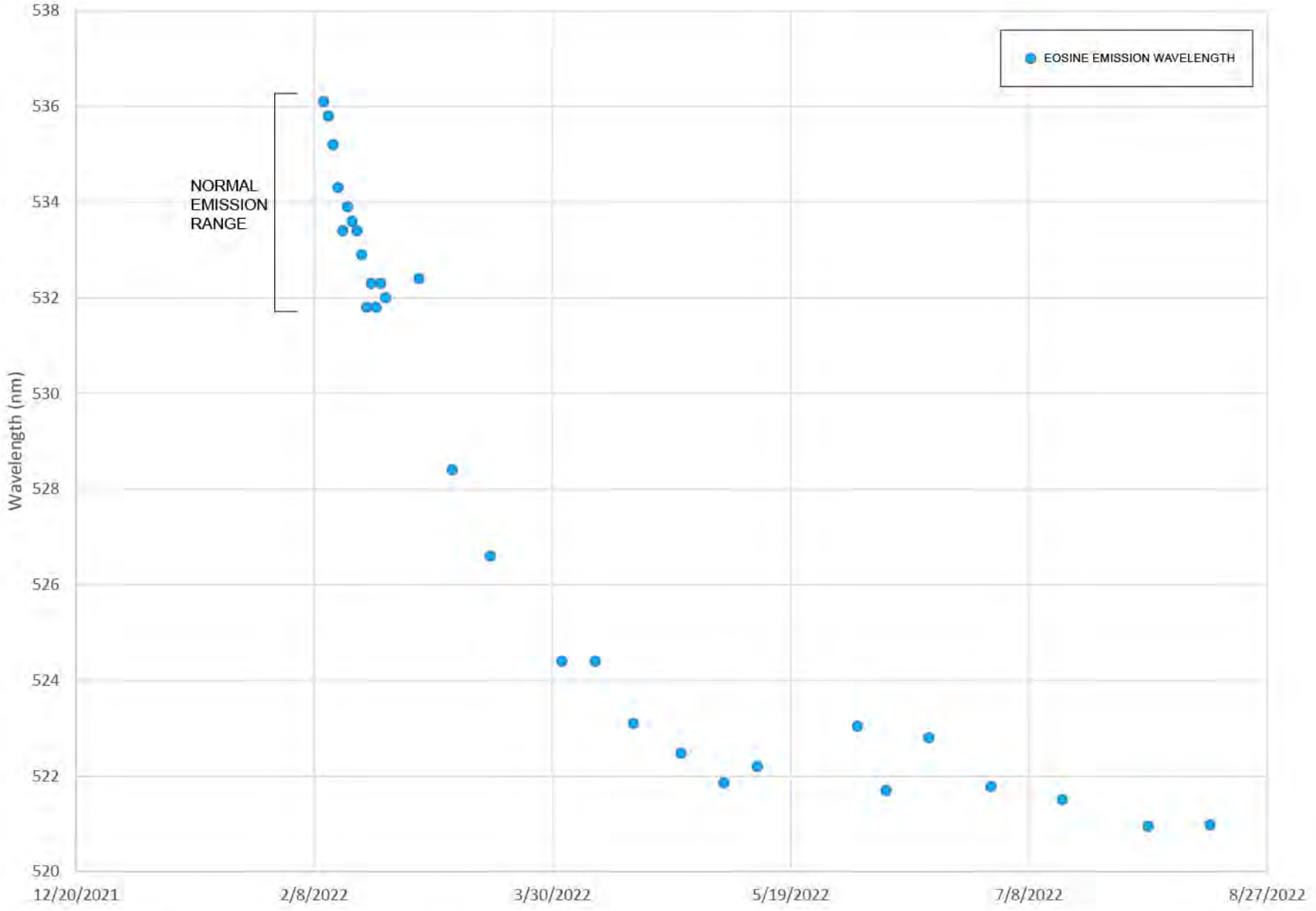


hydrogeology inc.

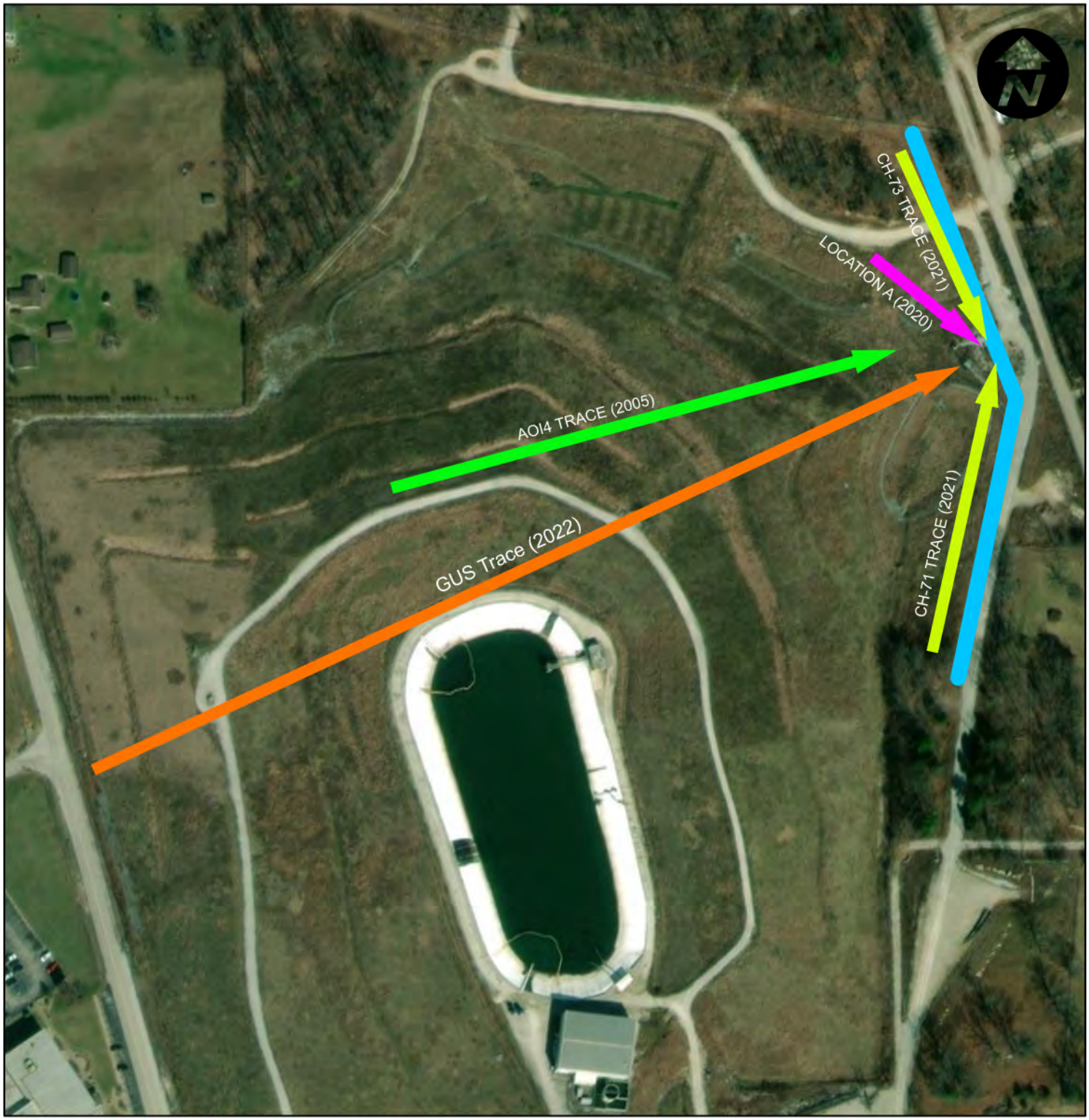
FIGURE
23

WW-3 INLET PIPES SITE CONCEPTUAL MODEL

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA



hydrogeology inc.	FIGURE 24	WW-3 EOSINE EMISSION SHIFT	PMP DYE TRACE STUDY GM BCO FACILITY BEDFORD, INDIANA



LEGEND

Pilot Trench (not to scale)

Illustrative dye trace flow-path

0 100 200 Feet

Source: Esri

PMP DYE TRACE STUDY
GM BCO FACILITY
BEDFORD, INDIANA

DYE TRACE SUMMARY

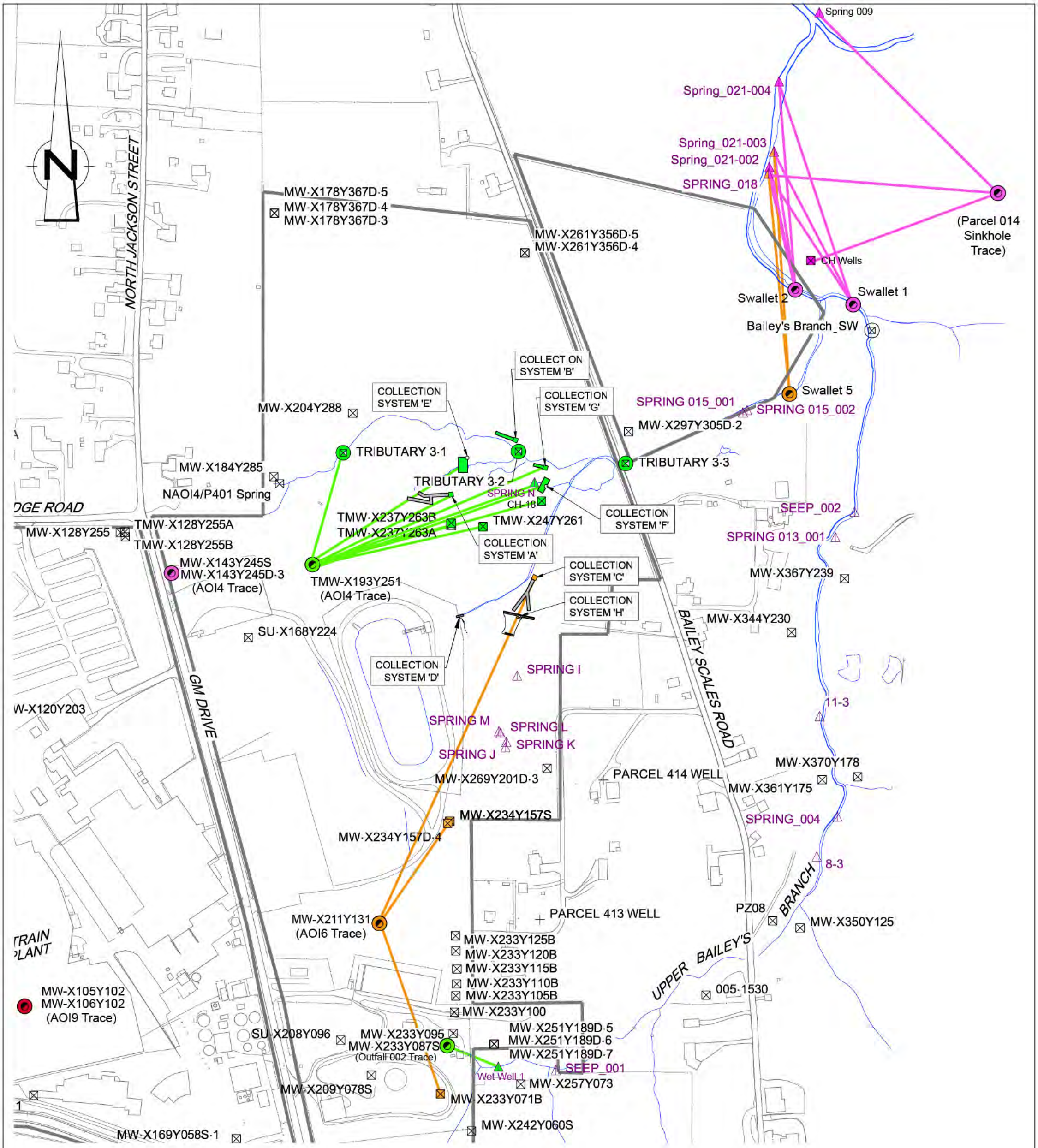
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FIGURE
25

Appendices

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PMP Dye Trace Study
Appendix A - Historical Dye Traces



NOTE:

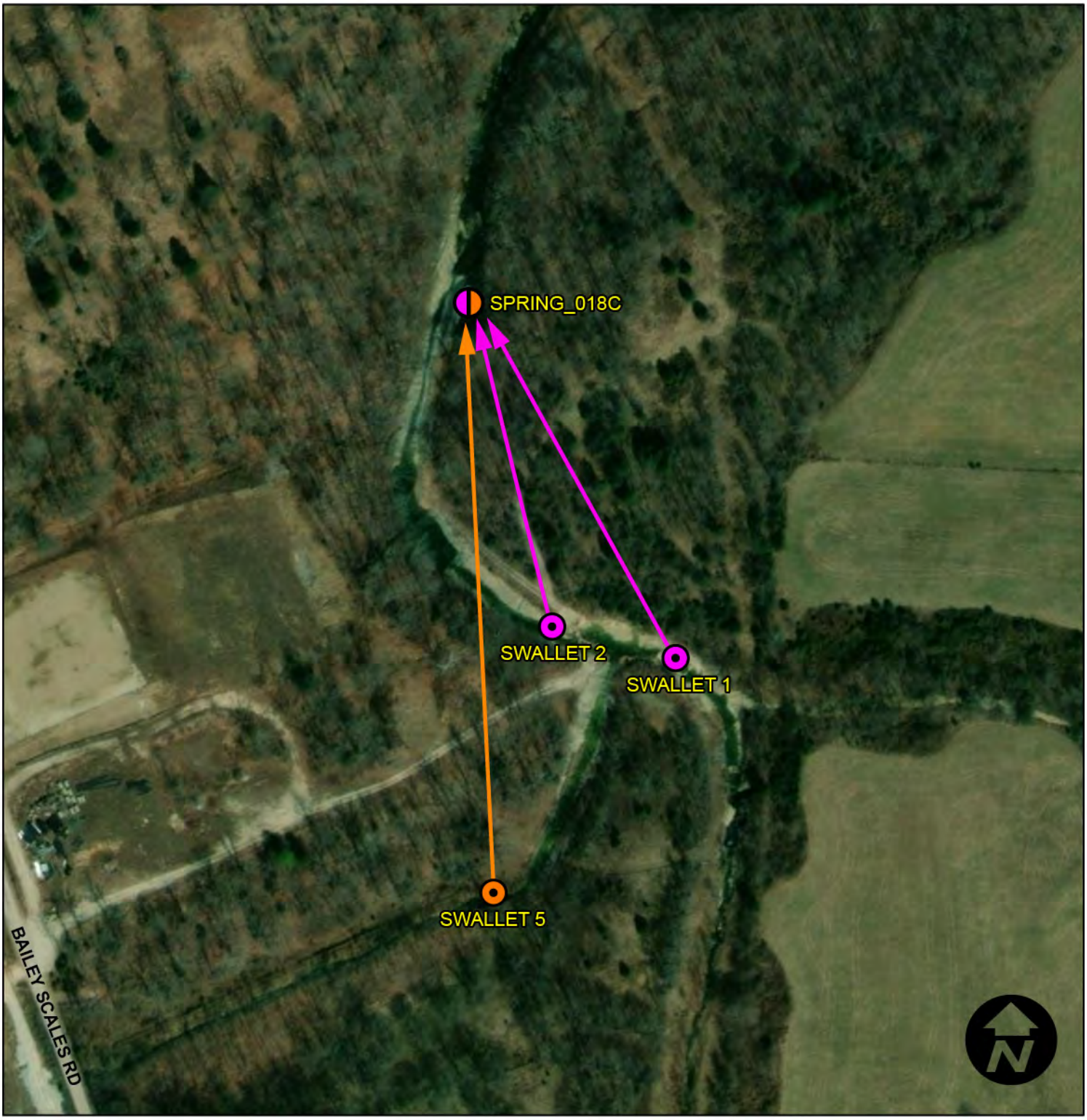
(1) PROPERTY BOUNDARY LOCATIONS APPROXIMATED FROM THE LAWRENCE COUNTY SURVEY PLATS. LOCATIONS MAY NOT ACCURATELY REPRESENT THE TRUE BOUNDARIES.

(2) STRAIGHT LINE DYE TRAVEL-PATHS ARE FOR ILLUSTRATIVE PURPOSES. THEY ARE NOT INTENDED TO SHOW THE ACTUAL PATH THE DYE TOOK THROUGHT THE SUBSURFACE.

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FIGURE A1

DYE TRACE INVESTIGATIONS 2005-2012
PMP DYE TRACE STUDY
GM POWERTRAIN FACILITY
BEDFORD, IN



LEGEND

- Eosine injection point
- Rhodamine WT injection point
- Eosine/Rhodamine WT detection point
- Illustrative dye trace flow-path

0 50 100 200 Feet

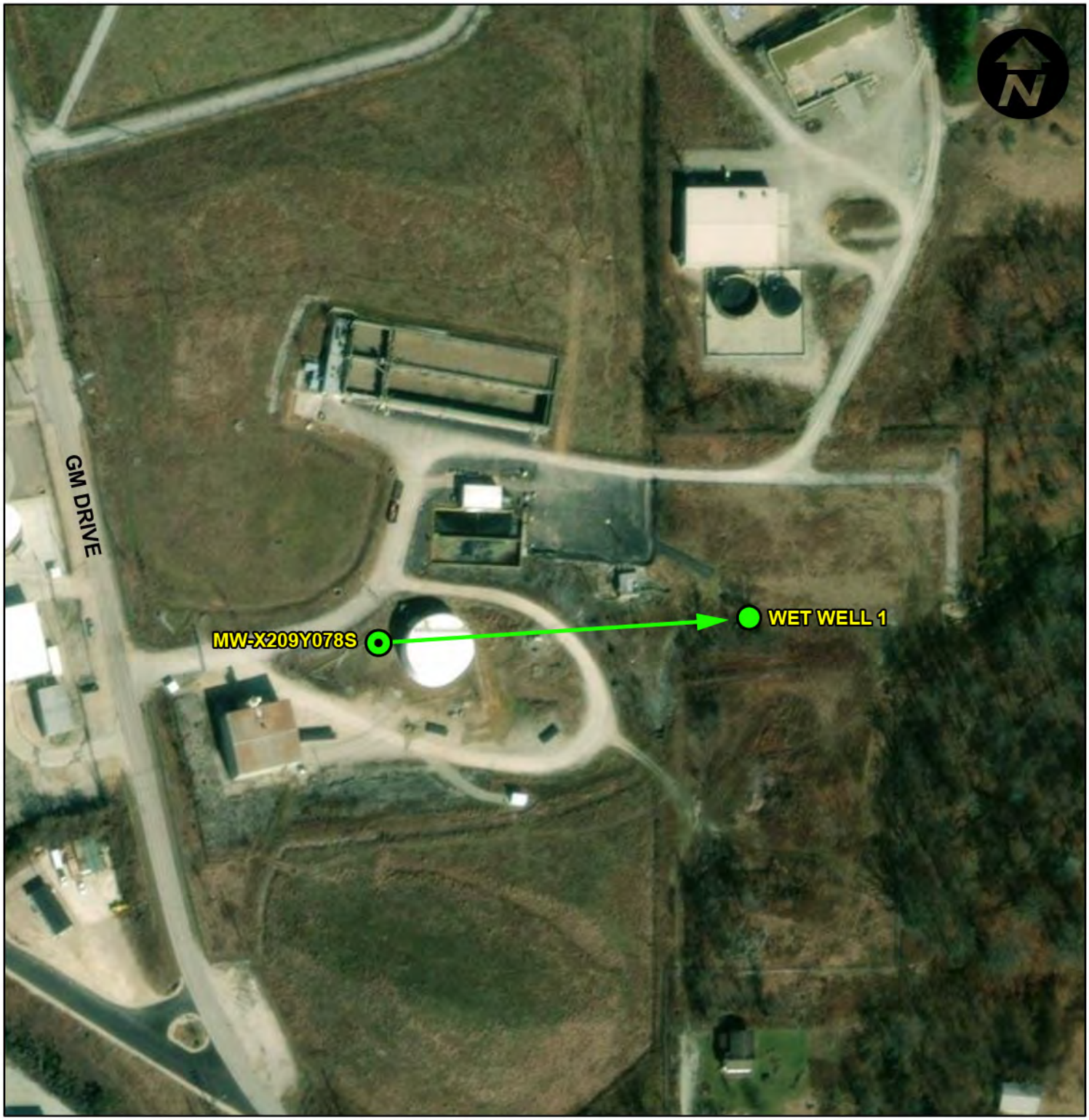
Source: Esri

PMP DYE TRACE STUDY
GM POWERTRAIN FACILITY
BEDFORD, IN

SWALLET DYE TRACES

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FIGURE
A2



LEGEND

- Fluorescein injection point
- Fluorescein detection point
- Illustrative dye trace flow-path

0 50 100 200 Feet

PMP DYE TRACE STUDY
GM POWERTRAIN FACILITY
BEDFORD, IN

OUTFALL 002
DYE TRACE

hydrogeology inc.

FIGURE
A3



LEGEND

- Eosine injection point
- Eosine detection point
- Illustrative dye trace flow-path

0 100 200 Feet

PMP DYE TRACE STUDY
GM POWERTRAIN FACILITY
BEDFORD, IN

AOI 6 DYE TRACE

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FIGURE
A4

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PMP Dye Trace Study
Appendix B - Dye Trace Procedures

hydrogeology inc.
1211 S Walnut St
Bloomington, IN 47401

FIELD AND LABORATORY PROCEDURES FOR ANALYSIS OF FLUORESCENT DYES IN CHARCOAL AND WATER SAMPLES

March 7, 2023

Jason N. Krothe
President
Hydrogeology Inc.

1. Introduction

This document describes the standard field and laboratory operating procedures used by Hydrogeology Inc. (HGI) for the analysis of charcoal and water samples for the presence of fluorescent dyes. In some situations, these procedures are altered, and are noted as such in the laboratory report.

2. Fluorescent Dyes

The following dyes were used for the PMP dye tracing studies. These dyes have been used successfully and safely for groundwater tracing for over 50 years.

Common Name: Pyranine
Color Index Number: 59040
Color Index Name: Solvent Green 7

Common Name: Eosine
Color Index: 45830
Chemical Name: Acid Red 87

Common Name: Rhodamine WT
Chemical Name: Acid Red 388

3. Field Procedures

3.1 Activated Charcoal Sample Preparation

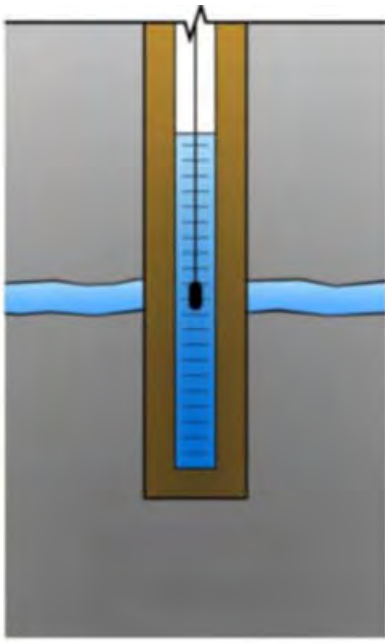
Activate Charcoal Sample (ACS) packets are constructed using fiberglass screen. The screen is formed into approximately 2-inch by 2-inch pouches for spring and surface water locations and 3-inch by 0.5-inch cylindrical pouches for wells. The pouches are filled with 10 grams of Calgon 207C coconut shell carbon. Prior to being placed in the field, all ACS packets are washed with de-ionized water, until there are no carbon particulates visible in the water. This process typically requires three rinses. After rinsing, ACS packets are placed in plastic containers for transport.



Example of well ACS packet.

3.2 Well ACS Installation

In the case of monitoring well sampling, ACS are typically deployed to the mid-point of the targeted screen interval at each monitoring well using a non-colored nylon string and stainless-steel bolts as weights. However, each well was evaluated on an individual basis to determine areas of high flow, with multiple ACS installed in some wells.



Example of ACS installation.

3.3 Surface Water ACS Installation

ACS packets deployed at surface water locations including springs and streams are connected to an anchored wire and submerged in the location with the highest estimated flow.

3.4 ACS Sample Collection

HGI staff were responsible for all ACS collection. All collected ACS were identified with the sample location ID, date, and time. ACS were collected in 150 milliliter opaque HDPE bottles. ACS were removed from the nylon line with gloved hands. The ACS was then opened, and the carbon poured directly into the sampling bottle. All ACS samples were stored in a cooler after collection and delivered same day to the HGI laboratory.

3.5 Water Sample Collection

HGI staff were responsible for all water sample collection, which was limited to the Waterloo Well locations All collected samples were identified with the sample location ID, date, and time. Water samples were collected in 150 milliliter opaque HDPE bottles. Based on discussions with GHD water samples were collected as direct fill, without well purging. All water samples were stored in a cooler after collection and delivered same day to the HGI laboratory.

4. Laboratory Procedures

4.1 ACS Laboratory Preparation

During preparation in the laboratory, ACS packets are rinsed with de-ionized water to remove all excess sediment and particulates that can interfere with analysis. Only ACS with visible sediment were rinsed prior to analysis. All wash water used to clean ACS packets is processed through a de-ionizing system to remove chlorine. The water is analyzed for fluorescence prior to rinsing any ACS packets. Once the ACS is properly rinsed the packet is manually opened (with a gloved hand) and the contents are poured back into the original HDPE sampling container. The ACS container is then filled with 10 mL of eluting solution which is composed of 5 parts alcohol, 3 parts de-ionized water, and 2 parts aqueous ammonia. The eluting solution is analyzed for fluorescence prior to being applied to the sample. The loose charcoal sits in this solution for one hour and then 4 mL is poured into a cuvette for analysis. The remaining solution is reserved in the event it is needed for a secondary analysis.

After one hour of eluting, approximately 4 milliliters (mL) of the elutant is poured into a disposable polyethylene cuvette. These cuvettes are designed for fluorometric analysis and are clear on all four sides. The cuvettes have a spectral range of 340 to 800 nanometer. The cuvette is then placed in the Shimadzu RF-60006000and analyzed as noted in Section 4.3.

All cuvettes with elutant are placed in a constant temperature cell designed to maintain a temperature of 4º Celsius prior to analysis. The constant temperature cells are placed in an ice-bath with one temperature blank sample. A digital thermometer is placed in the temperature blank to ensure the samples maintain a constant temperature of 4º Celsius.

4.2 Water Sample Laboratory Preparation

Approximately 4 ml of the water sample is poured into a disposable polyethylene cuvette. These cuvettes are designed for fluorometric analysis. The cuvettes have a spectral range of 340 to 800mm. The cuvette is then placed in the Shimadzu RF-60006000 and analyzed as noted in Section 4.3.

All water sample cuvettes are placed in a constant temperature cell designed to maintain a temperature of 4º Celsius prior to analysis on the RF-6000. The constant temperature cells are placed in an ice-bath with one temperature blank sample. A digital thermometer is placed in the temperature blank to ensure the samples maintain a constant temperature of 4º Celsius. The fluorescence intensity of fluorescein, eosine and pyranine is pH dependent. Water samples for those dyes are adjusted to pH 9.5 or higher prior to analysis. The water samples are placed in a high ammonia atmosphere for up to two (2) hours to achieve a pH of 9.5.

4.3 Analysis on the Shimadzu RF-6000PC

The Shimadzu RF-60006000 spectrofluorophotometer (RF-60006000) is used for all sample analysis. This is a synchronous scanning model and is controlled by LabSolutions RF software. The Shimadzu RF-60006000PC is operated and maintained in accordance with the manufacturer's recommendations. Shimadzu Scientific Instrument technicians provided the initial installation and training of all HGI staff that operate the RF-60006000.

The standard excitation and emission slit widths used for the RF-60006000 can be seen in Table 1. Synchronous scanning of the excitation and emission wavelength is standard with a 17 nanometer (nm) separation between excitation and emission wavelengths. The following are the standard parameters used for analysis with the RF-60006000:

Scanning Speed = Fast
Scanning Interval = 0.2 nanometers
Sensitivity = High

The fluorogram produced for each sample plots the emission wavelength (nanometer) versus the intensity (unitless). The fluorogram is inspected by the lab technician who identifies any fluorescence peaks indicative of the dyes used for the trace. For a sample to have been considered a potential dye positive a peak in the appropriate range must be identified in the LabSolutions RF interface.

Table 1: Typical excitation and emission slit widths for dye analysis

Matrix	Excitation Slit Width (EX)	Emission Slit Width (EM)
Water	5	5
Elutant	3	5

4.4 PeakFit Analysis

All samples with a potential dye peak are imported into PeakFit for additional analysis. PeakFit is a non-linear curve matching program designed for spectroscopy. PeakFit allows for the separation of potential peaks from background noise. The peak wavelength, peak height and

peak area are recorded for all samples analyzed with PeakFit. To quantify dye concentration, the peak area is calculated and compared to the appropriate dye calibration curve.

4.5 Dilution

Dilution of water and elutant samples is often required. Any sample with an intensity peak above the recordable range will be diluted prior to analysis on the RF-6000. Diluted samples will be identified in Appendix E.

4.6 Sample Retention

After analysis, the cuvettes with elutant are stored in a freezer located at HGI's office for possible re-analysis.

5. Quality Assurance / Quality Control

5.1 Laboratory Blanks

Elutant and water blanks are analyzed for fluorescence prior to all lab sessions. De-ionized water used for rinsing ACS packets and elutant applied to ACS packets are also analyzed for fluorescence prior to use.

5.2 Dye Standards

Dye standards are run prior to and after all analysis on the RF-60006000. Dye standards are also run every 100 samples. The typical elutant standards used are as follows:

I. Eosine, Rhodamine WT in elutant at concentrations of 1 & 10 ppb
II. Pyranine in elutant at concentrations of 10 & 50 ppb
III. Eosine, Rhodamine WT in water at concentrations of 0.1 & 1 ppb
IV. Pyranine in elutant at concentrations of 1 & 10 ppb

Laboratory standards are prepared on a quarterly basis. Standards are kept refrigerated and in amber bottles to prevent photodegradation. The following procedures are followed in the event that a dye standard shows +/- 5 nanometer deviation from the accepted excitation wavelength range and/or a +/- 2% deviation in the accepted emission intensity for a given standard:

1. Re-analyze standard.
2. Shutdown Lab Solutions RF Software, then re-analyze standard.
3. Adjust Xenon Lamp per RF-6000 manual, then re-analyze standard.
4. Contact manufacturer.

These steps were not required during for the PMP dye trace studies.

6.0 Determination of Positive Dye Recovery for Water and Elutant

The fluorescent emission wavelength ranges for all the dyes used have been established and are listed in Table 2. The following criteria are used to determine a dye positive in water and elutant samples:

1. Fluorescence peak within +/- 5 nanometers of accepted emission range for the dye in question.

2. Fluorescence peak must have typical sharp symmetrical peak exhibited by fluorescent dyes.

3. The fluorescence peak must be ten times greater than the detection limit for the sample for that location.

4. The fluorescence peak must be ten times greater than any fluorescent peak within the typical range observed in the background samples for that location.

5. It must be reasonable that the dye detection came from the dye injection and no other source. Factors such as local hydrogeology are considered as part of this step.

All fluorescence peaks that meet the above criteria are reported as dye positives. However, the following secondary set of qualifying terms are also applied to dye positives:

1. High Confidence Result – Any location with two or more dye positives for the same dye and/or a concentration at least double the quantitation limit.

2. Low Confidence Result – Any location with a single result, a concentration less than double the quantitation limit, or any other factor that calls the result into question.

Quantification

The magnitudes of fluorescent peaks for all dyes used are determined using a series of dye standards. Dye concentrations are calculated based on the area of the fluorescence peak. The accepted emission wavelengths for each dye can be seen in Table 2 and the Limit of Detection (LOD) and Limit of Quantitation (LOQ) for each dye can be seen in Table 3. Please note the LOQ is ten times the LOD.

Table 2: Elutant Emission Wavelength Ranges

Dye	Emission Wavelength Range (nm)
Pyranine	489.9 to 494.9
Eosine	536.9 to 541.9
Rhodamine WT	567.8 to 572.8

Table 3: Detection Limit - Elutant

Dye Name	Matrix	MDL (ppb)
Pyranine	Elutant	2.98
Eosine	Elutant	0.013
Rhodamine WT	Elutant	0.101

hydrogeology inc.

PMP Dye Trace Study
Appendix C - Injection Well Logs

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

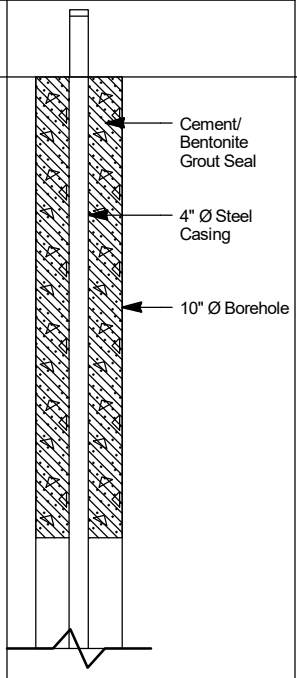
HOLE DESIGNATION: MW-LOC-A
DATE COMPLETED: October 7, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

NORTHING: 1324579.25
EASTING: 3124879.07

TOP OF RISER 625.36
GROUND SURFACE 622.73

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
0	BACKFILL, grass	
		621.73
2	CL-CLAY, firm, low to medium plasticity, brown, moist	
4		
6		616.73
8	LIMESTONE, weathered	
10		
12		
	END OF OVERBURDEN HOLE @ 12.4ft BGS	
14		
16		
18		
20		
22		
24		
26		
28		

MONITORING WELL



SAMPLE NUMBER	INTERVAL	REC (ft)
1GP		
2GP		
3HSA		

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 11/6/20

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: MW-LOC-A
PROJECT NUMBER: 013968
DATE COMPLETED: October 7, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
12		610.33				
	LIMESTONE, fine grained, thin bedded, tan, trace calcite crystals - fractures at 12.63 and 13.23 ft BGS			1	85	73
14						
16	- clay infilling at 15.8ft BGS - vertical fractrues at 15.83 and 16.37 ft BGS - clay infilling at 16.4ft BGS	605.63				
18	LIMESTONE, fine grained, thin bedded, trace calcite crystals - clay and sand infilling at 17.1 ft BGS - horizontal fracture at 17.1 ft BGS		3.78" Ø Open Borehole			
20	- stylolite at 18.0ft BGS - trace fossils, gray at 19.6ft BGS					
22				2	88	92
24	- stylolite at 24.3ft BGS - clay and sand infilling at 24.4ft BGS - horizontal fracture at 24.68 ft BGS					
26	- stylolite at 25.1ft BGS	596.73				
	LIMESTONE, fine grained, thin bedded, calcite crystals, gray - stylolites at 26.35, 28.05, and 28.34 ft BGS					
28	- horizontal fractures at 38.34, 29.21, and 28.60 ft BGS - stylolites at 28.90, 28.97, and 31.70 ft BGS					
30	- fracture at 30.77 ft BGS			3	100	99
32	- vugs at 31.70-32.00 ft BGS - stylolites at 32.00 and 34.55 ft BGS					
34						
36	- vugs at 35.55 to 35.75 ft BGS	586.73				
	END OF BOREHOLE @ 36.0ft BGS		WELL DETAILS Material: Open Hole			
38	Note: Water lost at 16 ft BGS Lost approximately 1,200 gallons of water throughout coring					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-71
DATE COMPLETED: October 8, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)
	NORTHING: 1323992.98 EASTING: 3124966.76 TOP OF RISER GROUND SURFACE	643.32 641.32				
0	TOPSOIL, grass	640.72	Cement/ Bentonite Grout Seal; 4" Ø Steel Casing; 10" Ø Borehole	1GP		
2	CL-SILTY CLAY, very soft, no plasticity, brown, dry					
4						
6	LIMESTONE, weathered	635.82		2HSA		
8						
10	END OF OVERBURDEN HOLE @ 9.9ft BGS					
12						
14						
16						
18						
20						
22						
24						
26						
28						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-71
PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
10	LIMESTONE, fine grained, thin bedded, tan and gray mixed - styolite at 10.8ft BGS	631.42		1	100	86
12	- styolite and fracture at 11.2ft BGS LIMESTONE, fine grained, thin bedded, tan and gray mixed - fractures at 12.00 and 12.24 ft BGS	629.87 628.08		2	100	86
14	LIMESTONE, fine grained, thin bedded, gray - fractures at 13.24, 13.45, and 16.98 ft BGS					
16						
18	- vertical fractures at 17.33 and 18.45 ft BGS - fractures at 17.84 and 18.00 ft BGS		3.78" Ø Open Borehole	3	80	66
20	- vertical fractures at 19.03-19.05, and 20.09 ft BGS					
22						
24	LIMESTONE, fine grained, thin bedded, gray	618.08				
26						
28	- styolites at 28.16, 29.80, and 30.10 ft BGS			4	100	96
30						
32	- tan at 31.3ft BGS - gray at 32.4ft BGS					
34	LIMESTONE, medium grained, thin bedded, tan	608.08		5	104	104
36						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-71
PROJECT NUMBER: 013968
DATE COMPLETED: October 8, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %	
	END OF BOREHOLE @ 38.2ft BGS Note: Possibly void 16.5-18.5 ft BGS; 8 ft of recovery during Run 3 Began to lose water at 12 ft BGS	603.08	WELL DETAILS Material: Open Hole				

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

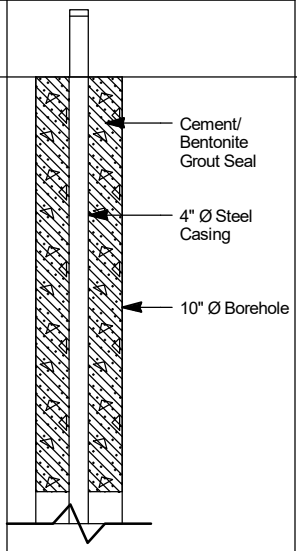
PROJECT NAME: GM LLC - Bedford GPS Facility
PROJECT NUMBER: 013968
CLIENT: General Motors LLC
LOCATION: Bedford, Indiana
DRILLING CONTRACTOR: Stearns Drilling

HOLE DESIGNATION: CH-73
DATE COMPLETED: October 6, 2020
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
FIELD PERSONNEL: J. Luzwick
DRILLER: Jim

NORTHING: 1324703.18
EASTING: 3124932.8

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL
	TOP OF RISER	637.68
	GROUND SURFACE	635.03
0	TOPSOIL, grass	634.43
	CL-CLAY, firm, medium plasticity, brown, moist	
4	LIMESTONE, weathered	630.53
10	END OF OVERBURDEN HOLE @ 9.7ft BGS	

MONITORING WELL



SAMPLE NUMBER	INTERVAL	REC (ft)
1GP		
2HSA		

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

OVERBURDEN LOG 013968-CO.GPJ GHD_Corp 11/6/20

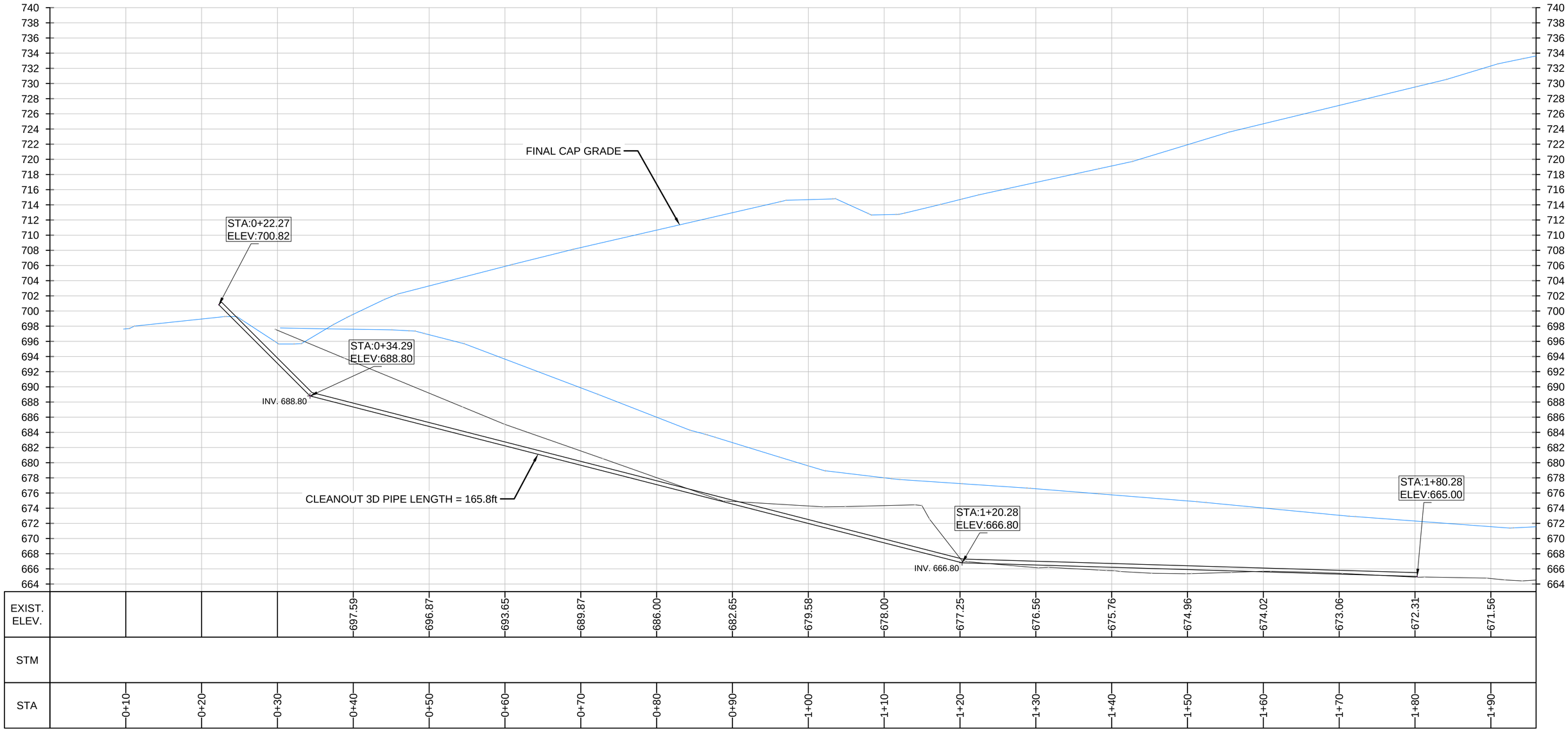
STRATIGRAPHIC AND INSTRUMENTATION LOG (BEDROCK)

PROJECT NAME: GM LLC - Bedford GPS Facility
HOLE DESIGNATION: CH-73
PROJECT NUMBER: 013968
DATE COMPLETED: October 6, 2020
CLIENT: General Motors LLC
DRILLING METHOD: Geoprobe/6¼" Ø HSA & HQ Core"
LOCATION: Bedford, Indiana
FIELD PERSONNEL: J. Luzwick
DRILLING CONTRACTOR: Stearns Drilling
DRILLER: Jim

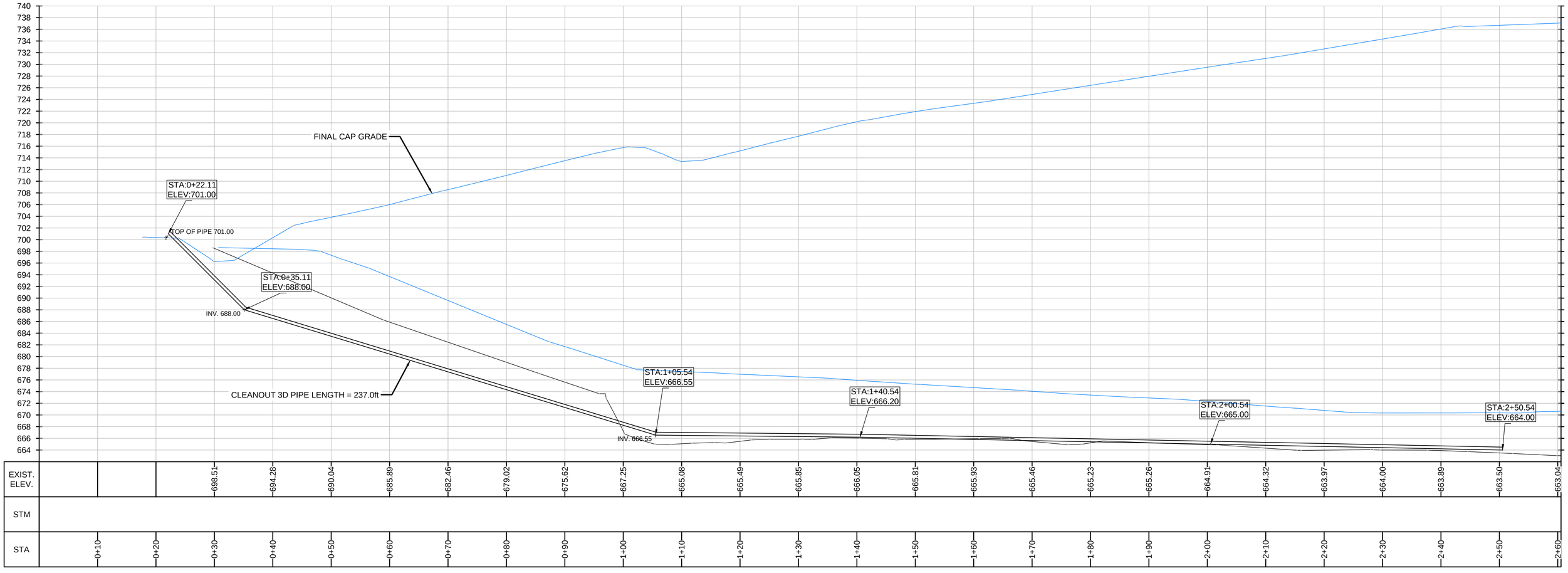
DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	MONITORING WELL	RUN NUMBER	CORE RECOVERY %	RQD %
10	LIMESTONE, fine grained, thinly bedded, light gray - closed horizontal fracture from 10.5 to 10.2ft BGS - open styolite from 10.7 to 10.9ft BGS - styolite at 12.3ft BGS - fracture at 12.8ft BGS - tan at 12.8ft BGS	625.33		1	100	100
16	- fracture at 17.0ft BGS					
18	LIMESTONE, fine grained, thinley bedded, tan - fractures at 18.53 and 22.50 ft BGS	617.23	3.78" Ø Open Borehole	2	99	99
20	- styolite at 20.4ft BGS					
22	- horizontal fracture at 22.50 to 23.30 ft BGS					
24	- styolite at 24.4ft BGS - fractures at 24.50 and 25.85 ft BGS					
26	- horizontal fracture at 25.20 to 25.46 ft BGS					
28	LIMESTONE, fine grained, thin bedded, gray - gray and tan at 28.6ft BGS - styolite at 29.3ft BGS - tan at 29.3ft BGS	607.23		3	95	84
30	- fractures at 30.70 and 30.92 ft BGS					
32	- vertical fracture at 31.9ft BGS - clay and sand infilling from 32.4 to 32.8ft BGS - fractures at 32.35 and 32.51 ft BGS	602.23				
34	END OF BOREHOLE @ 32.8ft BGS Note: Water lost at 18.4 ft BGS Water lost at approximately 30 ft BGS		WELL DETAILS Material: Open Hole			
36						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

GUS CLEANOUT 1 - PROFILE



GUS CLEANOUT 2 - PROFILE



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PMP Dye Trace Study
Appendix D - GHD Facility Activities

GHD Facility Activities

The following activities were conducted by GHD personnel at the wells used as sampling locations for the Near-Field and Far-field dye traces.

Quarterly water levels:

November (16, 17, 18, and 19, 2020)

February (22, 23, 24, and 25), May (24, 25, 26, and 27), August (23, 24, 25, and 26), and November (15, 17, and 18) 2021

February (14, 15, 16, and 17), May (23, 24, and 25)

Groundwater Sampling:

November (16 thru 19) 2020

May (24 thru 27) and November (15 thru 19) 2021

May (23 thru 26)

Transducers:

2020 – 11-16-20, 12-21-20

2021 – 1-15-21, 4-20-21, 6-22-21, 7-29-21, 9-17-21, 10-28-21, 11-15-21, 12-16-21

2022 – 2-1-22, 2-15-22, 4-5-22, 4-25-22, 5-23-22, 7-7-22, 8-2-22

Water Levels for Pilot Trench Monitoring:

2020
11-30-20

2021
1-15-21. 3-16-21, 4-19-21, 6-21-21. 7-29-21, 9-17-21, 10-28-21, 12-9-21

2022
3-30-22, 4-25-22, 6-29-22, 7-15-22

Groundwater Monitoring:

August 2 to 9, 2022.

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PMP Dye Trace Study
Appendix E - Analytical Results

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Analytical Results - Overview

The following tables contain the analytical results for each sampling location. The following abbreviations are used in the tables:

NA – Not Applicable. In the tables this applies to dye that has not been injected yet.

ND – Non-detect. For a result to be considered a positive dye recovery the following criteria had to have been met:

Criteria For Dye Positive

The following attributes were required of any sample designated a dye positive:

1. Fluorescence peak within +/- 5 nanometers of accepted emission range for the dye in question.
2. Fluorescence peak must have a typical sharp symmetrical peak exhibited by fluorescent dyes. If a fluorescent peak is described as broad in the summary below it indicates that the peak does not satisfy criteria 2.
3. Fluorescence peak must be ten times greater than the detection limit for the dye in question.
4. Fluorescence peak must be ten times greater than any fluorescent peak within the typical range observed in the background samples for that location
5. It must be reasonable that the dye detection came from the dye injection and no other source. Factors such as local hydrogeology are considered as part of this step.
6. A minimum of two results meeting criteria 1-5. Due to the nearly two-year duration of sampling, it would be expected that the two results would occur relatively close to each other. For example, a fluorescent peak detected in December 2020 and second peak in July 2022 are unlikely to be related.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-1	11/12/20	----	----	----	----	Loc A	Background	Not collected.
WW-1	11/23/20	10:10	ND	ND	ND	Loc A	Background	
WW-1	11/30/20	10:45	ND	ND	ND	Loc A	Background	
WW-1	12/3/20	12:35	ND	ND	ND	Loc A	Background	
WW-1	12/4/20	9:15	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/5/20	9:35	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/6/20	8:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/7/20	8:35	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/8/20	10:20	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/9/20	10:40	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/10/20	12:25	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/11/21	----	----	----	----	Loc A	Post-Injection	ACS missing.
WW-1	12/12/20	10:20	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/13/20	10:10	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/14/20	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/15/20	10:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/16/20	11:00	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/23/20	13:10	NA	NA	ND	Loc A	Post-Injection	
WW-1	12/29/20	11:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	1/5/21	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-1	1/12/21	12:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	1/21/21	11:45	NA	NA	ND	Loc A	Post-Injection	
WW-1	1/26/21	12:15	NA	NA	ND	Loc A	Post-Injection	
WW-1	2/2/21	11:55	NA	NA	ND	Loc A	Post-Injection	
WW-1	2/12/21	13:25	NA	NA	ND	Loc A	Post-Injection	
WW-1	2/23/21	10:15	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/1/21	11:55	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/5/21	11:15	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/11/21	14:10	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/17/21	11:20	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/24/21	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-1	3/31/21	13:20	NA	NA	ND	Loc A	Post-Injection	
WW-1	4/14/21	12:10	NA	NA	ND	Loc A	Post-Injection	
WW-1	5/3/21	13:20	NA	NA	ND	Loc A	Post-Injection	
WW-1	5/14/21	11:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	6/3/21	12:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	6/4/21	11:30	NA	NA	ND	Loc A	Post-Injection	
WW-1	6/5/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/6/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/7/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/8/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/9/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/10/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/11/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/12/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/13/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/14/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/15/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/16/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	6/17/21	11:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
WW-1	6/25/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	7/3/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	7/9/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	7/14/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	7/23/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	7/30/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	8/8/21	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	8/13/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-1	8/20/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	8/27/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	9/7/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	9/9/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	9/10/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-1	9/11/21	13:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/12/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/13/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/14/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/15/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/16/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/17/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/18/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/19/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/20/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	9/22/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	10/1/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	10/19/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	10/29/21	10:25	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
WW-1	11/5/21	11:10	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
WW-1	11/12/21	11:35	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
WW-1	11/19/21	12:50	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
WW-1	12/30/21	12:15	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
WW-1	1/6/22	9:40	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
WW-1	1/14/22	12:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
WW-1	1/24/22	9:35	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
WW-1	2/8/22	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-1	2/10/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/11/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/12/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/13/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/14/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/15/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/16/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/17/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/18/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/19/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/20/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/21/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/22/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	2/23/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	3/2/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	3/9/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	3/17/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	4/1/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	4/8/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	4/26/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	5/5/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	5/12/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	5/24/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	6/2/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	6/8/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	6/17/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	6/30/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	7/16/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	8/2/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-1	8/15/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-2	11/12/20	----	----	----	----	Loc A	Background	Not collected
WW-2	11/23/20	10:25	ND	ND	ND	Loc A	Background	
WW-2	11/30/20	10:40	ND	ND	ND	Loc A	Background	
WW-2	12/3/20	12:30	ND	ND	ND	Loc A	Background	
WW-2	12/4/20	9:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/5/20	9:40	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/6/20	8:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/7/20	8:45	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/8/20	10:25	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/9/20	10:45	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/10/20	12:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/11/20	10:30	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/12/20	10:15	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/13/20	10:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/14/20	11:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/15/20	10:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/16/20	11:10	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/23/20	13:15	NA	NA	ND	Loc A	Post-Injection	
WW-2	12/29/20	11:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	1/5/21	11:45	NA	NA	ND	Loc A	Post-Injection	
WW-2	1/12/21	12:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	1/21/21	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-2	1/26/21	12:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	2/2/21	12:00	NA	NA	ND	Loc A	Post-Injection	
WW-2	2/12/21	13:30	NA	NA	ND	Loc A	Post-Injection	
WW-2	2/23/21	10:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/1/21	12:00	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/5/21	11:20	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/11/21	14:15	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/17/21	11:15	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/24/21	11:45	NA	NA	ND	Loc A	Post-Injection	
WW-2	3/31/21	13:25	NA	NA	ND	Loc A	Post-Injection	
WW-2	4/14/21	12:05	NA	NA	ND	Loc A	Post-Injection	
WW-2	5/3/21	13:15	NA	NA	ND	Loc A	Post-Injection	
WW-2	5/14/21	11:25	NA	NA	ND	Loc A	Post-Injection	
WW-2	6/3/21	12:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	6/4/21	11:35	NA	NA	ND	Loc A	Post-Injection	
WW-2	6/5/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/6/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/7/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/8/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/9/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/10/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/11/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/12/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/13/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/14/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/15/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/16/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	6/17/21	10:55	NA	ND	ND	Loc A, CH-74	Post-Injection	
WW-2	6/25/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	7/3/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	7/9/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	7/14/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	7/23/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	7/30/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	8/8/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	8/13/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-2	8/20/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	8/27/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	9/7/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	9/9/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	9/10/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-2	9/11/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/12/21	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/13/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/14/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/15/21	13:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/16/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/17/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/18/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/19/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/20/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	9/22/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	10/1/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	10/19/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	10/29/21	10:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
WW-2	11/5/21	11:15	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
WW-2	11/12/21	12:10	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
WW-2	11/19/21	12:55	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
WW-2	12/30/21	12:15	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
WW-2	1/6/22	9:45	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
WW-2	1/14/22	12:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
WW-2	1/24/22	9:40	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
WW-2	2/8/22	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-2	2/10/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/11/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/12/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/13/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/14/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/15/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/16/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/17/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/18/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/19/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/20/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/21/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/22/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	2/23/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	3/2/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	3/9/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	3/17/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	4/1/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	4/8/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	4/26/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	5/5/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	5/12/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	5/24/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	6/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	6/8/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	6/17/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	6/30/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	7/16/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	8/2/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-2	8/15/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-3	11/12/20	10:15	NA	NA	ND	Loc A	Background	
WW-3	11/23/20	13:15	ND	ND	ND	Loc A	Background	
WW-3	11/30/20	13:20	ND	ND	ND	Loc A	Background	
WW-3	12/3/20	15:00	ND	ND	ND	Loc A	Background	
WW-3	12/4/20	12:40	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/5/20	11:00	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/6/20	10:35	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/7/20	12:20	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/8/20	12:15	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected.
WW-3	12/10/20	12:10	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/11/20	12:15	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/12/20	11:35	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/13/20	10:55	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/14/20	14:30	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/15/20	9:00	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/16/20	9:50	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/23/20	11:45	NA	NA	ND	Loc A	Post-Injection	
WW-3	12/29/20	13:20	NA	NA	ND	Loc A	Post-Injection	
WW-3	1/5/21	13:20	NA	NA	ND	Loc A	Post-Injection	
WW-3	1/12/21	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-3	1/21/21	13:00	NA	NA	ND	Loc A	Post-Injection	
WW-3	1/26/21	13:50	NA	NA	ND	Loc A	Post-Injection	
WW-3	2/2/21	13:35	NA	NA	ND	Loc A	Post-Injection	
WW-3	2/12/21	12:15	NA	NA	ND	Loc A	Post-Injection	
WW-3	2/23/21	11:40	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/1/21	13:40	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/5/21	13:15	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/11/21	13:05	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/17/21	13:10	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/24/21	13:05	NA	NA	ND	Loc A	Post-Injection	
WW-3	3/31/21	12:40	NA	NA	ND	Loc A	Post-Injection	
WW-3	4/14/21	14:00	NA	NA	ND	Loc A	Post-Injection	
WW-3	5/3/21	15:00	NA	NA	ND	Loc A	Post-Injection	
WW-3	5/14/21	13:10	NA	NA	ND	Loc A	Post-Injection	
WW-3	6/3/21	14:10	NA	NA	ND	Loc A	Post-Injection	
WW-3	6/4/21	13:50	NA	NA	ND	Loc A	Post-Injection	
WW-3	6/5/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/6/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/7/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/8/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/9/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/10/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/11/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/12/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/13/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/14/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/15/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/16/21	13:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	6/17/21	13:10	NA	ND	ND	Loc A, CH-74	Post-Injection	
WW-3	6/25/21	14:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	7/3/21	13:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	7/9/21	14:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	7/14/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	7/23/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	7/30/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	8/8/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	8/13/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-3	8/20/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	8/27/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	9/7/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	9/9/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	9/10/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
WW-3	9/11/21	16:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/12/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/13/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/14/21	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/15/21	15:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/16/21	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/17/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/18/21	14:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/19/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/20/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	9/22/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Water fllowing out of the wet well, ACS not collected
WW-3	10/1/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	10/19/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	10/29/21	9:40	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
WW-3	11/5/21	12:50	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
WW-3	11/12/21	14:15	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
WW-3	11/19/21	14:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
WW-3	12/30/21	13:50	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
WW-3	1/6/22	11:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
WW-3	1/14/22	14:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
WW-3	1/24/22	11:20	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
WW-3	2/8/22	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
WW-3	2/10/22	15:15	349.02	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/11/22	15:15	2126.77	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/12/22	14:25	2031.04	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/13/22	15:10	824.41	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/14/22	15:05	1010.35	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/15/22	15:05	1057.65	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/16/22	15:20	498.34	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/17/22	15:45	322.15	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/18/22	15:50	744.94	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/19/22	14:45	228.19	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/20/22	15:10	182.75	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/21/22	14:45	3355.58	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/22/22	13:50	2486.97	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	2/23/22	15:00	539.81	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	3/2/22	14:10	410.56	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	3/9/22	14:10	1154.26	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	3/17/22	13:45	1407.98	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	4/1/22	14:10	1627.54	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	4/8/22	14:10	3555.58	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	4/16/22	13:40	2714.58	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	4/26/22	12:55	591.32	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	5/5/22	15:35	1591.91	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	5/12/22	13:40	603.14	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	5/24/22	11:20	285.52	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	6/2/22	15:25	1646.24	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	6/8/22	13:35	795.63	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	6/17/22	16:05	4656.79	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	6/30/22	15:00	6911.91	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	7/15/22	17:10	10261.72	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	7/16/22	12:40	101.74	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	8/2/22	14:40	2142.46	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-3	8/15/22	15:40	1387.15	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-4	11/12/20		NA	NA	ND	Loc A	Background	
WW-4	11/23/20	13:20	ND	ND	ND	Loc A	Background	
WW-4	11/30/20	13:25	ND	ND	ND	Loc A	Background	
WW-4	12/3/20	14:55	NA	NA	704.32	Loc A	Background	
WW-4	12/4/20	12:45	NA	NA	45.86	Loc A	Post-Injection	
WW-4	12/5/20	11:05	NA	NA	0.71	Loc A	Post-Injection	
WW-4	12/6/20	10:40	NA	NA	48.43	Loc A	Post-Injection	
WW-4	12/7/20	12:25	NA	NA	75.51	Loc A	Post-Injection	
WW-4	12/8/20	12:20	NA	NA	41.91	Loc A	Post-Injection	
WW-4	12/9/20	13:25	NA	NA	9.54	Loc A	Post-Injection	
WW-4	12/10/20	12:15	NA	NA	0.08	Loc A	Post-Injection	
WW-4	12/11/20	----	----	----	----	Loc A	Post-Injection	ACS missing.
WW-4	12/12/20	11:30	NA	NA	31.82	Loc A	Post-Injection	
WW-4	12/13/20	10:55	NA	NA	5.65	Loc A	Post-Injection	
WW-4	12/14/20	14:35	NA	NA	194.87	Loc A	Post-Injection	
WW-4	12/15/20	9:05	NA	NA	243.05	Loc A	Post-Injection	
WW-4	12/16/20	9:45	NA	NA	95.88	Loc A	Post-Injection	
WW-4	12/23/20	11:40	NA	NA	309.60	Loc A	Post-Injection	
WW-4	12/29/20	13:20	NA	NA	326.71	Loc A	Post-Injection	
WW-4	1/5/21	13:20	NA	NA	331.56	Loc A	Post-Injection	
WW-4	1/12/21	11:40	NA	NA	248.43	Loc A	Post-Injection	
WW-4	1/21/21	13:00	NA	NA	64.68	Loc A	Post-Injection	
WW-4	1/26/21	13:50	NA	NA	174.43	Loc A	Post-Injection	
WW-4	2/2/21	13:35	NA	NA	87.12	Loc A	Post-Injection	
WW-4	2/12/21	12:30	NA	NA	57.71	Loc A	Post-Injection	
WW-4	2/23/21	11:45	NA	NA	97.48	Loc A	Post-Injection	
WW-4	3/1/21	13:40	NA	NA	425.22	Loc A	Post-Injection	
WW-4	3/5/21	13:15	NA	NA	1500.92	Loc A	Post-Injection	
WW-4	3/11/21	13:05	NA	NA	295.94	Loc A	Post-Injection	
WW-4	3/17/21	13:10	NA	NA	35.91	Loc A	Post-Injection	
WW-4	3/24/21	13:05	NA	NA	112.32	Loc A	Post-Injection	
WW-4	3/31/21	12:40	NA	NA	53.14	Loc A	Post-Injection	
WW-4	4/14/21	14:05	NA	NA	ND	Loc A	Post-Injection	ACS on the ground outside of the wet well.
WW-4	5/3/21	15:00	NA	NA	257.94	Loc A	Post-Injection	
WW-4	5/14/21	13:10	NA	NA	641.01	Loc A	Post-Injection	
WW-4	6/3/21	14:10	NA	18830.78	118.20	Loc A, CH-71	Post-Injection	
WW-4	6/4/21	13:55	NA	851817.00	3.17	Loc A, CH-72	Post-Injection	
WW-4	6/5/21	12:40	NA	18452.28	468.08	Loc A, CH-73	Post-Injection	
WW-4	6/6/21	12:45	NA	4087.61	35.13	Loc A, CH-73	Post-Injection	
WW-4	6/7/21	12:55	NA	2468.42	93.87	Loc A, CH-73	Post-Injection	
WW-4	6/8/21	12:55	NA	1925.81	51.79	Loc A, CH-73	Post-Injection	
WW-4	6/9/21	13:10	NA	788.49	31.97	Loc A, CH-73	Post-Injection	
WW-4	6/10/21	13:00	NA	759.22	34.96	Loc A, CH-73	Post-Injection	
WW-4	6/11/21	13:00	NA	1010.35	67.09	Loc A, CH-73	Post-Injection	
WW-4	6/12/21	12:45	NA	915.10	131.29	Loc A, CH-73	Post-Injection	
WW-4	6/13/21	13:00	NA	443.06	39.91	Loc A, CH-73	Post-Injection	
WW-4	6/14/21	13:15	NA	389.24	30.44	Loc A, CH-73	Post-Injection	
WW-4	6/15/21	13:15	NA	246.10	23.51	Loc A, CH-73	Post-Injection	
WW-4	6/16/21	13:20	NA	201.68	29.40	Loc A, CH-73	Post-Injection	
WW-4	6/17/21	13:10	NA	264.89	4.71	Loc A, CH-74	Post-Injection	
WW-4	6/25/21	14:00	NA	704.63	155.33	Loc A, CH-73	Post-Injection	
WW-4	7/3/21	13:30	NA	780.59	214.77	Loc A, CH-73	Post-Injection	
WW-4	7/9/21	14:50	NA	213.83	7.26	Loc A, CH-73	Post-Injection	
WW-4	7/14/21	12:50	NA	800.15	88.16	Loc A, CH-73	Post-Injection	
WW-4	7/23/21	12:40	NA	139.20	508.01	Loc A, CH-73	Post-Injection	
WW-4	7/30/21	9:40	NA	78.50	181.78	Loc A, CH-73	Post-Injection	
WW-4	8/8/21	12:25	NA	126.91	75.00	Loc A, CH-73	Post-Injection	
WW-4	8/13/21	12:40	NA	56.26	16.74	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WW-4	8/20/21	12:50	NA	36.23	46.46	Loc A, CH-73	Post-Injection	
WW-4	8/27/21	12:30	NA	34.62	39.35	Loc A, CH-73	Post-Injection	
WW-4	9/7/21	12:15	NA	32.39	183.82	Loc A, CH-73	Post-Injection	
WW-4	9/9/21	13:10	NA	54535.20	22.92	Loc A, CH-73	Post-Injection	Dye visible in wet well.
WW-4	9/10/21	13:10	NA	37377.91	8.15	Loc A, CH-73	Post-Injection	
WW-4	9/11/21	16:05	NA	11359.92	34.97	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/12/21	11:55	NA	10056.63	7.61	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/13/21	13:10	NA	8963.28	7.81	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/14/21	13:20	NA	6044.25	8.18	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/15/21	15:25	NA	9713.82	15.38	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/16/21	14:05	NA	3860.20	7.55	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/17/21	12:50	NA	2062.02	11.26	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/18/21	14:55	NA	6016.54	7.68	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/19/21	9:45	NA	6764.42	7.23	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/20/21	9:05	NA	3076.90	11.90	Loc A, CH-73, CH-71	Post-Injection	
WW-4	9/21/22	12:55	NA	1787.73	40.31	Loc A, CH-73, CH-72	Post-Injection	
WW-4	9/22/21	13:10	NA	631.51	13.69	Loc A, CH-73, CH-71	Post-Injection	
WW-4	10/1/21	12:50	NA	80.56	214.42	Loc A, CH-73, CH-71	Post-Injection	
WW-4	10/11/21	14:25	NA	175.51	263.86	Loc A, CH-73, CH-72	Post-Injection	
WW-4	10/19/21	9:40	NA	566.10	97.71	Loc A, CH-73, CH-71	Post-Injection	
WW-4	10/29/21	9:40	NA	405.44	87.02	Loc A, CH-73, CH-72	Post-Injection	
WW-4	11/5/21	12:50	NA	79.60	194.09	Loc A, CH-73, CH-73	Post-Injection	
WW-4	11/12/21	14:15	NA	83.67	53.38	Loc A, CH-73, CH-65	Post-Injection	
WW-4	11/19/21	14:30	NA	80.44	75.03	Loc A, CH-73, CH-66	Post-Injection	
WW-4	12/30/21	13:50	NA	63.98	59.46	Loc A, CH-73, CH-67	Post-Injection	
WW-4	1/14/22	14:15	NA	50.57	13.11	Loc A, CH-73, CH-69	Post-Injection	
WW-4	1/24/22	11:20	NA	52.06	38.57	Loc A, CH-73, CH-70	Post-Injection	
WW-4	2/8/22	11:35	NA	50.34	46.62	Loc A, CH-73, CH-71	Post-Injection	
WW-4	2/10/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS out of water.
WW-4	2/11/22	15:15	66.67	ND	15.50	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/12/22	14:25	99.32	ND	7.00	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/13/22	15:10	81.26	ND	9.00	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/14/22	15:05	21.08	ND	8.73	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/15/22	15:05	32.46	34.92	20.65	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/16/22	15:20	32.01	ND	15.15	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/17/22	13:50	13.74	ND	7.74	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/18/22	15:50	524.32	ND	12.81	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/19/22	14:45	36.68	ND	44.17	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/20/22	15:10	32.03	ND	38.85	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/21/22	14:45	24.42	ND	25.71	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/22/22	13:50	36.91	ND	5.40	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	2/23/22	15:00	617.63	ND	6.00	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	3/2/22	14:10	140.52	ND	13.42	Loc A, CH-73, CH-71, GUS	Post-Injection	
WW-4	3/9/22	14:10	740.51	ND	11.55	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	3/17/22	13:45	707.52	ND	20.54	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	4/1/22	14:10	1142.69	ND	49.41	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	4/8/22	14:10	336.89	ND	17.69	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	4/16/22	14:30	294.28	ND	18.65	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	4/26/22	12:50	12.22	ND	7.17	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	5/5/22	15:35	32.82	ND	24.34	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	5/12/22	13:45	45.54	ND	58.58	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	5/24/22	11:30	233.12	ND	11.01	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	6/2/22	15:30	751.50	ND	12.70	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	6/8/22	13:40	179.72	ND	11.89	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	6/17/22	16:05	47.07	ND	11.18	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	6/30/22	15:05	1608.10	ND	6.78	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	7/15/22	17:15	850.58	ND	9.57	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	7/16/22	12:45	365.51	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift. ACS in place one day.
WW-4	8/2/22	17:15	164.83	ND	9.01	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.
WW-4	8/15/22	15:45	87.10	ND	31.61	Loc A, CH-73, CH-71, GUS	Post-Injection	Eosine emission shift.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-20	11/12/20	10:30	NA	NA	NA	Loc A	Background	
CH-20	11/23/20	12:45	NA	NA	ND	Loc A	Background	
CH-20	11/30/20	13:05	NA	NA	ND	Loc A	Background	
CH-20	12/3/20	14:25	NA	NA	ND	Loc A	Background	
CH-20	12/4/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/5/20	----	----	----	----	Loc A	Post-Injection	ACS missing.
CH-20	12/6/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/7/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/8/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/9/20	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/10/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/11/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-20	12/12/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/13/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/14/20	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/15/20	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-20	12/23/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-20	12/29/20	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-20	1/5/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-20	1/12/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-20	1/21/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-20	1/26/21	14:00	NA	NA	NA	Loc A	Post-Injection	
CH-20	2/2/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-20	2/12/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-20	2/23/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/1/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/5/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/11/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/17/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/24/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-20	3/31/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-20	4/14/21	14:05	NA	NA	ND	Loc A	Post-Injection	
CH-20	5/3/21	14:40	NA	NA	ND	Loc A	Post-Injection	
CH-20	5/14/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-20	6/3/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-20	6/4/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-20	6/5/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/6/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/7/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/8/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/9/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/10/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/11/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/12/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/13/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/14/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/15/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/16/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	6/17/21	12:40	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-20	6/25/21	13:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	7/3/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	7/9/21	14:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	7/14/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	7/23/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	7/30/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	8/8/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	8/13/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-20	8/20/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	8/27/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	9/7/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	9/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	9/10/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-20	9/11/21	15:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/12/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/13/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/14/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/15/21	14:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/16/21	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/17/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/18/21	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/19/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/20/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	9/22/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	10/1/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	10/19/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	10/29/21	8:50	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-20	11/5/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected.
CH-20	11/12/21	14:10	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-20	11/19/21	14:25	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-20	12/30/21	12:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-20	1/6/22	11:20	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-20	1/14/22	14:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-20	1/24/22	11:10	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-20	2/8/22	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-20	2/10/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/11/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/12/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/13/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/14/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/15/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/16/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-20	2/18/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/19/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/20/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/21/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/22/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	2/23/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	3/2/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	3/9/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	3/17/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	4/1/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	4/8/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	4/26/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	5/5/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	5/12/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	5/24/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	6/2/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	6/8/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	6/17/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	6/30/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	7/16/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	8/2/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-20	8/15/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-22	11/12/20	NA	NA	NA	NA	Loc A	Background	
CH-22	11/23/20	12:55	NA	NA	ND	Loc A	Background	
CH-22	11/30/20	13:10	NA	NA	ND	Loc A	Background	
CH-22	12/3/20	14:30	NA	NA	ND	Loc A	Background	
CH-22	12/4/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/5/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-22	12/7/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-22	12/9/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/10/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/11/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/12/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/13/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/14/20	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/15/20	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-22	12/23/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-22	12/29/20	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-22	1/5/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-22	1/12/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-22	1/21/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-22	1/26/21	14:00	NA	NA	NA	Loc A	Post-Injection	
CH-22	2/2/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-22	2/12/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-22	2/23/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/1/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/5/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/11/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/17/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/24/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-22	3/31/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-22	4/14/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-22	5/3/21	14:45	NA	NA	ND	Loc A	Post-Injection	
CH-22	5/14/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-22	6/3/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-22	6/4/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-22	6/5/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/6/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/7/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/8/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/9/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/10/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/11/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/12/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/13/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/14/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/15/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/16/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	6/17/21	12:40	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-22	6/25/21	13:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	7/3/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	7/9/21	14:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	7/14/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	7/23/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	7/30/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	8/8/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	8/13/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-22	8/20/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	8/27/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	9/7/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	9/9/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	9/10/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-22	9/11/21	15:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/12/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/13/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/14/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/15/21	14:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/16/21	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/17/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/18/21	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/19/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/20/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	9/22/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	10/1/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	10/19/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	10/29/21	8:50	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-22	11/5/21	12:40	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-22	11/12/21	14:10	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-22	11/19/21	14:25	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-22	12/30/21	12:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-22	1/6/22	11:20	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-22	1/14/22	14:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-22	1/24/22	11:10	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-22	2/8/22	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-22	2/10/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/11/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/12/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/13/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/14/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/15/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/16/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-22	2/18/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/19/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/20/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/21/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/22/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	2/23/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	3/2/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	3/9/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	3/17/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	4/1/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	4/8/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	4/26/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	5/5/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	5/12/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	5/24/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	6/2/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	6/8/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	6/17/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	6/30/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	7/16/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	8/2/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-22	8/15/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-45	12/10/21	14:25	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	12/17/21	10:30	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	12/22/21	10:20	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	12/30/21	14:05	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	1/6/22	11:35	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	1/14/22	14:35	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	1/24/22	11:30	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	2/8/22	11:45	ND	ND	ND	GUS	Background	Far-field Background.
CH-45	2/10/22	15:25	ND	ND	ND	GUS	Post-injection	
CH-45	2/11/22	14:40	ND	ND	ND	GUS	Post-injection	
CH-45	2/12/22	14:35	ND	ND	ND	GUS	Post-injection	
CH-45	2/13/22	15:25	ND	ND	ND	GUS	Post-injection	
CH-45	2/14/22	15:20	ND	ND	ND	GUS	Post-injection	
CH-45	2/15/22	15:20	ND	ND	ND	GUS	Post-injection	
CH-45	2/16/22	15:35	ND	ND	ND	GUS	Post-injection	
CH-45	2/17/22	----	----	----	----	GUS	Post-injection	Not collected.
CH-45	2/18/22	16:00	ND	ND	ND	GUS	Post-injection	
CH-45	2/19/22	14:50	ND	ND	ND	GUS	Post-injection	
CH-45	2/20/22	15:25	ND	ND	ND	GUS	Post-injection	
CH-45	2/21/22	15:10	ND	ND	ND	GUS	Post-injection	
CH-45	2/22/22	14:15	ND	ND	ND	GUS	Post-injection	
CH-45	2/23/22	15:25	ND	ND	ND	GUS	Post-injection	
CH-45	3/2/22	14:30	ND	ND	ND	GUS	Post-injection	
CH-45	3/9/22	14:20	ND	ND	ND	GUS	Post-injection	
CH-45	3/17/22	14:10	ND	ND	ND	GUS	Post-injection	
CH-45	4/1/22	14:35	ND	ND	ND	GUS	Post-injection	
CH-45	4/8/22	14:50	ND	ND	ND	GUS	Post-injection	
CH-45	4/26/22	13:30	ND	ND	ND	GUS	Post-injection	
CH-45	5/5/22	15:45	ND	ND	ND	GUS	Post-injection	
CH-45	5/12/22	14:05	ND	ND	ND	GUS	Post-injection	
CH-45	5/24/22	12:45	ND	ND	ND	GUS	Post-injection	
CH-45	6/2/22	15:55	ND	ND	ND	GUS	Post-injection	
CH-45	6/8/22	15:05	ND	ND	ND	GUS	Post-injection	
CH-45	6/17/22	15:55	ND	ND	ND	GUS	Post-injection	
CH-45	6/30/22	14:50	ND	ND	ND	GUS	Post-injection	
CH-45	7/16/22	12:20	ND	ND	ND	GUS	Post-injection	
CH-45	8/2/22	14:30	ND	ND	ND	GUS	Post-injection	
CH-45	8/15/22	15:30	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-46	11/12/20	NA	ND	ND	ND	Loc A	Background	
CH-46	11/23/20	14:55	ND	ND	ND	Loc A	Background	
CH-46	11/30/20	14:30	ND	ND	ND	Loc A	Background	
CH-46	12/3/20	15:45	ND	ND	ND	Loc A	Background	
CH-46	12/4/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/5/20	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/6/20	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-46	12/8/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/9/20	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/10/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/11/20	8:15	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/12/20	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/13/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/14/20	14:45	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/15/20	8:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/16/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/23/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	12/29/20	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-46	1/5/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-46	1/12/21	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-46	1/21/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-46	1/26/21	14:15	NA	NA	NA	Loc A	Post-Injection	
CH-46	2/2/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-46	2/12/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-46	2/23/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/1/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/5/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/11/21	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/17/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/24/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-46	3/31/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-46	4/14/21	14:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	5/3/21	15:10	NA	NA	ND	Loc A	Post-Injection	
CH-46	5/14/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-46	6/3/21	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-46	6/4/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-46	6/5/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/6/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/7/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/8/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/9/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/10/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/11/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/12/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/13/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/14/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/15/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/16/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	6/17/21	12:45	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-46	6/25/21	14:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	7/3/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	7/9/21	14:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	7/14/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	7/23/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	7/30/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	8/8/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	8/13/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-46	8/20/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	8/27/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	9/7/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	9/9/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	9/10/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-46	9/11/21	15:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/12/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/13/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/14/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/15/21	15:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/16/21	13:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/17/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/18/21	14:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/19/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/20/21	8:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	9/22/21	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	10/1/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	10/19/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	10/29/21	8:15	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-46	11/5/21	12:55	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-46	11/12/21	14:20	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-46	11/19/21	14:35	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-46	12/30/21	14:10	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-46	1/6/22	11:40	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-46	1/14/22	14:40	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-46	1/24/22	11:35	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-46	2/8/22	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-46	2/10/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/11/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/12/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/13/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/14/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/15/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/16/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-46	2/18/22	16:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/19/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/20/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/21/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/22/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	2/23/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	3/2/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	3/9/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	3/17/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	4/1/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	4/8/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	4/26/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	5/5/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	5/12/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	5/24/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	6/2/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	6/8/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	6/17/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	6/30/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	7/16/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	8/2/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-46	8/15/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-47	11/12/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	11/23/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	11/30/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/3/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/4/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/5/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/6/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/7/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/8/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/9/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/10/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/11/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/12/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/13/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/14/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/15/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/16/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/23/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	12/29/20	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	1/5/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	1/12/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	1/21/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	1/26/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	2/2/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	2/12/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	2/23/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	3/1/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	3/5/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	3/11/21	----	----	----	----	NA	NA	Location added on 3/11/21
CH-47	3/17/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-47	3/24/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-47	3/31/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-47	4/14/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-47	5/3/21	15:15	NA	NA	ND	Loc A	Post-Injection	
CH-47	5/14/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-47	6/3/21	14:25	NA	NA	ND	Loc A	Post-Injection	
CH-47	6/4/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-47	6/5/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/6/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/7/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/8/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/9/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/10/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/11/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/12/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/13/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/14/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/15/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/16/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	6/17/21	12:50	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-47	6/25/21	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	7/3/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	7/9/21	14:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	7/14/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	7/23/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	7/30/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	8/8/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	8/13/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-47	8/20/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	8/27/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	9/7/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	9/9/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	9/10/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-47	9/11/21	15:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/12/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/13/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/14/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/15/21	15:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/16/21	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/17/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/18/21	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/19/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/20/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	9/22/21	13:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	10/1/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	10/19/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	10/29/21	8:20	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-47	11/5/21	13:00	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-47	11/12/21	14:25	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-47	11/19/21	14:40	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-47	12/30/21	14:15	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-47	1/6/22	11:45	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-47	1/14/22	14:45	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-47	1/24/22	11:40	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-47	2/8/22	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-47	2/10/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/11/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/12/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/13/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/14/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/15/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/16/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-47	2/18/22	16:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/19/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/20/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/21/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/22/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	2/23/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	3/2/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	3/9/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	3/17/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	4/1/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	4/8/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	4/26/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	5/5/22	15:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	5/12/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	5/24/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	6/2/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	6/8/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	6/17/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	6/30/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	7/16/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	8/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-47	8/15/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-48	11/12/20	----	----	----	----	Loc A	Background	Not collected
CH-48	11/23/20	15:05	NA	NA	ND	Loc A	Background	
CH-48	11/30/20	14:35	NA	NA	ND	Loc A	Background	
CH-48	12/3/20	15:40	NA	NA	ND	Loc A	Background	
CH-48	12/4/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/5/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/6/20	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/7/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/8/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/9/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/10/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/11/20	8:20	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/12/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/13/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/14/20	15:00	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/15/20	8:10	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/16/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/23/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-48	12/29/20	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-48	1/5/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-48	1/12/21	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-48	1/21/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-48	1/26/21	14:10	NA	NA	NA	Loc A	Post-Injection	
CH-48	2/2/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-48	2/12/21	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-48	2/23/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/1/21	14:05	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/5/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/11/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/17/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/24/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-48	3/31/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-48	4/14/21	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-48	5/3/21	15:20	NA	NA	ND	Loc A	Post-Injection	
CH-48	5/14/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-48	6/3/21	14:30	NA	NA	ND	Loc A	Post-Injection	
CH-48	6/4/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-48	6/5/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/6/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/7/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/8/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/9/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/10/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/11/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/12/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/13/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/14/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/15/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/16/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	6/17/21	12:55	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-48	6/25/21	14:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	7/3/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	7/9/21	14:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	7/14/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	7/23/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	7/30/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	8/8/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	8/13/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-48	8/20/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	8/27/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	9/7/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	9/9/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	9/10/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-48	9/11/21	15:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/12/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/13/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/14/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/15/21	15:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/16/21	13:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/17/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/18/21	14:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/19/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/20/21	8:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	9/22/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	10/1/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	10/19/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	10/29/21	8:25	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-48	11/5/21	13:05	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-48	11/12/21	14:30	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-48	11/19/21	14:45	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-48	12/30/21	14:20	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-48	1/6/22	11:50	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-48	1/14/22	14:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-48	1/24/22	11:45	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-48	2/8/22	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-48	2/10/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/11/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/12/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/13/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/14/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/15/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/16/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-48	2/18/22	16:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/19/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/20/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/21/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/22/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	2/23/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	3/2/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	3/9/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	3/17/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	4/1/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	4/8/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	4/26/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	5/5/22	16:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	5/12/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	5/24/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	6/2/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	6/8/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	6/17/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	6/30/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	7/16/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	8/2/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-48	8/15/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-49	11/12/20	----	----	----	----	Loc A	Background	Not collected
CH-49	11/23/20	15:10	NA	NA	ND	Loc A	Background	
CH-49	11/30/20	14:45	NA	NA	ND	Loc A	Background	
CH-49	12/3/20	15:35	NA	NA	ND	Loc A	Background	
CH-49	12/4/20	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/5/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/6/20	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/7/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/8/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/9/20	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/10/20	10:05	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/11/20	8:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/12/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/13/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/14/20	15:05	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/15/20	8:15	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/16/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/23/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-49	12/29/20	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-49	1/5/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-49	1/12/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	1/21/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	1/26/21	14:05	NA	NA	NA	Loc A	Post-Injection	
CH-49	2/2/21	13:55	NA	NA	ND	Loc A	Post-Injection	
CH-49	2/12/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-49	2/23/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/1/21	14:10	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/5/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/11/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/17/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/24/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-49	3/31/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-49	4/14/21	14:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	5/3/21	15:25	NA	NA	ND	Loc A	Post-Injection	
CH-49	5/14/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-49	6/3/21	14:35	NA	NA	ND	Loc A	Post-Injection	
CH-49	6/4/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-49	6/5/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/6/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/7/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/8/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/9/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/10/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/11/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/12/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/13/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/14/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/15/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/16/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	6/17/21	13:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-49	6/25/21	14:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	7/3/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	7/9/21	14:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	7/14/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	7/23/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	7/30/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	8/8/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	8/13/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-49	8/20/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	8/27/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	9/7/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	9/9/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	9/10/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-49	9/11/21	15:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/12/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/13/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/14/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/15/21	15:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/16/21	14:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/17/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/18/21	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/19/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/20/21	8:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	9/22/21	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	10/1/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	10/19/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	10/29/21	8:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-49	11/5/21	13:10	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-49	11/12/21	14:35	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-49	11/19/21	14:50	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-49	12/30/21	14:25	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-49	1/6/22	11:55	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-49	1/14/22	14:55	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-49	1/24/22	11:50	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-49	2/8/22	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-49	2/10/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/11/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/12/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/13/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/14/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/15/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/16/22	15:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
CH-49	2/18/22	16:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/19/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/20/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/21/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/22/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	2/23/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	3/2/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	3/9/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	3/17/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	4/1/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	4/8/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	4/26/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	5/5/22	16:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	5/12/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	5/24/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	6/2/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	6/8/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	6/17/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	6/30/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	7/16/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	8/2/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-49	8/15/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-52-42	11/12/20	11:40	NA	NA	ND	Loc A	Background	
CH-52-42	11/23/20	10:30	NA	NA	ND	Loc A	Background	
CH-52-42	11/30/20	11:00	NA	NA	ND	Loc A	Background	
CH-52-42	12/3/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/4/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/5/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/6/20	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/7/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/8/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/9/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/10/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/11/20	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/12/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/13/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/14/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/15/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/16/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/23/20	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	12/29/20	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	1/5/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	1/12/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	1/21/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	1/26/21	13:05	NA	NA	NA	Loc A	Post-Injection	
CH-52-42	2/2/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	2/12/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	2/23/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/1/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/5/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/11/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/17/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/24/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	3/31/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	4/14/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	5/3/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	5/14/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	6/3/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	6/4/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-42	6/5/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/6/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/7/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/8/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/10/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/11/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/12/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/13/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/14/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/15/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/16/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	6/17/21	11:40	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-52-42	6/25/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	7/3/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	7/9/21	13:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	7/14/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	7/23/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	7/30/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	8/8/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	8/13/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-52-42	8/20/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	8/27/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	9/7/21	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	9/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	9/10/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-42	9/11/21	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/12/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/13/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/14/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/15/21	14:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/16/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/17/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/18/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/19/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/20/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	9/22/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	10/1/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	10/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	10/29/21	9:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-52-42	11/5/21	11:50	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-52-42	11/12/21	13:20	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-52-42	11/19/21	13:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-52-42	12/30/21	13:30	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-52-42	1/6/22	10:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-52-42	1/14/22	13:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-52-42	1/24/22	10:25	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-52-42	2/8/22	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-42	2/10/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/11/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/12/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/13/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/14/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/15/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/16/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/17/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/18/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/19/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/20/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/21/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/22/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	2/23/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	3/2/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	3/9/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	3/17/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	4/1/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	4/8/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	4/26/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	5/5/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	5/12/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	5/24/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	6/2/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	6/8/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	6/17/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	6/30/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	7/16/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	8/2/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-42	8/15/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-52-53	11/12/20	11:40	NA	NA	ND	Loc A	Background	
CH-52-53	11/23/20	10:30	NA	NA	ND	Loc A	Background	
CH-52-53	11/30/20	11:00	NA	NA	ND	Loc A	Background	
CH-52-53	12/3/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/4/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-52-53	12/6/20	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/7/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/8/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/9/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/10/20	----	----	----	----	Loc A	Post-Injection	ACS missing.
CH-52-53	12/11/20	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/12/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/13/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/14/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/15/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/16/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/23/20	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	12/29/20	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	1/5/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	1/12/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	1/21/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	1/26/21	13:05	NA	NA	NA	Loc A	Post-Injection	
CH-52-53	2/2/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	2/12/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	2/23/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/1/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/5/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/11/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/17/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/24/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	3/31/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	4/14/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	5/3/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	5/14/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	6/3/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	6/4/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-52-53	6/5/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/6/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/7/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/8/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/10/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/11/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/12/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/13/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/14/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/15/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/16/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	6/17/21	11:40	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-52-53	6/25/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	7/3/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	7/9/21	13:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	7/14/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	7/23/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	7/30/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	8/8/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	8/13/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-52-53	8/20/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	8/27/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	9/7/21	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	9/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	9/10/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-52-53	9/11/21	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/12/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/13/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/14/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/15/21	14:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/16/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/17/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/18/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/19/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/20/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	9/22/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	10/1/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	10/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	10/29/21	9:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-52-53	11/5/21	11:50	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-52-53	11/12/21	13:20	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-52-53	11/19/21	13:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-52-53	12/30/21	13:30	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-52-53	1/6/22	10:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-52-53	1/14/22	13:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-52-53	1/24/22	10:25	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-52-53	2/8/22	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-52-53	2/10/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/11/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/12/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/13/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/14/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/15/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/16/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/17/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/18/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/19/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/20/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/21/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/22/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	2/23/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	3/2/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	3/9/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	3/17/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	4/1/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	4/8/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	4/26/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	5/5/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	5/12/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	5/24/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	6/2/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	6/8/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	6/17/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	6/30/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	7/16/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	8/2/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-52-53	8/15/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-53	12/10/21	14:25	ND	ND	ND	GUS	Background	Far-field Background
CH-53	12/17/21	10:10	ND	ND	ND	GUS	Background	Far-field Background
CH-53	12/22/21	10:05	ND	ND	ND	GUS	Background	Far-field Background
CH-53	12/30/21	12:45	ND	ND	ND	GUS	Background	Far-field Background
CH-53	1/6/22	10:15	ND	ND	ND	GUS	Background	Far-field Background
CH-53	1/14/22	12:55	ND	ND	ND	GUS	Background	Far-field Background
CH-53	1/24/22	10:20	ND	ND	ND	GUS	Background	Far-field Background
CH-53	2/8/22	10:30	ND	ND	ND	GUS	Background	Far-field Background
CH-53	2/10/22	14:00	ND	ND	ND	GUS	Post-injection	
CH-53	2/11/22	13:10	ND	ND	ND	GUS	Post-injection	
CH-53	2/12/22	13:20	ND	ND	ND	GUS	Post-injection	
CH-53	2/13/22	13:45	ND	ND	ND	GUS	Post-injection	
CH-53	2/14/22	13:55	ND	ND	ND	GUS	Post-injection	
CH-53	2/15/22	13:55	ND	ND	ND	GUS	Post-injection	
CH-53	2/16/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-53	2/17/22	14:30	ND	ND	ND	GUS	Post-injection	
CH-53	2/18/22	13:55	ND	ND	ND	GUS	Post-injection	
CH-53	2/19/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-53	2/20/22	14:05	ND	ND	ND	GUS	Post-injection	
CH-53	2/21/22	13:25	ND	ND	ND	GUS	Post-injection	
CH-53	2/22/22	12:55	ND	ND	ND	GUS	Post-injection	
CH-53	2/23/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-53	3/2/22	13:05	ND	ND	ND	GUS	Post-injection	
CH-53	3/9/22	12:50	ND	ND	ND	GUS	Post-injection	
CH-53	3/17/22	12:45	ND	ND	ND	GUS	Post-injection	
CH-53	4/1/22	12:55	ND	ND	ND	GUS	Post-injection	
CH-53	4/8/22	13:00	ND	ND	ND	GUS	Post-injection	
CH-53	4/26/22	12:45	ND	ND	ND	GUS	Post-injection	
CH-53	5/5/22	14:15	ND	ND	ND	GUS	Post-injection	
CH-53	5/12/22	12:50	ND	ND	ND	GUS	Post-injection	
CH-53	5/24/22	10:35	ND	ND	ND	GUS	Post-injection	
CH-53	6/2/22	14:00	ND	ND	ND	GUS	Post-injection	
CH-53	6/8/22	13:20	ND	ND	ND	GUS	Post-injection	
CH-53	6/17/22	14:25	ND	ND	ND	GUS	Post-injection	
CH-53	6/30/22	13:10	ND	ND	ND	GUS	Post-injection	
CH-53	7/16/22	10:50	ND	ND	ND	GUS	Post-injection	
CH-53	8/2/22	13:05	ND	ND	ND	GUS	Post-injection	
CH-53	8/15/22	14:00	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-54	12/10/21	14:35	ND	ND	ND	GUS	Background	Far-field Background
CH-54	12/17/21	10:05	ND	ND	ND	GUS	Background	Far-field Background
CH-54	12/22/21	10:00	ND	ND	ND	GUS	Background	Far-field Background
CH-54	12/30/21	12:40	ND	ND	ND	GUS	Background	Far-field Background
CH-54	1/6/22	10:10	ND	ND	ND	GUS	Background	Far-field Background
CH-54	1/14/22	12:50	ND	ND	ND	GUS	Background	Far-field Background
CH-54	1/24/22	10:15	ND	ND	ND	GUS	Background	Far-field Background
CH-54	2/8/22	10:25	ND	ND	ND	GUS	Background	Far-field Background
CH-54	2/10/22	13:55	ND	ND	ND	GUS	Post-injection	
CH-54	2/11/22	13:05	ND	ND	ND	GUS	Post-injection	
CH-54	2/12/22	13:15	ND	ND	ND	GUS	Post-injection	
CH-54	2/13/22	13:40	ND	ND	ND	GUS	Post-injection	
CH-54	2/14/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-54	2/15/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-54	2/16/22	13:45	ND	ND	ND	GUS	Post-injection	
CH-54	2/17/22	14:25	ND	ND	ND	GUS	Post-injection	
CH-54	2/18/22	13:50	ND	ND	ND	GUS	Post-injection	
CH-54	2/19/22	13:10	ND	ND	ND	GUS	Post-injection	
CH-54	2/20/22	14:00	ND	ND	ND	GUS	Post-injection	
CH-54	2/21/22	13:20	ND	ND	ND	GUS	Post-injection	
CH-54	2/22/22	12:50	ND	ND	ND	GUS	Post-injection	
CH-54	2/23/22	13:45	ND	ND	ND	GUS	Post-injection	
CH-54	3/2/22	13:00	ND	ND	ND	GUS	Post-injection	
CH-54	3/9/22	12:45	ND	ND	ND	GUS	Post-injection	
CH-54	3/17/22	12:40	ND	ND	ND	GUS	Post-injection	
CH-54	4/1/22	12:50	ND	ND	ND	GUS	Post-injection	
CH-54	4/8/22	12:55	ND	ND	ND	GUS	Post-injection	
CH-54	4/26/22	12:40	ND	ND	ND	GUS	Post-injection	
CH-54	5/5/22	14:10	ND	ND	ND	GUS	Post-injection	
CH-54	5/12/22	12:40	ND	ND	ND	GUS	Post-injection	
CH-54	5/24/22	10:30	ND	ND	ND	GUS	Post-injection	
CH-54	6/2/22	13:55	ND	ND	ND	GUS	Post-injection	
CH-54	6/8/22	13:15	ND	ND	ND	GUS	Post-injection	
CH-54	6/17/22	14:20	ND	ND	ND	GUS	Post-injection	
CH-54	6/30/22	13:05	ND	ND	ND	GUS	Post-injection	
CH-54	7/16/22	10:45	ND	ND	ND	GUS	Post-injection	
CH-54	8/2/22	13:00	ND	ND	ND	GUS	Post-injection	
CH-54	8/15/22	13:55	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-61-17	11/12/20	10:35	NA	NA	ND	Loc A	Background	
CH-61-17	11/23/20	14:45	NA	NA	ND	Loc A	Background	
CH-61-17	11/30/20	13:35	NA	NA	ND	Loc A	Background	
CH-61-17	12/3/20	15:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/4/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/5/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/6/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/7/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/8/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/9/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/10/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/11/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/12/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/13/20	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/14/20	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/15/20	8:35	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/16/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/23/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	12/29/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	1/5/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	1/12/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	1/21/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	1/26/21	13:45	NA	NA	NA	Loc A	Post-Injection	
CH-61-17	2/2/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	2/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	2/23/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/1/21	13:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/5/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/11/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/17/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/24/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	3/31/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	4/14/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	5/3/21	14:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	5/14/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	6/3/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	6/4/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-17	6/5/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/6/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/7/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/8/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/10/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/11/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/12/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/13/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/14/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/15/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/16/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	6/17/21	12:30	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-61-17	6/25/21	13:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	7/3/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	7/9/21	14:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	7/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	7/23/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	7/30/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	8/8/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	8/13/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-61-17	8/20/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	8/27/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	9/7/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	9/9/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	9/10/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-17	9/11/21	15:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/12/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/13/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/14/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/15/21	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/16/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/17/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/18/21	14:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/19/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/20/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	9/22/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	10/1/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	10/19/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	10/29/21	8:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-61-17	11/5/21	12:35	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-61-17	11/12/21	14:00	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-61-17	11/19/21	14:15	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-61-17	12/30/21	13:40	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-61-17	1/6/22	11:10	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-61-17	1/14/22	14:00	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-61-17	1/24/22	11:05	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-61-17	2/8/22	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-17	2/10/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/11/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/12/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/13/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/14/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/15/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/16/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-61-17	2/18/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/19/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/20/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/21/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/22/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	2/23/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	3/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	3/9/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	3/17/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	4/1/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	4/8/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	4/26/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	5/5/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	5/12/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	5/24/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	6/2/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	6/8/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	6/17/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	6/30/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	7/16/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	8/2/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-17	8/15/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-61-30	11/12/20	10:35	NA	NA	ND	Loc A	Background	
CH-61-30	11/23/20	14:45	NA	NA	ND	Loc A	Background	
CH-61-30	11/30/20	13:35	NA	NA	ND	Loc A	Background	
CH-61-30	12/3/20	15:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/4/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/5/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/6/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/7/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/8/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/9/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/10/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/11/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/12/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/13/20	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/14/20	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/15/20	8:35	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/16/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/23/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	12/29/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	1/5/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	1/12/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	1/21/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	1/26/21	13:45	NA	NA	NA	Loc A	Post-Injection	
CH-61-30	2/2/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	2/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	2/23/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/1/21	13:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/5/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/11/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/17/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/24/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	3/31/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	4/14/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	5/3/21	14:50	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	5/14/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	6/3/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	6/4/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-61-30	6/5/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/6/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/7/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/8/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/10/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/11/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/12/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/13/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/14/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/15/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/16/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	6/17/21	12:30	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-61-30	6/25/21	13:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	7/3/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	7/9/21	14:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	7/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	7/23/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	7/30/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	8/8/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	8/13/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-61-30	8/20/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	8/27/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	9/7/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	9/9/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	9/10/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-61-30	9/11/21	15:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/12/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/13/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/14/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/15/21	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/16/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/17/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/18/21	14:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/19/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/20/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	9/22/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	10/1/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	10/19/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	10/29/21	8:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-61-30	11/5/21	12:35	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-61-30	11/12/21	14:00	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-61-30	11/19/21	14:15	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-61-30	12/30/21	13:40	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-61-30	1/6/22	11:10	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-61-30	1/14/22	14:00	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-61-30	1/24/22	11:05	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-61-30	2/8/22	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-61-30	2/10/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/11/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/12/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/13/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/14/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/15/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/16/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-61-30	2/18/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/19/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/20/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/21/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/22/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	2/23/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	3/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	3/9/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	3/17/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	4/1/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	4/8/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	4/26/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	5/5/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	5/12/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	5/24/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	6/2/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	6/8/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	6/17/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	6/30/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing.
CH-61-30	7/16/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	8/2/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-61-30	8/15/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-62-15	11/12/20	10:45	NA	NA	ND	Loc A	Background	
CH-62-15	11/23/20	16:40	NA	NA	ND	Loc A	Background	
CH-62-15	11/30/20	12:50	NA	NA	ND	Loc A	Background	
CH-62-15	12/3/20	15:10	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/4/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/5/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/6/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/7/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/8/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/9/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/10/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/11/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/12/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/13/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/14/20	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/15/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/16/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/23/20	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	12/29/20	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	1/5/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	1/12/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	1/21/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	1/26/21	13:45	NA	NA	NA	Loc A	Post-Injection	
CH-62-15	2/2/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	2/12/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	2/23/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/1/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/5/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/11/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/17/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/24/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	3/31/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	4/14/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	5/3/21	14:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	5/14/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	6/3/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	6/4/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-15	6/5/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/6/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/7/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/8/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/10/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/11/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/12/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/13/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/14/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/15/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/16/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	6/17/21	12:25	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-62-15	6/25/21	13:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	7/3/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	7/9/21	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	7/14/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	7/23/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	7/30/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	8/8/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	8/13/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-62-15	8/20/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	8/27/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	9/7/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	9/9/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	9/10/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-15	9/11/21	15:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/12/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/13/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/14/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/15/21	14:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/16/21	13:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/17/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/18/21	14:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/19/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/20/21	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	9/22/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	10/1/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	10/19/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	10/29/21	8:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-62-15	11/5/21	12:30	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-62-15	11/12/21	13:55	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-62-15	11/19/21	14:10	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-62-15	12/30/21	13:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-62-15	1/6/22	11:05	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-62-15	1/14/22	13:55	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-62-15	1/24/22	11:05	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-62-15	2/8/22	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-15	2/10/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/11/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/12/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/13/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/14/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/15/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/16/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-62-15	2/18/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/19/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/20/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/21/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/22/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	2/23/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	3/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	3/9/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	3/17/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	4/1/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	4/8/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	4/26/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	5/5/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	5/12/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	5/24/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	6/2/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	6/8/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	6/17/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	6/30/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	7/16/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	8/2/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-15	8/15/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-62-26	11/12/20	10:45	NA	NA	ND	Loc A	Background	
CH-62-26	11/23/20	16:40	NA	NA	ND	Loc A	Background	
CH-62-26	11/30/20	12:50	NA	NA	ND	Loc A	Background	
CH-62-26	12/3/20	15:10	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/4/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/5/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/6/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/7/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/8/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/9/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/10/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/11/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/12/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/13/20	10:20	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/14/20	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/15/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/16/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/23/20	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	12/29/20	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	1/5/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	1/12/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	1/21/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	1/26/21	13:45	NA	NA	NA	Loc A	Post-Injection	
CH-62-26	2/2/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	2/12/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	2/23/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/1/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/5/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/11/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/17/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/24/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	3/31/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	4/14/21	13:45	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	5/3/21	14:55	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	5/14/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	6/3/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	6/4/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-62-26	6/5/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/6/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/7/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/8/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/10/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/11/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/12/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/13/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/14/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/15/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/16/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	6/17/21	12:25	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-62-26	6/25/21	13:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	7/3/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	7/9/21	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	7/14/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	7/23/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	7/30/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	8/8/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	8/13/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-62-26	8/20/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	8/27/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	9/7/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	9/9/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	9/10/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-62-26	9/11/21	15:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/12/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/13/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/14/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/15/21	14:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/16/21	13:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/17/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/18/21	14:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/19/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/20/21	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	9/22/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	10/1/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	10/19/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	10/29/21	8:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-62-26	11/5/21	12:30	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-62-26	11/12/21	13:55	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-62-26	11/19/21	14:10	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-62-26	12/30/21	13:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-62-26	1/6/22	11:05	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-62-26	1/14/22	13:55	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-62-26	1/24/22	11:05	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-62-26	2/8/22	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-62-26	2/10/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/11/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/12/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/13/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/14/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/15/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/16/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-62-26	2/18/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/19/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/20/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/21/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/22/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	2/23/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	3/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	3/9/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	3/17/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	4/1/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	4/8/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	4/26/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	5/5/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	5/12/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	5/24/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	6/2/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	6/8/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	6/17/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	6/30/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	7/16/22	not collected	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	8/2/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-62-26	8/15/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-63	11/12/20	10:50	ND	ND	ND	Loc A	Background	
CH-63	11/23/20	14:30	ND	ND	ND	Loc A	Background	
CH-63	11/30/20	13:00	ND	ND	ND	Loc A	Background	
CH-63	12/3/20	15:10	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/4/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/5/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/6/20	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/7/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/8/20	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/9/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/10/20	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/11/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/12/20	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/13/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/14/20	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/15/20	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/16/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/23/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	12/29/20	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	1/5/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	1/12/21	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	1/21/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	1/26/21	13:40	NA	NA	NA	Loc A	Post-Injection	
CH-63	2/2/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-63	2/12/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-63	2/23/21	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/1/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/5/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/11/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/17/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/24/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-63	3/31/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	4/14/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-63	5/3/21	14:40	NA	NA	ND	Loc A	Post-Injection	
CH-63	5/14/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	6/3/21	13:50	NA	NA	ND	Loc A	Post-Injection	
CH-63	6/4/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-63	6/5/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/6/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/7/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/8/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/10/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/11/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/12/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/13/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/14/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/15/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/16/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	6/17/21	12:20	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-63	6/25/21	13:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	7/3/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	7/9/21	14:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	7/14/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	7/23/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	7/30/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	8/8/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	8/13/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-63	8/20/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	8/27/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	9/7/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	9/9/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	9/10/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-63	9/11/21	15:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/12/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/13/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/14/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/15/21	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/16/21	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/17/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/18/21	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/19/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/20/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	9/22/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	10/1/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	10/19/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	10/29/21	9:00	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-63	11/5/21	12:25	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-63	11/12/21	13:50	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-63	11/19/21	14:05	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-63	12/30/21	13:30	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-63	1/6/22	11:00	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-63	1/14/22	13:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-63	1/24/22	11:00	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-63	2/8/22	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-63	2/10/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/11/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/12/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/13/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/14/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/15/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/16/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-63	2/18/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/19/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/20/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/21/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/22/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	2/23/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	3/2/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	3/9/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	3/17/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	4/1/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	4/8/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	4/26/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	5/5/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	5/12/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	5/24/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	6/2/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	6/8/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	6/17/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	6/30/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	7/16/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	8/2/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-63	8/15/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-64-24	11/12/20	10:55	NA	NA	ND	Loc A	Background	
CH-64-24	11/23/20	12:30	NA	NA	ND	Loc A	Background	
CH-64-24	11/30/20	12:35	NA	NA	ND	Loc A	Background	
CH-64-24	12/3/20	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/4/20	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/5/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/6/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/7/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/8/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/9/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/10/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/11/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/12/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/13/20	10:05	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/14/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/15/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/16/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/23/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	12/29/20	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	1/5/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	1/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	1/21/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	1/26/21	13:35	NA	NA	NA	Loc A	Post-Injection	
CH-64-24	2/2/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	2/12/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	2/23/21	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/1/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/5/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/11/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/17/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/24/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	3/31/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	4/14/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	5/3/21	14:30	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	5/14/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	6/3/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	6/4/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-24	6/5/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/6/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/7/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/8/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/9/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/10/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/11/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/12/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/13/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/15/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/16/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	6/17/21	12:10	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-64-24	6/25/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	7/3/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	7/9/21	13:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	7/14/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	7/23/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	7/30/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	8/8/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	8/13/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-64-24	8/20/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	8/27/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	9/7/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	9/9/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	9/10/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-24	9/11/21	15:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/12/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/13/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/14/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/15/21	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/16/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/17/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/18/21	13:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/19/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/20/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	9/22/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	10/1/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	10/19/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	10/29/21	9:10	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-64-24	11/5/21	12:15	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-64-24	11/12/21	13:40	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-64-24	11/19/21	13:55	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-64-24	12/30/21	13:20	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-64-24	1/6/22	10:50	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-64-24	1/14/22	13:40	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-64-24	1/24/22	10:50	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-64-24	2/8/22	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-24	2/10/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/11/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/12/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/13/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/14/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/15/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/16/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-64-24	2/18/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/19/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/20/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/21/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/22/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	2/23/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	3/2/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	3/9/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	3/17/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	4/1/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	4/8/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	4/26/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	5/5/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	5/12/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	5/24/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	6/2/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	6/8/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	6/17/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	6/30/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	7/16/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	8/2/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	8/15/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-64-43	11/23/20	12:30	NA	NA	ND	Loc A	Background	
CH-64-43	11/30/20	12:35	NA	NA	ND	Loc A	Background	
CH-64-43	12/3/20	14:15	NA	NA	ND	Loc A	Background	
CH-64-43	12/4/20	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/5/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/6/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/7/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/8/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/9/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/10/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/11/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/12/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/13/20	10:05	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/14/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/15/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/16/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/23/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	12/29/20	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	1/5/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	1/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	1/21/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	1/26/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	2/2/21	13:10	NA	NA	NA	Loc A	Post-Injection	
CH-64-43	2/12/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	2/23/21	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/1/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/5/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/11/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/17/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/24/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	3/31/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	4/14/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	5/3/21	14:30	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	5/14/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	6/3/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	6/4/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	6/5/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-64-43	6/6/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/7/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/8/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/9/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/10/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/11/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/12/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/13/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/15/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/16/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/17/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	6/25/21	13:15	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-64-43	7/3/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	7/9/21	13:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	7/14/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	7/23/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	7/30/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	8/8/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	8/13/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	8/20/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-64-43	8/27/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	9/7/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	9/9/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	9/10/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	9/11/21	15:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-64-43	9/12/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/13/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/14/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/15/21	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/16/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/17/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/18/21	13:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/19/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/20/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	9/22/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	10/1/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	10/19/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	10/29/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	11/5/21	12:15	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-64-43	11/12/21	13:40	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-64-43	11/19/21	13:55	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-64-43	12/30/21	13:20	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-64-43	1/6/22	10:50	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-64-43	1/14/22	13:40	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-64-43	1/24/22	10:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-64-43	2/8/22	11:00	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-64-43	2/10/22	14:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-64-43	2/11/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/12/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/13/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/14/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/15/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/16/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
CH-64-43	2/18/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/19/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/20/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/21/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/22/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	2/23/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	3/2/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	3/9/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	3/17/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	4/1/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	4/8/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	4/26/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	5/5/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	5/12/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	5/24/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	6/2/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	6/8/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	6/17/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	6/30/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	7/16/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	8/2/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-43	8/15/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-64-24	8/15/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-65-33	11/12/20	12:35	ND	ND	ND	Loc A	Background	
CH-65-33	11/23/20	14:30	ND	ND	ND	Loc A	Background	
CH-65-33	11/30/20	15:00	ND	ND	ND	Loc A	Background	
CH-65-33	12/3/20	16:25	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/4/20	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/5/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/6/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/7/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-65-33	12/9/20	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/10/20	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/11/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/12/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/13/20	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/14/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/15/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/16/20	11:43	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/23/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	12/29/20	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	1/5/21	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	1/12/21	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	1/21/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	1/26/21	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	2/2/21	9:10	NA	NA	NA	Loc A	Post-Injection	
CH-65-33	2/12/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	2/23/21	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/1/21	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/5/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/11/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/17/21	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/24/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	3/31/21	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	4/14/21	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	5/3/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	5/14/21	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	6/3/21	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	6/4/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	6/5/21	8:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-33	6/6/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/7/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/8/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/9/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/10/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/11/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/12/21	8:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/13/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/14/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/15/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/16/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/17/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	6/25/21	9:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-65-33	7/3/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	7/9/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	7/14/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	7/23/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	7/30/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	8/8/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	8/13/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-65-33	8/20/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	8/27/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	9/7/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	9/9/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	9/10/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	9/11/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-33	9/12/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/13/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/14/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/15/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/16/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/17/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/18/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/19/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/20/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	9/22/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	10/1/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	10/19/21	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	10/29/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	11/5/21	9:00	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-65-33	11/12/21	9:10	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-65-33	11/19/21	8:30	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-65-33	12/30/21	10:50	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-65-33	1/6/22	12:25	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-65-33	1/14/22	9:15	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-65-33	1/24/22	12:45	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-65-33	2/8/22	12:55	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-65-33	2/10/22	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-33	2/11/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/12/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/13/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/14/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/15/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/16/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/17/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/18/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/19/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/20/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/21/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/22/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	2/23/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	3/2/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	3/9/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	3/17/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	4/1/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	4/8/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	4/26/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	5/5/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	5/12/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	5/18/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	6/2/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	6/8/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	6/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	6/30/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	7/16/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	8/2/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-33	8/15/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-65-50	11/12/20	----	----	----	----	Loc A	Background	ACS missing.
CH-65-50	11/23/20	14:30	NA	NA	ND	Loc A	Background	
CH-65-50	11/30/20	15:00	NA	NA	ND	Loc A	Background	
CH-65-50	12/3/20	16:25	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/4/20	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-65-50	12/6/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/7/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/8/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/9/20	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/10/20	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/11/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/12/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/13/20	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/14/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/15/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/16/20	11:43	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/23/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	12/29/20	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	1/5/21	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-65-50	1/12/21	8:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	1/21/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	1/26/21	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	2/2/21	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	2/12/21	10:30	NA	NA	NA	Loc A	Post-Injection	
CH-65-50	2/23/21	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/1/21	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/5/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/11/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/17/21	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/24/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	3/31/21	8:55	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	4/14/21	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	5/3/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	5/14/21	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	6/3/21	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	6/4/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	6/5/21	8:35	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	6/6/21	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-65-50	6/7/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/8/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/9/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/10/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/11/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/12/21	8:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/13/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/14/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/15/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/16/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/17/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	6/25/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	7/3/21	8:35	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-65-50	7/9/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	7/14/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	7/23/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	7/30/21	13:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	8/8/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	8/13/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-65-50	8/20/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	8/27/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/7/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/9/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/10/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/11/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/12/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-65-50	9/13/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/14/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/15/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/16/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/17/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/18/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/19/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/20/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	9/22/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	10/1/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	10/19/21	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	10/29/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	11/5/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	11/12/21	9:10	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-65-50	11/19/21	8:30	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-65-50	12/30/21	10:50	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-65-50	1/6/22	12:25	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-65-50	1/14/22	9:15	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-65-50	1/24/22	12:45	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-65-50	2/8/22	12:55	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-65-50	2/10/22	9:25	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-65-50	2/11/22	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-65-50	2/12/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/13/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/14/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/15/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/16/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/17/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/18/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/19/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/20/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/21/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/22/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	2/23/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	3/2/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	3/9/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	3/17/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	4/1/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	4/8/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	4/26/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	5/5/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	5/12/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	5/18/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	6/2/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	6/8/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	6/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	6/30/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	7/16/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	8/2/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-65-50	8/15/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-66-37	11/12/20	11:05	ND	ND	ND	Loc A	Background	
CH-66-37	11/23/20	12:05	ND	ND	ND	Loc A	Background	
CH-66-37	11/30/20	12:25	ND	ND	ND	Loc A	Background	
CH-66-37	12/3/20	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/4/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/5/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/6/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/7/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/8/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/9/20	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/10/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/11/20	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/12/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/13/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/14/20	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/15/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/16/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/23/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	12/29/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	1/5/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	1/12/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	1/21/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	1/26/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	2/2/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	2/12/21	12:45	NA	NA	NA	Loc A	Post-Injection	
CH-66-37	2/23/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/1/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/5/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/11/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/17/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/24/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	3/31/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	4/14/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	5/3/21	14:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	5/14/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	6/3/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	6/4/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	6/5/21	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	6/6/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-37	6/7/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/8/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/9/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/10/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/11/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/12/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/13/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/15/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/16/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/17/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	6/25/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	7/3/21	12:15	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-66-37	7/9/21	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	7/14/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	7/23/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	7/30/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	8/8/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	8/13/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-66-37	8/20/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	8/27/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/7/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/9/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/10/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/11/21	14:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/12/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-37	9/13/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/14/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/15/21	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/16/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/17/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/18/21	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/19/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/20/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	9/22/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	10/1/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	10/19/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	10/29/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	11/5/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	11/12/21	13:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-66-37	11/19/21	13:50	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-66-37	12/30/21	13:15	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-66-37	1/6/22	10:45	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-66-37	1/14/22	13:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-66-37	1/24/22	10:45	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-66-37	2/8/22	10:35	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-66-37	2/10/22	14:35	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-66-37	2/11/22	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-37	2/12/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/13/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/14/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/15/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/16/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-66-37	2/18/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/19/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/20/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/21/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/22/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	2/23/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	3/2/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	3/9/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	3/17/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	4/1/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	4/8/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	4/26/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	5/5/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	5/12/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	5/24/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	6/2/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	6/8/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	6/17/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	6/30/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	7/16/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	8/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-37	8/15/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-66-50	11/12/20	11:05	ND	ND	ND	Loc A	Background	
CH-66-50	11/23/20	12:05	ND	ND	ND	Loc A	Background	
CH-66-50	11/30/20	12:25	ND	ND	ND	Loc A	Background	
CH-66-50	12/3/20	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/4/20	10:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/5/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/6/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/7/20	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/8/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/9/20	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/10/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/11/20	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/12/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/13/20	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/14/20	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/15/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/16/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/23/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	12/29/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	1/5/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	1/12/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	1/21/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	1/26/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	2/2/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	2/12/21	12:45	NA	NA	NA	Loc A	Post-Injection	
CH-66-50	2/23/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/1/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/5/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/11/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/17/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/24/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	3/31/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	4/14/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	5/3/21	14:25	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	5/14/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	6/3/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	6/4/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	6/5/21	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	6/6/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-66-50	6/7/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/8/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/9/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/10/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/11/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/12/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/13/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/14/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/15/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/16/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/17/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	6/25/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	7/3/21	12:15	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-66-50	7/9/21	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	7/14/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	7/23/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	7/30/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	8/8/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	8/13/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-66-50	8/20/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	8/27/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/7/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/9/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/10/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/11/21	14:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/12/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-66-50	9/13/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/14/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/15/21	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/16/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/17/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/18/21	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/19/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/20/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	9/22/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	10/1/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	10/19/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	10/29/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	11/5/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	11/12/21	13:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-66-50	11/19/21	13:50	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-66-50	12/30/21	13:15	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-66-50	1/6/22	10:45	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-66-50	1/14/22	13:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-66-50	1/24/22	10:45	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-66-50	2/8/22	10:35	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-66-50	2/10/22	14:35	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-66-50	2/11/22	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-66-50	2/12/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/13/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/14/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/15/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/16/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-66-50	2/18/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/19/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/20/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/21/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/22/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	2/23/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	3/2/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	3/9/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	3/17/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	4/1/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	4/8/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	4/26/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	5/5/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	5/12/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	5/24/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	6/2/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	6/8/22	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	6/17/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	6/30/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	7/16/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	8/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-66-50	8/15/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-67-40	11/12/20	12:00	ND	ND	ND	Loc A	Background	
CH-67-40	11/23/20	15:30	ND	ND	ND	Loc A	Background	String tangled and charcoal out of water.
CH-67-40	11/30/20	15:05	ND	ND	ND	Loc A	Background	
CH-67-40	12/3/20	16:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/4/20	8:20	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/5/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/6/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/7/20	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/8/20	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/9/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/10/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/11/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/12/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/13/20	8:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/14/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/15/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/16/20	11:56	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	12/23/20	10:05	NA	NA	ND	Loc A	Post-Injection	Cap not on well.
CH-67-40	12/29/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	1/5/21	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	1/12/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	1/21/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	1/26/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	2/2/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	2/12/21	10:45	NA	NA	NA	Loc A	Post-Injection	
CH-67-40	2/23/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/1/21	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/5/21	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/11/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/17/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/24/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	3/31/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	4/14/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	5/3/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	5/14/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	6/3/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	6/4/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	6/5/21	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	6/6/21	10:05	NA	NA	ND	Loc A	Post-Injection	
CH-67-40	6/7/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/8/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/9/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/10/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/11/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/12/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/13/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/14/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/15/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/16/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/17/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	6/25/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	7/3/21	10:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-67-40	7/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	7/14/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	7/23/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	7/30/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	8/8/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	8/13/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-67-40	8/20/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	8/27/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/7/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/9/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/10/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/11/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/12/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-40	9/13/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/14/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/15/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/16/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/17/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/18/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/19/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/20/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	9/22/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	10/1/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	10/19/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	10/29/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	11/5/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	11/12/21	10:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-67-40	11/19/21	10:05	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-67-40	12/30/21	9:20	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-67-40	1/6/22	13:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-67-40	1/14/22	10:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-67-40	1/24/22	13:20	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-67-40	2/8/22	14:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-67-40	2/10/22	10:50	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-67-40	2/11/22	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-40	2/12/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/13/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/14/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/15/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/16/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/17/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/18/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/19/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/20/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/21/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/22/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	2/23/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	3/2/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	3/9/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	3/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	4/1/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	4/8/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	4/26/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	5/5/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	5/12/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	5/24/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	6/2/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	6/8/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	6/17/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	6/30/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	7/16/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	8/2/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-40	8/15/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-67-67	11/12/20	12:00	NA	NA	ND	Loc A	Background	
CH-67-67	11/23/20	15:30	NA	NA	ND	Loc A	Background	String tangled and charcoal out of water.
CH-67-67	11/30/20	15:05	NA	NA	ND	Loc A	Background	
CH-67-67	12/3/20	16:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/4/20	8:20	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/5/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/6/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/7/20	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-67-67	12/9/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/10/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/11/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/12/20	9:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/13/20	8:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/14/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/15/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/16/20	11:56	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	12/23/20	10:05	NA	NA	ND	Loc A	Post-Injection	Cap not on well.
CH-67-67	12/29/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	1/5/21	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	1/12/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	1/21/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	1/26/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	2/2/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	2/12/21	10:45	NA	NA	NA	Loc A	Post-Injection	
CH-67-67	2/23/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/1/21	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/5/21	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/11/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/17/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/24/21	10:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	3/31/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	4/14/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	5/3/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	5/14/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	6/3/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	6/4/21	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	6/5/21	9:55	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	6/6/21	10:05	NA	NA	ND	Loc A	Post-Injection	
CH-67-67	6/7/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/8/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/9/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/10/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/11/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/12/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/13/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/14/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/15/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/16/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/17/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	6/25/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	7/3/21	10:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-67-67	7/9/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	7/14/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	7/23/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	7/30/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	8/8/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	8/13/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-67-67	8/20/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	8/27/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/7/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/9/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/10/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/11/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/12/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-67-67	9/13/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/14/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/15/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/16/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/17/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/18/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/19/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/20/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	9/22/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	10/1/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	10/19/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	10/29/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	11/5/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	11/12/21	10:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-67-67	11/19/21	10:05	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-67-67	12/30/21	9:20	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-67-67	1/6/22	13:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-67-67	1/14/22	10:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-67-67	1/24/22	13:20	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-67-67	2/8/22	14:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-67-67	2/10/22	10:50	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-67-67	2/11/22	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-67-67	2/12/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/13/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/14/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/15/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/16/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/17/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/18/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/19/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/20/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/21/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/22/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	2/23/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	3/2/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	3/9/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	3/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	4/1/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	4/8/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	4/26/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	5/5/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	5/12/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	5/24/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	6/2/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	6/8/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	6/17/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	6/30/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	7/16/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	8/2/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-67-67	8/15/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-68-30	11/12/20	11:15	ND	ND	ND	Loc A	Background	
CH-68-30	11/23/20	10:50	ND	ND	ND	Loc A	Background	
CH-68-30	11/30/20	11:35	ND	ND	ND	Loc A	Background	
CH-68-30	12/3/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/4/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/5/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/6/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/7/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/8/20	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/9/20	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/10/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/11/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/12/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/13/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/14/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/15/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/16/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/23/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	12/29/20	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	1/5/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	1/12/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	1/21/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	1/26/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	2/2/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	2/12/21	13:05	NA	NA	NA	Loc A	Post-Injection	
CH-68-30	2/23/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/1/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/5/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/11/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/17/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/24/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	3/31/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	4/14/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	5/3/21	14:05	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	5/14/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	6/3/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	6/4/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	6/5/21	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	6/6/21	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-30	6/7/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/8/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/9/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/10/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/11/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/12/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/13/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/14/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/15/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/16/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/17/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	6/25/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	7/3/21	11:55	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-68-30	7/9/21	13:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	7/14/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	7/23/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	7/30/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	8/8/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	8/13/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-68-30	8/20/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	8/27/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/7/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/10/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/11/21	14:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/12/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-30	9/13/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/14/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/15/21	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/16/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/17/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/18/21	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/20/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	9/22/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	10/1/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	10/19/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	10/29/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	11/5/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	11/12/21	13:20	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-68-30	11/19/21	13:45	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-68-30	12/30/21	13:00	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-68-30	1/6/22	10:40	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-68-30	1/14/22	13:30	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-68-30	1/24/22	10:30	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-68-30	2/8/22	10:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-68-30	2/10/22	14:20	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-68-30	2/11/22	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-30	2/12/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/13/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/14/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/15/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/16/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-68-30	2/18/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/19/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/20/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/21/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/22/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	2/23/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	3/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	3/9/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	3/17/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	4/1/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	4/8/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	4/26/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	5/5/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	5/12/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	5/24/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	6/2/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	6/8/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	6/17/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	6/30/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	7/16/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	8/2/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-30	8/15/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-68-62	11/12/20	11:15	ND	ND	ND	Loc A	Background	
CH-68-62	11/23/20	10:50	ND	ND	ND	Loc A	Background	
CH-68-62	11/30/20	11:35	ND	ND	ND	Loc A	Background	
CH-68-62	12/3/20	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/4/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/5/20	11:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/6/20	9:15	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/7/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/8/20	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/9/20	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/10/20	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/11/20	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/12/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/13/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/14/20	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/15/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/16/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/23/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	12/29/20	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	1/5/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	1/12/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	1/21/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	1/26/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	2/2/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	2/12/21	13:05	NA	NA	NA	Loc A	Post-Injection	
CH-68-62	2/23/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/1/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/5/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/11/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/17/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/24/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	3/31/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	4/14/21	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	5/3/21	14:05	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	5/14/21	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	6/3/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	6/4/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	6/5/21	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	6/6/21	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-68-62	6/7/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/8/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/9/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/10/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/11/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/12/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/13/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/14/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/15/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/16/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/17/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	6/25/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	7/3/21	11:55	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-68-62	7/9/21	13:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	7/14/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	7/23/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	7/30/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	8/8/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	8/13/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-68-62	8/20/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	8/27/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/7/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/10/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/11/21	14:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/12/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-68-62	9/13/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/14/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/15/21	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/16/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/17/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/18/21	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/20/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	9/22/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	10/1/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	10/19/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	10/29/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	11/5/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	11/12/21	13:20	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-68-62	11/19/21	13:45	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-68-62	12/30/21	13:00	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-68-62	1/6/22	10:40	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-68-62	1/14/22	13:30	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-68-62	1/24/22	10:30	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-68-62	2/8/22	10:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-68-62	2/10/22	14:20	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-68-62	2/11/22	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-68-62	2/12/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/13/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/14/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/15/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/16/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
CH-68-62	2/18/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/19/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/20/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/21/22	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/22/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	2/23/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	3/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	3/9/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	3/17/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	4/1/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	4/8/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	4/26/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	5/5/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	5/12/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	5/24/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	6/2/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	6/8/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	6/17/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	6/30/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	7/16/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	8/2/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-68-62	8/15/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-69-50	11/12/20	12:05	ND	ND	ND	Loc A	Background	
CH-69-50	11/23/20	15:45	ND	ND	ND	Loc A	Background	
CH-69-50	11/30/20	15:15	ND	ND	ND	Loc A	Background	
CH-69-50	12/3/20	16:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/4/20	8:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/5/20	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/6/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/7/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/8/20	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/9/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/10/20	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/11/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/12/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/13/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/14/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/15/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/16/20	12:01	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/23/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	12/29/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	1/5/21	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	1/12/21	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	1/21/21	10:45	NA	NA	ND	Loc A	Post-Injection	Cap off well.
CH-69-50	1/26/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	2/2/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	2/12/21	10:45	NA	NA	NA	Loc A	Post-Injection	
CH-69-50	2/23/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/1/21	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/5/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/11/21	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/17/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/24/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	3/31/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	4/14/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	5/3/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	5/14/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	6/3/21	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	6/4/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	6/5/21	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	6/6/21	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-50	6/7/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/8/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/9/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/10/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/11/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/12/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/13/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/14/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/15/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/16/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/17/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	6/25/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	7/3/21	10:05	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-69-50	7/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	7/14/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	7/23/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	7/30/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	8/8/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	8/13/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	ACS on ground next to well.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-69-50	8/20/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	8/27/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/7/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/9/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/10/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/11/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/12/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-50	9/13/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/14/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/15/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/16/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/17/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/18/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/19/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/20/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	9/22/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	10/1/21	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	10/19/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	10/29/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	11/5/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	11/12/21	10:50	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-69-50	11/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-69-50	12/30/21	9:25	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-69-50	1/6/22	13:35	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-69-50	1/14/22	10:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-69-50	1/24/22	13:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-69-50	2/8/22	14:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-69-50	2/10/22	10:55	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-69-50	2/11/22	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-50	2/12/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/13/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/14/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/15/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/16/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/17/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/18/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/19/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/20/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/21/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/22/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	2/23/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	3/2/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	3/9/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	3/17/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	4/1/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	4/8/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	4/26/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	5/5/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	5/12/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	5/24/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	6/2/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	6/8/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	6/17/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	6/30/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	7/16/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	8/2/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-50	8/15/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-69-70	11/12/20	12:05	ND	ND	ND	Loc A	Background	
CH-69-70	11/23/20	15:45	ND	ND	ND	Loc A	Background	
CH-69-70	11/30/20	15:15	ND	ND	ND	Loc A	Background	
CH-69-70	12/3/20	16:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/4/20	8:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/5/20	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/6/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/7/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/8/20	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/9/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/10/20	8:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/11/20	9:25	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/12/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/13/20	8:40	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/14/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/15/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/16/20	12:01	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/23/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	12/29/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	1/5/21	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	1/12/21	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	1/21/21	10:45	NA	NA	ND	Loc A	Post-Injection	Cap off well.
CH-69-70	1/26/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	2/2/21	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	2/12/21	10:45	NA	NA	NA	Loc A	Post-Injection	
CH-69-70	2/23/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/1/21	11:15	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/5/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/11/21	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/17/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/24/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	3/31/21	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	4/14/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	5/3/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	5/14/21	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	6/3/21	11:50	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	6/4/21	9:05	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	6/5/21	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	6/6/21	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-69-70	6/7/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/8/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/9/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/10/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/11/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/12/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/13/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/14/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/15/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/16/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/17/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	6/25/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	7/3/21	10:05	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-69-70	7/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	7/14/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	7/23/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	7/30/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	8/8/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	8/13/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	ACS on ground next to well.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-69-70	8/20/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	8/27/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/7/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/9/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/10/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/11/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/12/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-69-70	9/13/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/14/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/15/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/16/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/17/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/18/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/19/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/20/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	9/22/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	10/1/21	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	10/19/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	10/29/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	11/5/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	11/12/21	10:50	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-69-70	11/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-69-70	12/30/21	9:25	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-69-70	1/6/22	13:35	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-69-70	1/14/22	10:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-69-70	1/24/22	13:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-69-70	2/8/22	14:15	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-69-70	2/10/22	10:55	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-69-70	2/11/22	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-69-70	2/12/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/13/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/14/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/15/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/16/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/17/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/18/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/19/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/20/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/21/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/22/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	2/23/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	3/2/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	3/9/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	3/17/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	4/1/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	4/8/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	4/26/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	5/5/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	5/12/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	5/24/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	6/2/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	6/8/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	6/17/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	6/30/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	7/16/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	8/2/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-69-70	8/15/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-70-54	11/12/20	11:25	ND	ND	ND	Loc A	Background	
CH-70-54	11/23/20	10:45	ND	ND	ND	Loc A	Background	
CH-70-54	11/30/20	11:25	ND	ND	ND	Loc A	Background	
CH-70-54	12/3/20	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/4/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/5/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/6/20	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/7/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/8/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/9/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/10/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/11/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/12/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/13/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/14/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/15/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/16/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/23/20	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	12/29/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	1/5/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	1/12/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	1/21/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	1/26/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	2/2/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	2/12/21	12:55	NA	NA	NA	Loc A	Post-Injection	
CH-70-54	2/23/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/1/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/5/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/11/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/17/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/24/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	3/31/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	4/14/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	5/3/21	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	5/14/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	6/3/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	6/4/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	6/5/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	6/6/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-70-54	6/7/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/8/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/10/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/11/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/12/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/13/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/14/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/15/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/16/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/17/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	6/25/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	7/3/21	12:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-70-54	7/9/21	13:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	7/14/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	7/23/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	7/30/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	8/8/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	8/13/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-70-54	8/20/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	8/27/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/7/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/9/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/10/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/11/21	14:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/12/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-54	9/13/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/14/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/15/21	14:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/16/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/17/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/18/21	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/19/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/20/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	9/22/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	10/1/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	10/19/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	10/29/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	11/5/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	11/12/21	13:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-70-54	11/19/21	13:35	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-70-54	12/30/21	13:05	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-70-54	1/6/22	10:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-70-54	1/14/22	13:20	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-70-54	1/24/22	10:35	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-70-54	2/8/22	10:40	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-70-54	2/10/22	14:25	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-70-54	2/11/22	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-54	2/12/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/13/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/14/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/15/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/16/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-70-54	2/18/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/19/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/20/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/21/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/22/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	2/23/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	3/2/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	3/9/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	3/17/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	4/1/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	4/8/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	4/26/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	5/5/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	5/12/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	5/24/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	6/2/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	6/8/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	6/17/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	6/30/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	7/16/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	8/2/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-54	8/15/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS on ground next to well

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-70-74	11/12/20	11:25	ND	ND	ND	Loc A	Background	
CH-70-74	11/23/20	10:45	ND	ND	ND	Loc A	Background	
CH-70-74	11/30/20	11:25	ND	ND	ND	Loc A	Background	
CH-70-74	12/3/20	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/4/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/5/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/6/20	9:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/7/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/8/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/9/20	11:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/10/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/11/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/12/20	10:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/13/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/14/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/15/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/16/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/23/20	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	12/29/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	1/5/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	1/12/21	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	1/21/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	1/26/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	2/2/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	2/12/21	12:55	NA	NA	NA	Loc A	Post-Injection	
CH-70-74	2/23/21	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/1/21	12:50	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/5/21	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/11/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/17/21	12:10	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/24/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	3/31/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	4/14/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	5/3/21	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	5/14/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	6/3/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	6/4/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	6/5/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	6/6/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-70-74	6/7/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/8/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/9/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/10/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/11/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/12/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/13/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/14/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/15/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/16/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/17/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	6/25/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	7/3/21	12:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-70-74	7/9/21	13:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	7/14/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	7/23/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	7/30/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	8/8/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	8/13/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-70-74	8/20/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	8/27/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/7/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/9/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/10/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/11/21	14:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/12/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-70-74	9/13/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/14/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/15/21	14:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/16/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/17/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/18/21	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/19/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/20/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	9/22/21	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	10/1/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	10/19/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	10/29/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	11/5/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	11/12/21	13:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-70-74	11/19/21	13:35	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-70-74	12/30/21	13:05	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-70-74	1/6/22	10:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-70-74	1/14/22	13:20	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-70-74	1/24/22	10:35	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-70-74	2/8/22	10:40	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-70-74	2/10/22	14:25	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-70-74	2/11/22	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-70-74	2/12/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/13/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/14/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/15/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/16/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-70-74	2/18/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/19/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/20/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/21/22	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/22/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	2/23/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	3/2/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	3/9/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	3/17/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	4/1/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	4/8/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	4/26/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	5/5/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	5/12/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	5/24/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	6/2/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	6/8/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	6/17/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	6/30/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	7/16/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	8/2/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-70-74	8/15/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS on ground next to well.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-71	11/12/20	----	----	----	----	Loc A	Background	Not collected
CH-71	11/23/20	11:25	ND	ND	ND	Loc A	Background	
CH-71	11/30/20	12:00	ND	ND	ND	Loc A	Background	
CH-71	12/3/20	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/4/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/5/20	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/6/20	9:20	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/7/20	11:05	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/8/20	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/9/20	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/10/20	11:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/11/20	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/12/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/13/20	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/14/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/15/20	9:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/16/20	10:30	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/23/20	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-71	12/29/20	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-71	1/5/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-71	1/12/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-71	1/21/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	1/26/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-71	2/2/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-71	2/12/21	12:50	NA	NA	NA	Loc A	Post-Injection	
CH-71	2/23/21	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/1/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/5/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/11/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/17/21	12:15	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/24/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-71	3/31/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-71	4/14/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-71	5/3/21	14:10	NA	NA	ND	Loc A	Post-Injection	
CH-71	5/14/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-71	6/3/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-71	6/4/21	12:45	NA	NA	ND	Loc A	Post-Injection	
CH-71	6/5/21	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-71	6/6/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-71	6/7/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/8/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/9/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/10/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/11/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/12/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/13/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/14/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/15/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/16/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/17/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	6/25/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	7/3/21	12:05	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-71	7/9/21	13:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	7/14/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	7/23/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	7/30/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	8/8/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	8/13/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	8/20/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	8/27/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-71	9/7/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-72-30	11/12/20	----	----	----	----	Loc A	Background	Not collected.
CH-72-30	11/23/20	11:25	NA	NA	ND	Loc A	Background	
CH-72-30	11/30/20	11:50	NA	NA	ND	Loc A	Background	
CH-72-30	12/3/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/4/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/5/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/6/20	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/7/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/8/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/9/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/10/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/11/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-72-30	12/12/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/13/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-72-30	12/15/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/16/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	12/23/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-72-22	12/29/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	1/5/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	1/12/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	1/21/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	1/26/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	2/2/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	2/12/21	13:00	NA	NA	NA	Loc A	Post-Injection	
CH-72-30	2/23/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/1/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/5/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/11/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/17/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/24/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	3/31/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	4/14/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	5/3/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	5/14/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	6/3/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	6/4/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	6/5/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	6/6/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-30	6/7/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-72-42	11/12/20	----	----	----	----	Loc A	Background	Not collected.
CH-72-42	11/23/20	11:25	ND	ND	ND	Loc A	Background	
CH-72-42	11/30/20	11:50	ND	ND	ND	Loc A	Background	
CH-72-42	12/3/20	13:10	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/4/20	9:50	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/5/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/6/20	9:10	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/7/20	10:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/8/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/9/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/10/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/11/20	12:00	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/12/20	10:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/13/20	9:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-72-42	12/15/20	9:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/16/20	10:45	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	12/23/20	----	----	----	----	Loc A	Post-Injection	Not collected.
CH-72-42	12/29/20	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	1/5/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	1/12/21	12:05	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	1/21/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	1/26/21	13:20	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	2/2/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	2/12/21	13:00	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	2/23/21	10:50	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/1/21	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/5/21	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/11/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/17/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/24/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	3/31/21	13:05	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	4/14/21	13:15	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	5/3/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	5/14/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	6/3/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	6/4/21	12:40	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	6/5/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	6/6/21	11:35	NA	NA	ND	Loc A	Post-Injection	
CH-72-42	6/7/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/8/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/9/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/10/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/11/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/12/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/13/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/14/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/15/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/16/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/17/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	6/25/21	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	7/3/21	12:10	NA	ND	ND	Loc A, CH-74	Post-Injection	
CH-72-42	7/9/21	13:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	7/14/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	7/23/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	7/30/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	8/8/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	8/13/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-72-42	8/20/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	8/27/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/7/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/9/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/10/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/11/21	14:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/12/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
CH-72-42	9/13/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/14/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/15/21	14:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/16/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/17/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/18/21	13:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/19/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/20/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	9/22/21	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	10/1/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	10/19/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	10/29/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	11/5/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	11/12/21	13:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
CH-72-42	11/19/21	13:40	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
CH-72-42	12/30/21	13:10	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
CH-72-42	1/6/22	10:35	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
CH-72-42	1/14/22	13:25	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
CH-72-42	1/24/22	10:40	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
CH-72-42	2/8/22	10:45	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
CH-72-42	2/10/22	14:30	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
CH-72-42	2/11/22	14:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
CH-72-42	2/12/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/13/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/14/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/15/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/16/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
CH-72-42	2/18/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/19/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/20/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/21/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/22/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	2/23/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	3/2/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	3/9/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	3/17/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	4/1/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	4/8/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	4/26/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	5/5/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	5/12/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	5/24/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	6/2/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	6/8/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	6/17/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	6/30/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	7/16/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	8/2/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
CH-72-42	8/15/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
CH-73	11/12/20	----	----	----	----	Loc A	Background	Not collected.
CH-73	11/23/20	15:00	ND	ND	ND	Loc A	Background	
CH-73	11/30/20	----	----	----	----	Loc A	Background	Not collected.
CH-73	12/3/20	15:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/4/20	11:55	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/5/20	10:00	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/6/20	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/7/20	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/8/20	12:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/9/20	12:55	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/10/20	10:10	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/11/20	8:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/12/20	11:40	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/13/20	11:00	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/14/20	14:40	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/15/20	8:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/16/20	8:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/23/20	11:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	12/29/20	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	1/5/21	13:25	NA	NA	ND	Loc A	Post-Injection	
CH-73	1/12/21	11:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	1/21/21	13:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	1/26/21	14:20	NA	NA	ND	Loc A	Post-Injection	
CH-73	2/2/21	14:00	NA	NA	ND	Loc A	Post-Injection	
CH-73	2/12/21	11:50	NA	NA	NA	Loc A	Post-Injection	
CH-73	2/23/21	12:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/1/21	14:15	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/5/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/11/21	12:35	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/17/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/24/21	13:35	NA	NA	ND	Loc A	Post-Injection	
CH-73	3/31/21	12:20	NA	NA	ND	Loc A	Post-Injection	
CH-73	4/14/21	14:30	NA	NA	ND	Loc A	Post-Injection	
CH-73	5/3/21	15:05	NA	NA	ND	Loc A	Post-Injection	
CH-73	5/14/21	13:40	NA	NA	ND	Loc A	Post-Injection	
CH-73	6/3/21	8:35	NA	NA	ND	Loc A	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
Location B	11/12/20	----	----	----	----	Loc A	Background	Not collected.
Location B	11/23/20	12:35	NA	NA	ND	Loc A	Background	
Location B	11/30/20	12:40	NA	NA	ND	Loc A	Background	
Location B	12/3/20	14:20	NA	NA	ND	Loc A	Post-Injection	
Location B	12/4/20	10:35	NA	NA	ND	Loc A	Post-Injection	
Location B	12/5/20	10:35	NA	NA	ND	Loc A	Post-Injection	
Location B	12/6/20	10:25	NA	NA	ND	Loc A	Post-Injection	
Location B	12/7/20	11:35	NA	NA	ND	Loc A	Post-Injection	
Location B	12/8/20	11:40	NA	NA	ND	Loc A	Post-Injection	
Location B	12/9/20	11:40	NA	NA	ND	Loc A	Post-Injection	
Location B	12/10/20	10:55	NA	NA	ND	Loc A	Post-Injection	
Location B	12/11/20	11:25	NA	NA	ND	Loc A	Post-Injection	
Location B	12/12/20	11:05	NA	NA	ND	Loc A	Post-Injection	
Location B	12/13/20	10:10	NA	NA	ND	Loc A	Post-Injection	
Location B	12/14/20	10:11	NA	NA	ND	Loc A	Post-Injection	
Location B	12/15/20	10:12	NA	NA	ND	Loc A	Post-Injection	
Location B	12/16/20	10:13	NA	NA	ND	Loc A	Post-Injection	
Location B	12/23/20	10:14	NA	NA	ND	Loc A	Post-Injection	
Location B	12/29/20	12:55	NA	NA	ND	Loc A	Post-Injection	
Location B	1/5/21	12:55	NA	NA	ND	Loc A	Post-Injection	
Location B	1/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
Location B	1/21/21	12:45	NA	NA	ND	Loc A	Post-Injection	
Location B	1/26/21	13:35	NA	NA	ND	Loc A	Post-Injection	
Location B	2/2/21	13:10	NA	NA	ND	Loc A	Post-Injection	
Location B	2/12/21	12:30	NA	NA	NA	Loc A	Post-Injection	
Location B	2/23/21	11:15	NA	NA	ND	Loc A	Post-Injection	
Location B	3/1/21	13:15	NA	NA	ND	Loc A	Post-Injection	
Location B	3/5/21	12:15	NA	NA	ND	Loc A	Post-Injection	
Location B	3/11/21	13:15	NA	NA	ND	Loc A	Post-Injection	
Location B	3/17/21	12:45	NA	NA	ND	Loc A	Post-Injection	
Location B	3/24/21	12:50	NA	NA	ND	Loc A	Post-Injection	
Location B	3/31/21	12:45	NA	NA	ND	Loc A	Post-Injection	
Location B	4/14/21	13:30	NA	NA	ND	Loc A	Post-Injection	
Location B	5/3/21	14:35	NA	NA	ND	Loc A	Post-Injection	
Location B	5/14/21	12:45	NA	NA	ND	Loc A	Post-Injection	
Location B	6/3/21	13:45	NA	NA	ND	Loc A	Post-Injection	
Location B	6/4/21	13:00	NA	NA	ND	Loc A	Post-Injection	
Location B	6/5/21	11:50	NA	NA	ND	Loc A	Post-Injection	
Location B	6/6/21	11:55	NA	NA	ND	Loc A	Post-Injection	
Location B	6/7/21	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/8/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/9/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/10/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/11/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/12/21	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/13/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/14/21	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/15/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/16/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/17/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	6/25/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
Location B	7/3/21	12:25	NA	ND	ND	Loc A, CH-74	Post-Injection	
Location B	7/9/21	14:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	7/14/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
Location B	7/23/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	7/30/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	8/8/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	8/13/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
Location B	8/20/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	8/27/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/7/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/9/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/10/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/11/21	15:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/12/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Location B	9/13/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/14/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/15/21	14:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/16/21	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/17/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/18/21	14:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/19/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/20/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	9/22/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	10/1/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	10/19/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	10/29/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	11/5/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	11/12/21	13:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
Location B	11/19/21	14:00	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
Location B	12/30/21	13:25	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
Location B	1/6/22	10:55	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
Location B	1/14/22	13:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
Location B	1/24/22	10:55	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
Location B	2/8/22	11:05	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
Location B	2/10/22	14:45	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
Location B	2/11/22	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Location B	2/12/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/13/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/14/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/15/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/16/22	14:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
Location B	2/18/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/19/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/20/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/21/22	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/22/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	2/23/22	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	3/2/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	3/9/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	3/17/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	4/1/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	4/8/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	4/26/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	5/5/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	5/12/22	13:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	5/24/22	13:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	6/2/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	6/8/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	6/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing.
Location B	6/30/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	7/16/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	8/2/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Location B	8/15/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X033Y147S	12/10/21	8:45	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	12/17/21	8:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	12/22/21	8:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	12/30/21	8:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	1/6/22	13:55	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	1/14/22	15:10	ND	ND	ND	GUS	Background	Far-field Background
MW-X033-Y147S	1/28/22	12:15	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	2/8/22	8:40	ND	ND	ND	GUS	Background	Far-field Background
MW-X033Y147S	2/10/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/11/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/12/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/13/22	9:05	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/14/22	8:55	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/15/22	8:55	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/16/22	8:45	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/17/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/18/22	8:55	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/19/22	8:25	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/20/22	8:30	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/21/22	8:40	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/22/22	8:40	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	2/23/22	8:30	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	3/2/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	3/9/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	3/17/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	4/1/22	8:45	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	4/8/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	4/26/22	8:35	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	5/5/22	10:05	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	5/12/22	9:10	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	5/24/22	9:10	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	6/2/22	8:50	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	6/8/22	9:00	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	6/17/22	9:55	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	6/30/22	8:30	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	7/16/22	8:15	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	8/2/22	9:30	ND	ND	ND	GUS	Post-injection	
MW-X033Y147S	8/15/22	9:45	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X128Y255	12/10/21	8:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	12/17/21	10:40	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	12/22/21	8:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	12/30/21	8:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	1/6/22	8:20	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	1/14/22	15:05	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	1/24/22	14:40	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	2/8/22	14:45	ND	ND	ND	GUS	Background	Far-field background.
MW-X128Y255	2/10/22	16:20	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/11/22	16:20	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/12/22	15:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/13/22	9:10	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/14/22	15:45	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/15/22	15:45	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/16/22	16:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/17/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X128Y255	2/18/22	16:30	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/19/22	15:15	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/20/22	15:20	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/21/22	15:35	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/22/22	14:40	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	2/23/22	16:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	3/2/22	15:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	3/9/22	14:45	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	3/17/22	14:35	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	4/1/22	15:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	4/8/22	15:10	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	4/26/22	13:45	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	5/5/22	16:16	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	5/12/22	8:45	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	5/24/22	15:05	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	5/18/22	8:50	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	6/2/22	16:10	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	6/8/22	15:15	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	6/17/22	16:10	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	6/30/22	15:15	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	7/16/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	8/2/22	15:00	ND	ND	ND	GUS	Post-injection	
MW-X128Y255	8/15/22	16:00	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X143Y193	6/16/21	10:45	ND	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	6/17/22	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
MW-X143Y193	6/25/21	11:40	ND	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	7/3/21	10:35	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X143Y193	7/9/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	7/14/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	7/23/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	7/30/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	8/8/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	8/13/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	8/20/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	8/27/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	9/7/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	9/9/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	9/10/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	9/11/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X143Y193	9/12/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
MW-X143Y193	9/13/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/14/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/15/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/16/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/17/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/18/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/19/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/20/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	9/22/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	10/1/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	10/19/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	10/29/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	11/5/21	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	11/12/21	11:25	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X143Y193	11/19/21	10:40	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X143Y193	12/30/21	8:35	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X143Y193	1/6/22	8:40	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X143Y193	1/14/22	8:40	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X143Y193	1/24/22	8:30	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X143Y193	2/8/22	14:50	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X143Y193	2/10/22	11:50	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X143Y193	2/11/22	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X143Y193	2/12/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/13/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/14/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/15/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/16/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/17/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/18/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/19/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/20/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/21/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/22/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	2/23/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	3/2/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	3/9/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	3/17/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	4/1/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	4/8/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	4/26/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	5/5/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	5/12/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	5/24/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	6/2/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	6/8/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	6/17/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	6/30/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	7/16/22	8:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X143Y193	8/2/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing.
MW-X143Y193	8/15/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X184Y285	12/10/21	10:55	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	12/17/21	10:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	12/22/21	10:15	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	12/30/21	14:00	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	1/6/22	11:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	1/14/22	14:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	1/24/22	11:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	2/8/22	11:40	ND	ND	ND	GUS	Background	Far-field Background
MW-X184Y285	2/10/22	15:20	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/11/22	15:20	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/12/22	14:30	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/13/22	15:20	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/14/22	15:15	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/15/22	15:15	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/16/22	15:30	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/17/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X184Y285	2/18/22	15:55	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/19/22	14:45	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/20/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/21/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	2/22/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X184Y285	2/23/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X184Y285	3/2/22	14:25	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	3/9/22	14:15	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	3/17/22	14:05	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	4/1/22	14:30	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	4/8/22	14:55	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	4/26/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	5/5/22	15:40	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	5/12/22	14:00	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	5/24/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	6/2/22	16:00	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	6/8/22	15:10	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	6/17/22	16:00	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	6/30/22	14:40	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	7/16/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	8/2/22	14:35	ND	ND	ND	GUS	Post-injection	
MW-X184Y285	8/15/22	15:35	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X209Y187S	12/10/21	9:05	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	12/17/21	8:35	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	12/22/21	9:10	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	12/30/21	11:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	1/6/22	8:45	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	1/14/22	11:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	1/24/22	8:45	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	2/8/22	8:55	ND	ND	ND	GUS	Background	Far-field Background
MW-X209Y187S	2/10/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/11/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/12/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/13/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/14/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/15/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/16/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/17/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/18/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/19/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/20/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/21/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/22/22	11:10	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	2/23/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	3/2/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	3/9/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	3/17/22	11:15	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	4/1/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	4/8/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	4/26/22	11:25	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	5/5/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	5/12/22	11:25	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	5/24/22	9:20	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	6/2/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	6/8/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	6/17/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	6/30/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	7/16/22	9:25	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	8/2/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X209Y187S	8/15/22	12:40	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y071B	12/10/21	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	12/17/21	9:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	12/22/21	9:05	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	12/30/21	11:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	1/6/22	8:50	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	1/14/22	11:25	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	1/24/22	8:50	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	2/8/22	9:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y071B	2/10/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/11/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/12/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/13/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/14/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/15/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/16/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/17/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X233Y071B	2/18/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/19/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/20/22	----	----	----	----	GUS	Post-injection	Not collected.
MW-X233Y071B	2/21/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/22/22	11:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	2/23/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	3/2/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	3/9/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	3/17/22	11:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	4/1/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	4/8/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	4/26/22	11:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	5/5/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	5/12/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	5/24/22	9:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	6/2/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	6/8/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	6/17/22	14:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	6/30/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	7/16/22	9:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	8/2/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y071B	8/15/22	12:45	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y095	12/10/21	9:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	12/17/21	9:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	12/22/21	9:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	12/30/21	12:05	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	1/6/22	9:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	1/14/22	12:05	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	1/24/22	9:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	2/8/22	9:40	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y095	2/10/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/11/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/12/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/13/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/14/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/15/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/16/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/17/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/18/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/19/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/20/22	13:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/21/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/22/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	2/23/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	3/2/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	3/9/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	3/17/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	4/1/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	4/8/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	4/26/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	5/5/22	13:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	5/12/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	5/24/22	10:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	6/2/22	13:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	6/8/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	6/17/22	13:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	6/30/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	7/16/22	10:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	8/2/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y095	8/15/22	13:20	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y100	12/10/21	10:05	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	12/17/21	9:40	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	12/22/21	9:35	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	12/30/21	11:45	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	1/6/22	9:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	1/14/22	12:00	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	1/24/22	9:20	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	2/8/22	9:35	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y100	2/10/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/11/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/12/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/13/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/14/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/15/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/16/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/17/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/18/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/19/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/20/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/21/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/22/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	2/23/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	3/2/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	3/9/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	3/17/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	4/1/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	4/8/22	----	----	----	----	GUS	Post-injection	Not collected
MW-X233Y100	4/26/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	5/5/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	5/12/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	5/24/22	9:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	6/2/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	6/8/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	6/17/22	13:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	6/30/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	7/16/22	9:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	8/2/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y100	8/15/22	13:00	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y105B	12/10/21	10:00	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	12/17/21	9:35	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	12/22/21	9:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	12/30/21	11:50	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	1/6/22	9:15	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	1/14/22	11:50	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	1/24/22	9:15	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	2/8/22	9:30	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y105B	2/10/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/11/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/12/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/13/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/14/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/15/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/16/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/17/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/18/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/19/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/20/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/21/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/22/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	2/23/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	3/2/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	3/9/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	3/17/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	4/1/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	4/8/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	4/26/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	5/5/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	5/12/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	5/24/22	9:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	6/2/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	6/8/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	6/17/22	13:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	6/30/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	7/16/22	9:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	8/2/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y105B	8/15/22	13:05	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y115B	12/10/21	9:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	12/17/21	9:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	12/22/21	9:20	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	12/30/21	11:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	1/6/22	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	1/14/22	11:45	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	1/24/22	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	2/8/22	9:25	ND	ND	ND	GUS	Background	Far-field background.
MW-X233Y115B	2/10/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/11/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/12/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/13/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/14/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/15/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/16/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/17/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/18/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/19/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/20/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/21/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/22/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	2/23/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	3/2/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	3/9/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	3/17/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	4/1/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	4/8/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	4/26/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	5/5/22	13:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	5/12/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	5/24/22	9:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	6/2/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	6/8/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	6/17/22	13:30	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	6/30/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	7/16/22	9:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	8/2/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y115B	8/15/22	13:10	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X233Y125B	12/10/21	9:50	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	12/17/21	9:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	12/22/21	9:15	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	12/30/21	12:00	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	1/6/22	9:05	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	1/14/22	11:40	ND	ND	ND	GUS	Background	Far-field Background
MW-X233Y125B	1/24/22	----	----	----	----	GUS	Background	Not collected.
MW-X233-Y125B	1/28/22	12:25	ND	ND	ND	GUS	Background	Far-field Background
MW-X233-Y125B	2/7/22	9:40	ND	ND	ND	GUS	Post-injection	Far-field Background
MW-X233Y125B	2/8/22	9:20	ND	ND	ND	GUS	Post-injection	Far-field Background
MW-X233Y125B	2/10/22	13:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/11/22	13:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/12/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/13/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/14/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/15/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/16/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/17/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/18/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/19/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/20/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/21/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/22/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	2/23/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	3/2/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	3/9/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	3/17/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	4/1/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	4/8/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	4/26/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	5/5/22	13:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	5/12/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	5/24/22	9:55	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	6/2/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	6/8/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	6/17/22	13:35	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	6/30/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	7/16/22	10:00	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	8/2/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X233Y125B	8/15/22	13:15	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157S	12/10/21	10:25	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	12/17/21	9:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	12/22/21	9:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	12/30/21	12:25	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	1/6/22	10:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	1/14/22	12:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	1/24/22	10:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	2/8/22	10:20	ND	ND	ND	GUS	Background	Far-field background.
MW-X234Y157S	2/10/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/11/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/12/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/13/22	13:35	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/14/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/15/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/16/22	13:40	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/17/22	14:10	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/18/22	13:45	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/19/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/20/22	13:55	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/21/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/22/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	2/23/22	13:35	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	3/2/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	3/9/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	3/17/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	4/1/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	4/8/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	4/26/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	5/5/22	14:00	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	5/12/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	5/24/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	6/2/22	13:45	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	6/8/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	6/17/22	14:15	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	6/30/22	13:00	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	7/16/22	10:30	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	8/2/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X234Y157S	8/15/22	13:50	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X242Y060S	12/10/21	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	12/17/21	9:05	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	12/22/21	9:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	12/30/21	11:35	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	1/6/22	8:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	1/14/22	11:30	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	1/24/22	8:55	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	2/8/22	9:05	ND	ND	ND	GUS	Background	Far-field background.
MW-X242Y060S	2/10/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/11/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/12/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/13/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/14/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/15/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/16/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/17/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/18/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/19/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/20/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/21/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/22/22	11:20	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	2/23/22	12:30	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	3/2/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	3/9/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	3/17/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	4/1/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	4/8/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	4/26/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	5/5/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	5/12/22	11:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	5/24/22	9:30	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	6/2/22	12:50	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	6/8/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	6/17/22	13:10	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	6/30/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	7/16/22	9:35	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	8/2/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X242Y060S	8/15/22	12:50	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X257Y073	12/10/21	9:20	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	12/17/21	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	12/22/21	8:45	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	12/30/21	11:40	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	1/6/22	9:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	1/14/22	11:35	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	1/24/22	9:00	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	2/8/22	9:10	ND	ND	ND	GUS	Background	Far-field background.
MW-X257Y073	2/10/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/11/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/12/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/13/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/14/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/15/22	12:20	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/16/22	12:40	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/17/22	12:25	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/18/22	12:45	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/19/22	12:10	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/20/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/21/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/22/22	11:25	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	2/23/22	12:35	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	3/2/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	3/9/22	11:55	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	3/17/22	11:30	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	4/1/22	11:50	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	4/8/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	4/26/22	11:45	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	5/5/22	13:05	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	5/12/22	11:40	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	5/24/22	9:35	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	6/2/22	12:55	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	6/8/22	12:15	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	6/17/22	13:15	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	6/30/22	12:00	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	7/16/22	9:40	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	8/2/22	12:05	ND	ND	ND	GUS	Post-injection	
MW-X257Y073	8/15/22	12:55	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X344Y230	11/12/20	15:30	ND	ND	ND	Loc A	Background	
MW-X344Y230	11/23/20	15:30	ND	ND	ND	Loc A	Background	
MW-X344Y230	11/30/20	11:05	ND	ND	ND	Loc A	Background	
MW-X344Y230	12/3/20	11:40	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/4/20	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/5/20	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/6/20	8:35	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/7/20	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/8/20	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/9/20	8:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/10/20	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/11/20	8:50	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/12/20	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/13/20	8:40	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/14/20	8:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y231	12/15/20	NA	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y232	12/16/20	NA	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/23/20	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	12/29/20	8:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	1/5/21	8:30	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	1/12/21	8:25	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	1/21/21	8:25	NA	NA	ND	Loc A	Post-Injection	Cap of well.
MW-X344Y230	1/26/21	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	2/2/21	8:30	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	2/12/21	12:10	NA	NA	NA	Loc A	Post-Injection	
MW-X344Y230	2/23/21	11:05	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	3/1/21	----	----	----	----	Loc A	Post-Injection	ACS missing.
MW-X344Y230	3/5/21	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	3/11/21	8:40	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	3/17/21	8:25	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	3/24/21	8:25	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	3/31/21	8:30	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	4/14/21	8:50	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	5/3/21	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	5/14/21	8:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	6/3/21	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	6/4/21	11:05	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	6/5/21	8:10	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	6/6/21	8:20	NA	NA	ND	Loc A	Post-Injection	
MW-X344Y230	6/7/21	8:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/8/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/9/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/10/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/11/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/12/21	7:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/13/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/14/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/15/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/16/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/17/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	6/25/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	7/3/21	8:10	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X344Y230	7/9/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	7/14/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	7/23/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	7/30/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	8/8/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	8/13/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X344Y230	8/20/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	8/27/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/7/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/9/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/10/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/11/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/12/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X344Y230	9/13/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected.
MW-X344Y230	9/14/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/15/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/16/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/17/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/18/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/19/21	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/20/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	9/22/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	10/1/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	10/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
MW-X344Y230	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
MW-X344Y230	11/5/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
MW-X344Y230	11/12/21	----	----	----	----	Loc A, CH-73, CH-72	Post-Injection	No property access, not collected.
MW-X344Y230	11/19/21	----	----	----	----	Loc A, CH-73, CH-73	Post-Injection	No property access, not collected.
MW-X344Y230	12/30/21	10:55	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X344Y230	1/6/22	12:00	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X344Y230	1/14/22	8:50	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X344Y230	1/24/22	12:00	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X344Y230	2/8/22	12:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X344Y230	2/10/22	9:00	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X344Y230	2/11/22	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X344Y230	2/12/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/13/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/14/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/15/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/16/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/17/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/18/22	----	----	----	----	Loc A, CH-73, CH-73	Post-Injection	No property access, not collected.
MW-X344Y230	2/19/22	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/20/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/21/22	----	----	----	----	Loc A, CH-73, CH-73	Post-Injection	No property access, not collected.
MW-X344Y230	2/22/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	2/23/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	3/2/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	3/9/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	3/17/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	4/1/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	4/8/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	4/26/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	5/5/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	5/12/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	5/24/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	6/2/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	6/8/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	6/17/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	6/30/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	7/15/22	15:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	8/2/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X344Y230	8/15/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
9-4	12/10/21	13:00	ND	ND	ND	GUS	Background	Far-field Background
9-4	12/17/21	9:45	ND	ND	ND	GUS	Background	Far-field Background
9-4	12/22/21	9:45	ND	ND	ND	GUS	Background	Far-field Background
9-4	12/30/21	12:30	ND	ND	ND	GUS	Background	Far-field Background
9-4	1/6/22	9:55	ND	ND	ND	GUS	Background	Far-field Background
9-4	1/14/22	12:45	ND	ND	ND	GUS	Background	Far-field Background
9-4	1/24/22	10:00	ND	ND	ND	GUS	Background	Far-field Background
9-4	2/8/22	10:10	ND	ND	ND	GUS	Background	Far-field Background
9-4	2/10/22	13:40	ND	ND	ND	GUS	Post-injection	
9-4	2/11/22	13:40	ND	ND	ND	GUS	Post-injection	
9-4	2/12/22	13:10	ND	ND	ND	GUS	Post-injection	
9-4	2/13/22	13:25	ND	ND	ND	GUS	Post-injection	
9-4	2/14/22	13:20	ND	ND	ND	GUS	Post-injection	
9-4	2/15/22	13:20	ND	ND	ND	GUS	Post-injection	
9-4	2/16/22	13:30	ND	ND	ND	GUS	Post-injection	
9-4	2/17/22	14:00	ND	ND	ND	GUS	Post-injection	
9-4	2/18/22	13:35	ND	ND	ND	GUS	Post-injection	
9-4	2/19/22	12:55	ND	ND	ND	GUS	Post-injection	
9-4	2/20/22	13:35	ND	ND	ND	GUS	Post-injection	
9-4	2/21/22	13:05	ND	ND	ND	GUS	Post-injection	
9-4	2/22/22	12:15	ND	ND	ND	GUS	Post-injection	
9-4	2/23/22	13:25	ND	ND	ND	GUS	Post-injection	
9-4	3/2/22	12:45	ND	ND	ND	GUS	Post-injection	
9-4	3/9/22	12:30	ND	ND	ND	GUS	Post-injection	
9-4	3/17/22	12:25	ND	ND	ND	GUS	Post-injection	
9-4	4/1/22	12:35	ND	ND	ND	GUS	Post-injection	
9-4	4/8/22	12:30	ND	ND	ND	GUS	Post-injection	
9-4	4/26/22	12:30	ND	ND	ND	GUS	Post-injection	
9-4	5/5/22	13:55	ND	ND	ND	GUS	Post-injection	
9-4	5/12/22	12:25	ND	ND	ND	GUS	Post-injection	
9-4	5/24/22	10:05	ND	ND	ND	GUS	Post-injection	
9-4	6/2/22	13:40	ND	ND	ND	GUS	Post-injection	
9-4	6/8/22	13:00	ND	ND	ND	GUS	Post-injection	
9-4	6/17/22	14:05	ND	ND	ND	GUS	Post-injection	
9-4	6/30/22	12:50	ND	ND	ND	GUS	Post-injection	
9-4	7/16/22	10:30	ND	ND	ND	GUS	Post-injection	
9-4	8/2/22	12:50	ND	ND	ND	GUS	Post-injection	
9-4	8/15/22	13:40	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X178Y367D-2	11/12/2020	13:15	ND	ND	ND	Loc A	Background	
MW-X178Y367D-2	11/23/2020	12:00	ND	ND	ND	Loc A	Background	
MW-X178Y367D-2	11/30/2020	----	----	----	----	Loc A	Background	Not collected.
MW-X178Y367D-2	12/3/2020	13:15	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/4/2020	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/5/2020	10:10	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/6/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/7/2020	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/8/2020	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/9/2020	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/10/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/11/2020	10:45	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/12/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/13/2020	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/14/2020	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/15/2020	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/17/2020	14:35	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/23/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	12/29/2020	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	1/5/2021	9:35	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	1/12/2021	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	1/21/2021	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	1/26/2021	11:15	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	2/2/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	2/12/2021	11:05	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	2/23/2021	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/1/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/5/2021	8:55	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/11/2021	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/17/2021	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/24/2021	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	3/31/2021	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	4/14/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X178Y367D-2	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X178Y367D-2	6/3/2021	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	6/4/2021	11:15	NA	NA	ND	Loc A	Post-Injection	
MW-X178Y367D-2	6/5/2021	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/6/2021	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/7/2021	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/8/2021	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/9/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/10/2021	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/11/2021	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/12/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/13/2021	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/14/2021	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/15/2021	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/16/2021	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	6/17/2021	10:20	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X178Y367D-2	6/25/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	7/3/2021	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	7/9/2021	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	7/15/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	7/23/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	7/30/2021	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	8/8/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/9/2021	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X178Y367D-2	9/10/2021	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/11/2021	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/12/2021	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/13/2021	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/14/2021	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X178Y367D-2	9/15/2021	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/16/2021	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/17/2021	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/18/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/19/2021	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/20/2021	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/21/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	9/22/2021	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	10/1/2021	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	10/11/2021	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	10/19/2021	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	10/29/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	11/5/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	11/12/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X178Y367D-2	11/19/2021	9:40	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X178Y367D-2	12/30/2021	9:40	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X178Y367D-2	1/6/2022	10:00	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X178Y367D-2	1/14/2022	14:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X178Y367D-2	1/24/2022	9:55	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X178Y367D-2	2/8/2022	10:30	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X178Y367D-2	2/10/2022	9:35	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X178Y367D-2	2/11/2022	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X178Y367D-2	2/12/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/13/2022	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/14/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X178Y367D-2	2/15/2022	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/16/2022	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/17/2022	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/18/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/19/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X178Y367D-2	2/20/2022	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/21/2022	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/22/2022	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	2/23/2022	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	3/2/2022	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	3/9/2022	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	3/17/2022	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	4/1/2022	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	4/8/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	4/16/2022	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	4/22/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	5/5/2022	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	5/12/2022	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	5/24/2022	14:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	6/2/2022	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	6/8/2022	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	6/17/2022	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	6/30/2022	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	6/30/2022	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	7/16/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	8/4/2022	14:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X178Y367D-2	8/15/2022	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X178Y367D-5	1/24/2022	10:55	ND	ND	ND	GUS	Background	GUS backgorund.
MW-X178Y367D-5	2/8/2022	11:20	ND	ND	ND	GUS	Background	GUS backgorund.
MW-X178Y367D-5	2/10/2022	11:05	NA	ND	ND	GUS	Background	GUS backgorund.
MW-X178Y367D-5	2/11/2022	11:05	NA	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/12/2022	8:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/13/2022	14:35	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/14/2022	----	----	----	----	GUS	Post-Injection	Not collected.
MW-X178Y367D-5	2/15/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/16/2022	11:50	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/17/2022	10:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/18/2022	14:45	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/19/2022	11:25	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/20/2022	10:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/21/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/22/2022	11:05	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	2/23/2022	11:05	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	3/2/2022	8:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	3/9/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	3/17/2022	10:20	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	4/1/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	4/8/2022	10:30	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	4/16/2022	10:15	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	4/22/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	5/5/2022	11:50	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	5/12/2022	10:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	5/24/2022	14:45	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	6/2/2022	11:25	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	6/8/2022	10:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	6/17/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	6/30/2022	11:05	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	6/30/2022	11:05	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	7/16/2022	8:55	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	8/4/2022	14:35	ND	ND	ND	GUS	Post-Injection	
MW-X178Y367D-5	8/15/2022	11:40	ND	ND	ND	GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157D-1	11/12/2020	----	----	----	----	Loc A	Background	Dry, not collected.
MW-X234Y157D-1	11/23/2020	12:40	ND	ND	ND	Loc A	Background	
MW-X234Y157D-1	11/30/2020	----	----	----	----	Loc A	Background	Dry, not collected.
MW-X234Y157D-1	12/3/2020	13:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/4/2020	12:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/5/2020	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/6/2020	10:05	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/7/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/8/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/9/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/10/2020	10:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/11/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/12/2020	10:35	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/13/2020	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/14/2020	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/15/2020	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/17/2020	14:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/23/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	12/29/2020	11:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	1/5/2021	12:00	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	1/12/2021	12:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	1/21/2021	11:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	1/26/2021	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	2/2/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	2/12/2021	11:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	2/23/2021	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/1/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/5/2021	11:25	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/11/2021	13:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/17/2021	11:30	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/24/2021	11:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	3/31/2021	11:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	4/14/2021	12:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X234Y157D-1	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X234Y157D-1	6/3/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	6/4/2021	10:05	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-1	6/5/2021	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/6/2021	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/7/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/8/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/9/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/10/2021	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/11/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/12/2021	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/13/2021	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/14/2021	14:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/15/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/16/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	6/17/2021	12:00	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X234Y157D-1	6/25/2021	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	7/3/2021	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	7/9/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	7/15/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	7/23/2021	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	7/30/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	8/8/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/9/2021	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157D-1	9/10/2021	14:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/11/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/12/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/13/2021	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/14/2021	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-1	9/15/2021	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/16/2021	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/17/2021	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/18/2021	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/19/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/20/2021	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/21/2021	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	9/22/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	10/1/2021	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	10/11/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	10/19/2021	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	10/29/2021	12:34	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	11/5/2021	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	11/12/2021	13:50	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X234Y157D-1	11/19/2021	12:20	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X234Y157D-1	12/30/2021	----	----	----	----	Loc A, CH-73, CH-65	Post-Injection	Not collected.
MW-X234Y157D-1	1/6/2022	12:20	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X234Y157D-1	1/14/2022	12:35	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X234Y157D-1	1/24/2022	14:05	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X234Y157D-1	2/8/2022	12:34	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X234Y157D-1	2/10/2022	13:20	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X234Y157D-1	2/11/2022	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-1	2/12/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/13/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/14/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X234Y157D-1	2/15/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/16/2022	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/17/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/18/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/19/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X234Y157D-1	2/20/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/21/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/22/2022	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	2/23/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	3/2/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	3/9/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	3/17/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	4/1/2022	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	4/8/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	4/16/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	4/22/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	5/5/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	5/12/2022	12:34	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	5/24/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	6/2/2022	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	6/8/2022	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	6/17/2022	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	6/30/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	6/30/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	7/16/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	8/4/2022	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-1	8/15/2022	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157D-2	11/12/2020	14:30	ND	ND	ND	Loc A	Background	
MW-X234Y157D-2	11/23/2020	12:40	ND	ND	ND	Loc A	Background	
MW-X234Y157D-2	11/30/2020	----	----	----	----	Loc A	Background	Not collected
MW-X234Y157D-2	12/3/2020	13:30	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/4/2020	12:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/5/2020	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/6/2020	10:05	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/7/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/8/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/9/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/10/2020	10:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/11/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/12/2020	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/13/2020	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/14/2020	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/15/2020	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/17/2020	14:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/23/2020	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	12/29/2020	11:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	1/5/2021	12:00	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	1/12/2021	12:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	1/21/2021	11:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	1/26/2021	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	2/2/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	2/12/2021	11:30	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	2/23/2021	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/1/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/5/2021	11:25	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/11/2021	13:50	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/17/2021	11:30	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/24/2021	11:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	3/31/2021	11:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	4/14/2021	12:20	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected
MW-X234Y157D-2	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected
MW-X234Y157D-2	6/3/2021	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	6/4/2021	11:45	NA	NA	ND	Loc A	Post-Injection	
MW-X234Y157D-2	6/5/2021	12:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/6/2021	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/7/2021	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/8/2021	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/9/2021	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/10/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/11/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/12/2021	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/13/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/14/2021	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/15/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/16/2021	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	6/17/2021	11:55	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X234Y157D-2	6/25/2021	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	7/3/2021	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	7/9/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	7/15/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	7/23/2021	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	7/30/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	8/8/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/9/2021	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157D-2	9/10/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/11/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/12/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/13/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/14/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X234Y157D-2	9/15/2021	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/16/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/17/2021	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/18/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/19/2021	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/20/2021	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/21/2021	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	9/22/2021	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	10/1/2021	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	10/11/2021	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	10/19/2021	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	10/29/2021	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	11/5/2021	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	11/12/2021	12:10	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X234Y157D-2	11/19/2021	11:25	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X234Y157D-2	12/30/2021	13:50	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X234Y157D-2	1/6/2022	11:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X234Y157D-2	1/14/2022	11:55	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X234Y157D-2	1/24/2022	11:55	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X234Y157D-2	2/8/2022	12:05	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X234Y157D-2	2/10/2022	11:10	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X234Y157D-2	2/11/2022	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X234Y157D-2	2/12/2022	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/13/2022	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/14/2022	13:00	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/15/2022	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/16/2022	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/17/2022	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/18/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/19/2022	12:55	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/20/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/21/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/22/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	2/23/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	3/2/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	3/9/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	3/17/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	4/1/2022	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	4/8/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	4/16/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	4/22/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	5/5/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	5/12/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	5/24/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	6/2/2022	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	6/8/2022	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	6/17/2022	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	6/30/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	6/30/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	7/16/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	8/4/2022	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X234Y157D-2	8/15/2022	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X234Y157D-4	12/10/2021	13:00	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	12/22/2021	11:25	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	12/30/2021	11:15	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	1/6/2022	13:00	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	1/14/2022	13:50	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	1/24/2022	13:05	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	2/8/2022	14:10	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	2/10/2022	12:55	ND	ND	ND	GUS	Background	GUS background
MW-X234Y157D-4	2/11/2022	12:55	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/12/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/13/2022	12:20	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/14/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/15/2022	14:05	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/16/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/17/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/18/2022	12:30	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/19/2022	12:40	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/20/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/21/2022	13:20	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/22/2022	13:50	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	2/23/2022	13:05	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	3/2/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	3/9/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	3/17/2022	12:30	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	4/1/2022	12:40	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	4/8/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	4/16/2022	12:20	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	4/22/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	5/5/2022	14:05	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	5/12/2022	12:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	5/24/2022	13:20	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	6/2/2022	13:50	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	6/8/2022	13:05	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	6/17/2022	14:10	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	6/30/2022	12:55	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	6/30/2022	12:55	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	7/16/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	8/4/2022	15:10	ND	ND	ND	GUS	Post-Injection	
MW-X234Y157D-4	8/15/2022	13:45	ND	ND	ND	GUS	Post-Injection	

MW-X251Y189D-7	12/10/2021
MW-X251Y189D-7	12/22/2021
MW-X251Y189D-7	12/30/2021
MW-X251Y189D-7	1/6/2022
MW-X251Y189D-7	1/14/2022
MW-X251Y189D-7	1/24/2022

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X261Y356D-1	11/12/2020	13:00	ND	ND	ND	Loc A	Background	
MW-X261Y356D-1	11/23/2020	11:45	ND	ND	ND	Loc A	Background	
MW-X261Y356D-1	11/30/2020	----	----	----	----	Loc A	Background	Not collected.
MW-X261Y356D-1	12/3/2020	13:05	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/4/2020	12:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/5/2020	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/6/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/7/2020	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/8/2020	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/9/2020	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/10/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/11/2020	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/12/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/13/2020	9:35	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/14/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/15/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/17/2020	14:30	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/23/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	12/29/2020	10:25	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	1/5/2021	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	1/12/2021	10:10	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	1/21/2021	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	1/26/2021	11:10	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	2/2/2021	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	2/12/2021	11:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	2/23/2021	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/1/2021	10:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/5/2021	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/11/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/17/2021	10:10	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/24/2021	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	3/31/2021	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	4/14/2021	10:45	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X261Y356D-1	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X261Y356D-1	6/3/2021	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	6/4/2021	10:35	NA	NA	ND	Loc A	Post-Injection	
MW-X261Y356D-1	6/5/2021	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/6/2021	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/7/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/8/2021	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/9/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/10/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/11/2021	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/12/2021	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/13/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/14/2021	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/15/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/16/2021	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	6/17/2021	10:35	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X261Y356D-1	6/25/2021	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	7/3/2021	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	7/9/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	7/15/2021	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	7/23/2021	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	7/30/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	8/8/2021	11:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/9/2021	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X261Y356D-1	9/10/2021	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/11/2021	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/12/2021	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/13/2021	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/14/2021	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X261Y356D-1	9/15/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/16/2021	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/17/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/18/2021	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/19/2021	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/20/2021	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/21/2021	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	9/22/2021	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	10/1/2021	14:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	10/11/2021	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	10/19/2021	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	10/29/2021	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	11/5/2021	15:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	11/12/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X261Y356D-1	11/19/2021	10:20	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X261Y356D-1	12/30/2021	11:10	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X261Y356D-1	1/6/2022	10:40	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X261Y356D-1	1/14/2022	11:00	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X261Y356D-1	1/24/2022	10:00	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X261Y356D-1	2/8/2022	10:45	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X261Y356D-1	2/10/2022	8:45	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X261Y356D-1	2/11/2022	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X261Y356D-1	2/12/2022	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/13/2022	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/14/2022	10:15	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/15/2022	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/16/2022	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/17/2022	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/18/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/19/2022	9:55	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/20/2022	14:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/21/2022	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/22/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	2/23/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	3/2/2022	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	3/9/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	3/17/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	4/1/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	4/8/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	4/16/2022	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	4/22/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	5/5/2022	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	5/12/2022	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	5/24/2022	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	6/2/2022	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	6/8/2022	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	6/17/2022	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	6/30/2022	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	6/30/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X261Y356D-1	7/16/2022	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X261Y356D-1	8/4/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X261Y356D-1	8/15/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X261Y356D-5	1/24/2022	10:20	ND	ND	ND	GUS	Background	GUS background
MW-X261-Y356D-5	1/28/2022	12:40	ND	ND	ND	GUS	Background	GUS background
MW-X261Y356D-5	2/8/2022	10:50	ND	ND	ND	GUS	Background	GUS background
MW-X261Y356D-5	2/10/2022	10:10	ND	ND	ND	GUS	Background	GUS background
MW-X261Y356D-5	2/11/2022	10:15	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/12/2022	10:15	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/13/2022	10:45	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/14/2022	9:45	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/15/2022	9:35	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/16/2022	9:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/17/2022	9:55	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/18/2022	14:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/19/2022	9:45	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/20/2022	10:25	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/21/2022	9:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/22/2022	10:10	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	2/23/2022	10:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	3/2/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	3/9/2022	10:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	3/17/2022	10:35	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	4/1/2022	10:30	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	4/8/2022	10:25	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	4/16/2022	10:10	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	4/22/2022	10:25	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	5/5/2022	11:45	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	5/12/2022	10:50	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	5/24/2022	14:10	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	6/2/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	6/8/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	6/17/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	6/30/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	6/30/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	7/16/2022	8:50	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	8/4/2022	16:25	ND	ND	ND	GUS	Post-Injection	
MW-X261Y356D-5	8/15/2022	11:35	ND	ND	ND	GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X269Y201D-3	12/10/2021	10:35	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	12/22/2021	10:30	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	12/30/2021	10:35	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	1/6/2022	10:30	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	1/14/2022	10:25	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	1/24/2022	10:10	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	2/8/2022	10:25	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	2/10/2022	11:45	ND	ND	ND	GUS	Background	GUS background
MW-X269Y201D-3	2/11/2022	10:50	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/12/2022	14:10	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/13/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/14/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/15/2022	11:20	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/16/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/17/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/18/2022	12:45	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/19/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/20/2022	12:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/21/2022	13:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/22/2022	10:30	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	2/23/2022	10:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	3/2/2022	10:10	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	3/9/2022	12:55	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	3/17/2022	12:50	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	4/1/2022	13:00	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	4/8/2022	13:05	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	4/16/2022	12:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	4/22/2022	12:50	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	5/5/2022	14:10	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	5/12/2022	12:45	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	5/24/2022	10:40	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	6/2/2022	12:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	6/8/2022	13:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	6/17/2022	14:30	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	6/30/2022	13:15	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	6/30/2022	13:15	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	7/16/2022	10:55	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	8/4/2022	17:25	ND	ND	ND	GUS	Post-Injection	
MW-X269Y201D-3	8/15/2022	14:05	ND	ND	ND	GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X297Y305D-1	11/12/2020	12:20	ND	ND	ND	Loc A	Background	
MW-X297Y305D-1	11/23/2020	10:40	ND	ND	ND	Loc A	Background	
MW-X297Y305D-1	11/30/2020	NA	NA	NA	ND	Loc A	Background	Not collected
MW-X297Y305D-1	12/3/2020	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/4/2020	11:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/5/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/6/2020	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/7/2020	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/8/2020	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/9/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/10/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/11/2020	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/12/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/13/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/14/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/15/2020	NA	NA	NA	ND	Loc A	Post-Injection	Not collected
MW-X297Y305D-1	12/17/2020	14:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/23/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	12/29/2020	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	1/5/2021	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	1/12/2021	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	1/21/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	1/26/2021	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	2/2/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	2/12/2021	10:50	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	2/23/2021	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/1/2021	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/5/2021	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/11/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/17/2021	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/24/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	3/31/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	4/14/2021	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected
MW-X297Y305D-1	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected
MW-X297Y305D-1	6/3/2021	12:35	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	6/4/2021	12:20	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-1	6/5/2021	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/6/2021	14:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/7/2021	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/8/2021	13:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/9/2021	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/10/2021	13:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/11/2021	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/12/2021	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/13/2021	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/14/2021	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/15/2021	15:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/16/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	6/17/2021	10:20	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X297Y305D-1	6/25/2021	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	7/3/2021	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	7/9/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	7/15/2021	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	7/23/2021	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	7/30/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	8/8/2021	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/9/2021	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X297Y305D-1	9/10/2021	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/11/2021	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/12/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/13/2021	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/14/2021	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-1	9/15/2021	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/16/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/17/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/18/2021	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/19/2021	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/20/2021	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/21/2021	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	9/22/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	10/1/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	10/11/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	10/19/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	10/29/2021	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	11/5/2021	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	11/12/2021	9:30	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X297Y305D-1	11/19/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X297Y305D-1	12/30/2021	14:30	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X297Y305D-1	1/6/2022	9:45	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X297Y305D-1	1/14/2022	10:25	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X297Y305D-1	1/24/2022	9:30	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X297Y305D-1	2/8/2022	10:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X297Y305D-1	2/10/2022	10:30	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X297Y305D-1	2/11/2022	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-1	2/12/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/13/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/14/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/15/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/16/2022	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/17/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/18/2022	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/19/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
MW-X297Y305D-1	2/20/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
MW-X297Y305D-1	2/21/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/22/2022	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	2/23/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
MW-X297Y305D-1	3/2/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	3/9/2022	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	3/17/2022	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	4/1/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	4/8/2022	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	4/16/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	4/22/2022	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	5/5/2022	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	5/12/2022	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	5/18/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	6/2/2022	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	6/8/2022	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	6/17/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	6/30/2022	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	6/30/2022	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	7/16/2022	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	8/4/2022	16:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-1	8/15/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X297Y305D-2	11/12/2020	12:50	ND	ND	ND	Loc A	Background	
MW-X297Y305D-2	11/23/2020	10:40	ND	ND	ND	Loc A	Background	
MW-X297Y305D-2	11/30/2020	----	----	----	----	Loc A	Background	Not collected.
MW-X297Y305D-2	12/3/2020	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/4/2020	11:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/5/2020	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/6/2020	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/7/2020	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/8/2020	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/9/2020	9:55	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/10/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/11/2020	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/12/2020	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/13/2020	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/14/2020	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/15/2020	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/17/2020	14:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/23/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	12/29/2020	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	1/5/2021	9:20	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	1/12/2021	9:05	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	1/21/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	1/26/2021	10:00	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	2/2/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	2/12/2021	10:55	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	2/23/2021	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/1/2021	9:25	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/5/2021	10:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/11/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/17/2021	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/24/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	3/31/2021	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	4/14/2021	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X297Y305D-2	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X297Y305D-2	6/3/2021	10:30	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	6/4/2021	10:25	NA	NA	ND	Loc A	Post-Injection	
MW-X297Y305D-2	6/5/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/6/2021	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/7/2021	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/8/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/9/2021	14:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/10/2021	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/11/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/12/2021	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/13/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/14/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/15/2021	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/16/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	6/17/2021	12:25	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X297Y305D-2	6/25/2021	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	7/3/2021	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	7/9/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	7/15/2021	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	7/23/2021	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	7/30/2021	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	8/8/2021	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/9/2021	13:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X297Y305D-2	9/10/2021	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/11/2021	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/12/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/13/2021	12:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/14/2021	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X297Y305D-2	9/15/2021	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/16/2021	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/17/2021	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/18/2021	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/19/2021	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/20/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/21/2021	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	9/22/2021	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	10/1/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	10/11/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	10/19/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	10/29/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	11/5/2021	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	11/12/2021	9:35	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X297Y305D-2	11/19/2021	9:30	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X297Y305D-2	12/30/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X297Y305D-2	1/6/2022	14:30	NA	ND	ND	Loc A, CH-73, CH-66	Post-Injection	
MW-X297Y305D-2	1/14/2022	9:45	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X297Y305D-2	1/24/2022	10:25	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X297Y305D-2	2/8/2022	9:30	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X297Y305D-2	2/10/2022	10:10	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X297Y305D-2	2/11/2022	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X297Y305D-2	2/12/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/13/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/14/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/15/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/16/2022	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/17/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/18/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/19/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X297Y305D-2	2/20/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X297Y305D-2	2/21/2022	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/22/2022	14:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	2/23/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X297Y305D-2	3/2/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	3/9/2022	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	3/17/2022	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	4/1/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	4/8/2022	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	4/16/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	4/22/2022	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	5/5/2022	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	5/12/2022	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	5/18/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	6/2/2022	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	6/8/2022	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	6/17/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	6/30/2022	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	6/30/2022	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	7/16/2022	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	8/4/2022	16:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X297Y305D-2	8/15/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X318Y217D-5	11/12/2020	13:35	ND	ND	ND	Loc A	Background	
MW-X318Y217D-5	11/23/2020	10:15	ND	ND	ND	Loc A	Background	
MW-X318Y217D-5	11/30/2020	----	----	----	----	Loc A	Background	Not collected.
MW-X318Y217D-5	12/3/2020	12:35	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/4/2020	11:30	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/5/2020	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/6/2020	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/7/2020	8:35	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/8/2020	8:35	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/9/2020	8:50	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/10/2020	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/11/2020	10:20	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/12/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/13/2020	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/14/2020	9:10	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/15/2020	9:40	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/17/2020	15:00	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/23/2020	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	12/29/2020	----	----	----	----	Loc A	Background	Not collected.
MW-X318Y217D-5	1/5/2021	8:55	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	1/12/2021	8:45	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	1/21/2021	8:55	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	1/26/2021	9:45	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	2/2/2021	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	2/12/2021	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	2/23/2021	9:30	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/1/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/5/2021	10:40	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/11/2021	9:00	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/17/2021	8:50	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/24/2021	8:55	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	3/31/2021	8:55	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	4/14/2021	9:15	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	5/3/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X318Y217D-5	5/14/21	----	----	----	----	Loc A	Post-Injection	Not collected.
MW-X318Y217D-5	6/3/2021	12:50	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	6/4/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
MW-X318Y217D-5	6/5/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/6/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/7/2021	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/8/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/9/2021	13:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/10/2021	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/11/2021	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/12/2021	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/13/2021	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/14/2021	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/15/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/16/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	6/17/2021	11:15	NA	ND	ND	Loc A, CH-74	Post-Injection	
MW-X318Y217D-5	6/25/2021	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	7/3/2021	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	7/9/2021	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	7/15/2021	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	7/23/2021	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	7/30/2021	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	8/8/2021	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/9/2021	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
MW-X318Y217D-5	9/10/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/11/2021	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/12/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/13/2021	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/14/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
MW-X318Y217D-5	9/15/2021	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/16/2021	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/17/2021	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/18/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/19/2021	14:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/20/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/21/2021	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	9/22/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	10/1/2021	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	10/11/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	10/19/2021	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	10/29/2021	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	11/5/2021	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	11/12/2021	9:55	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
MW-X318Y217D-5	11/19/2021	14:30	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
MW-X318Y217D-5	12/30/2021	9:45	NA	ND	ND	Loc A, CH-73, CH-65	Post-Injection	
MW-X318Y217D-5	1/6/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X318Y217D-5	1/14/2022	10:25	NA	ND	ND	Loc A, CH-73, CH-67	Post-Injection	
MW-X318Y217D-5	1/24/2022	9:30	NA	ND	ND	Loc A, CH-73, CH-68	Post-Injection	
MW-X318Y217D-5	2/8/2022	10:10	NA	ND	ND	Loc A, CH-73, CH-69	Post-Injection	
MW-X318Y217D-5	2/10/2022	10:30	NA	ND	ND	Loc A, CH-73, CH-70	Post-Injection	
MW-X318Y217D-5	2/11/2022	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
MW-X318Y217D-5	2/12/2022	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/13/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/14/2022	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/15/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/16/2022	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/17/2022	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/18/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X318Y217D-5	2/19/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X318Y217D-5	2/20/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
MW-X318Y217D-5	2/21/2022	14:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/22/2022	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	2/23/2022	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	3/2/2022	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	3/9/2022	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	3/17/2022	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	4/1/2022	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	4/8/2022	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	4/16/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	4/22/2022	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	5/5/2022	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	5/12/2022	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	5/18/2022	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	6/2/2022	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	6/8/2022	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	6/17/2022	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	6/30/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	6/30/2022	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	7/16/2022	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	8/2/2022	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
MW-X318Y217D-5	8/15/2022	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-1/BB-6	11/12/2020	14:50	NA	NA	ND	Loc A	Background	
BB-1	11/23/2020	13:45	NA	NA	ND	Loc A	Background	
BB-1	11/30/2020	10:35	NA	NA	ND	Loc A	Background	
BB-1	12/3/2020	12:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/4/2020	9:05	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/5/2020	9:30	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/6/2020	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/7/2020	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/8/2020	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/9/2020	10:35	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/10/2020	12:35	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/11/2020	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/12/2020	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/13/2020	10:25	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/14/2020	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/15/2020	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/16/2020	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/23/2020	13:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	12/29/2020	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-1	1/5/2021	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-1	1/12/2021	12:25	NA	NA	ND	Loc A	Post-Injection	
BB-1	1/21/2021	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-1	1/26/2021	12:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	2/2/2021	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-1	2/12/2021	13:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	2/23/2021	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/1/2021	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/5/2021	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/11/2021	14:05	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/17/2021	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/24/2021	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-1	3/31/2021	13:30	NA	NA	ND	Loc A	Post-Injection	
BB-1	4/14/2021	12:00	NA	NA	ND	Loc A	Post-Injection	
BB-1	5/3/2021	13:10	NA	NA	ND	Loc A	Post-Injection	
BB-1	5/14/2021	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-1	6/3/2021	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/4/2021	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/5/2021	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/6/2021	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/7/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/8/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/9/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/10/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/11/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/12/2021	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/13/2021	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/14/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/15/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/16/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/17/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	6/25/2021	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected
BB-1	7/3/2021	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	7/9/2021	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	7/14/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	7/23/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	7/30/2021	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	8/8/2021	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	8/13/2021	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-1	8/20/2021	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	8/27/2021	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	9/7/2021	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-1	9/9/2021	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/10/2021	8:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/11/2021	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/12/2021	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/13/2021	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/14/2021	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/15/2021	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/16/2021	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/17/2021	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/18/2021	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/19/2021	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/20/2021	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	9/22/2021	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	10/1/2021	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	10/19/2021	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	10/29/2021	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	11/5/2021	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	11/12/2021	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	11/19/2021	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	12/30/2021	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	1/6/2022	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	1/14/2022	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	1/24/2022	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-1	2/8/2022	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-1	2/10/2022	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/11/2022	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/12/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/13/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/14/2022	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/15/2022	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/16/2022	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/17/2022	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/18/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-1	2/19/2022	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/20/2022	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/21/2022	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/22/2022	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	2/23/2022	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	3/2/2022	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	3/9/2022	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	3/17/2022	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	4/1/2022	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	4/8/2022	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	4/26/2022	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	5/5/2022	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	5/12/2022	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	5/24/2022	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Charcoal missing
BB-1	6/2/2022	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	6/8/2022	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	6/17/2022	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	6/30/2022	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	7/16/2022	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	8/2/2022	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-1	8/15/2022	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-2	11/12/20	15:00	NA	NA	ND	Loc A	Background	
BB-2	11/23/20	13:55	NA	NA	ND	Loc A	Background	
BB-2	11/30/20	11:50	NA	NA	ND	Loc A	Background	
BB-2	12/3/20	11:45	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/4/20	13:10	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/5/20	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/6/20	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/7/20	9:30	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/8/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/9/20	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/10/20	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/11/20	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/12/20	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/13/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/14/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/15/20	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/16/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/23/20	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-2	12/29/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-2	1/5/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-2	1/12/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-2	1/21/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-2	1/26/21	9:35	NA	NA	ND	Loc A	Post-Injection	
BB-2	2/2/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-2	2/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-2	2/23/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/1/21	9:05	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/5/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/11/21	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/17/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/24/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-2	3/31/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-2	4/14/21	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-2	5/3/21	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-2	5/14/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-2	6/3/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/4/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/5/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/6/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/7/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/8/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/9/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/10/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/11/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/12/21	7:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/13/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/14/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/15/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/16/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/17/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	6/25/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	7/3/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	7/9/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	7/14/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	7/23/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	7/30/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	8/8/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	8/13/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-2	8/20/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	8/27/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	9/7/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-2	9/9/22	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/10/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/11/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/12/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/13/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/14/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/15/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/16/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/17/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/18/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/19/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/20/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	9/22/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	10/1/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	10/19/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	10/29/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	11/5/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	11/12/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	11/19/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	12/30/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	1/6/22	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	1/14/22	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	1/24/22	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	2/8/22	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-2	2/10/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/11/22	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/12/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/13/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/14/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/15/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/16/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/17/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/18/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
BB-2	2/19/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/20/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/21/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
BB-2	2/22/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	2/23/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	3/2/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	3/9/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	3/17/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	4/1/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	4/8/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	4/26/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	5/5/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	5/12/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	5/24/22	13:35	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	6/2/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	6/8/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	6/17/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	6/30/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	7/15/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	8/2/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-2	8/15/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-3	11/12/20	15:05	NA	NA	ND	Loc A	Background	
BB-3	11/23/20	14:05	NA	NA	ND	Loc A	Background	
BB-3	11/30/20	11:00	NA	NA	ND	Loc A	Background	
BB-3	12/3/20	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/4/20	13:05	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/5/20	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/6/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/7/20	9:15	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/8/20	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/9/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/10/20	9:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/11/20	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/12/20	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/13/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/14/20	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/15/20	----	----	----	----	Loc A	Post-Injection	Not collected
BB-3	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected
BB-3	12/23/20	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	12/29/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	1/5/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-3	1/12/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	1/21/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	1/26/21	9:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	2/2/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	2/12/21	12:05	NA	NA	ND	Loc A	Post-Injection	
BB-3	2/23/21	11:00	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/1/21	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/5/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/11/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/17/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/24/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-3	3/31/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-3	4/14/21	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-3	5/3/21	10:25	NA	NA	ND	Loc A	Post-Injection	
BB-3	5/14/21	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-3	6/3/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/4/21	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/5/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/6/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/7/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/8/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/9/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/10/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/11/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/12/21	7:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/13/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/14/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/15/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/16/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/17/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	6/25/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	7/3/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	7/9/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	7/14/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	7/23/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	7/30/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	8/8/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	8/13/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-3	8/20/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	8/27/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	9/7/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-3	9/9/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/10/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/11/21	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/12/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/13/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/14/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/15/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/16/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/17/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/18/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/19/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/20/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	9/22/21	8:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	10/1/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	10/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-3	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-3	11/5/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-3	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-3	12/30/21	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	1/6/22	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	1/14/22	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	1/24/22	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	2/8/22	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-3	2/10/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/11/22	8:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/12/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/13/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/14/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/15/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/16/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/17/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/18/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-3	2/19/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/20/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/21/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-3	2/22/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	2/23/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	3/2/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	3/9/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	3/17/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	4/1/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	4/8/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	4/26/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	5/5/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	5/12/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	5/24/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	6/2/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	6/8/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	6/17/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	6/30/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	7/15/22	15:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	8/2/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-3	8/15/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-4	11/12/20	15:20	NA	NA	ND	Loc A	Background	
BB-4	11/23/20	14:20	NA	NA	ND	Loc A	Background	
BB-4	11/30/20	11:10	NA	NA	ND	Loc A	Background	
BB-4	12/3/20	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/4/20	13:00	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/5/20	9:05	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/6/20	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/7/20	9:20	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/8/20	9:50	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/9/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/10/20	9:30	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/11/20	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/12/20	9:10	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/13/20	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/14/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/15/21	----	----	----	----	Loc A	Post-Injection	Not collected
BB-4	12/16/21	----	----	----	----	Loc A	Post-Injection	Not collected
BB-4	12/23/20	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-4	12/29/20	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-4	1/5/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-4	1/12/21	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	1/21/21	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	1/26/21	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-4	2/2/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-4	2/12/21	12:15	NA	NA	ND	Loc A	Post-Injection	
BB-4	2/23/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/1/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/5/21	10:35	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/11/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/17/21	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/24/21	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-4	3/31/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-4	4/14/21	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-4	5/3/21	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-4	5/14/21	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-4	6/3/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/4/21	11:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/5/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/6/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/7/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/8/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/9/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/10/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/11/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/12/21	7:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/13/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/14/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/15/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/16/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/17/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	6/25/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	7/3/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	7/9/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	7/14/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	7/23/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	7/30/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	8/8/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	8/13/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-4	8/20/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	8/27/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	9/7/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-4	9/9/22	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/10/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/11/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/12/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/13/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/14/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/15/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/16/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/17/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/18/21	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/19/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/20/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	9/22/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	10/1/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	10/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-4	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-4	11/5/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-4	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-4	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	Not collected
BB-4	12/30/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	1/6/22	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	1/14/22	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	1/24/22	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	2/8/22	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-4	2/10/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/11/22	8:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/12/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/13/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/14/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/15/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/16/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/17/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/18/22	NA	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-4	2/19/22	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/20/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/21/22	NA	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-4	2/22/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	2/23/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	3/2/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	3/9/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	3/17/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	4/1/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	4/8/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	4/26/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	5/5/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	5/12/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	5/24/22	13:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	6/2/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	6/8/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	6/17/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	6/30/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	7/16/22	15:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	8/2/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-4	8/15/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-5	11/12/20	15:55	NA	NA	ND	Loc A	Background	
BB-5	11/23/20	16:25	NA	NA	ND	Loc A	Background	
BB-5	11/30/20	13:25	NA	NA	ND	Loc A	Background	
BB-5	12/3/20	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-5	12/4/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/5/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/6/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/7/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/8/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/9/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/10/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/11/20	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-5	12/12/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/13/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/14/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/15/20	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-5	12/16/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-5	12/23/20	13:40	NA	NA	ND	Loc A	Post-Injection	
BB-5	12/29/20	9:25	NA	NA	ND	Loc A	Post-Injection	
BB-5	1/5/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-5	1/12/21	9:20	NA	NA	ND	Loc A	Post-Injection	
BB-5	1/21/21	9:25	NA	NA	ND	Loc A	Post-Injection	
BB-5	1/26/21	9:20	NA	NA	ND	Loc A	Post-Injection	
BB-5	2/2/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-5	2/12/21	12:35	NA	NA	ND	Loc A	Post-Injection	
BB-5	2/23/21	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/1/21	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/5/21	9:25	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/11/21	9:30	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/17/21	9:20	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/24/21	9:20	NA	NA	ND	Loc A	Post-Injection	
BB-5	3/31/21	9:15	NA	NA	ND	Loc A	Post-Injection	
BB-5	4/14/21	9:50	NA	NA	ND	Loc A	Post-Injection	
BB-5	5/3/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-5	5/14/21	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-5	6/3/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/4/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/5/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/6/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/7/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/8/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/9/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/10/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/11/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/12/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/13/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/14/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/15/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/16/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/17/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	6/25/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	7/3/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	7/9/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	7/14/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	7/23/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	7/30/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	8/8/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	8/13/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-5	8/20/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	8/27/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	9/7/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-5	9/9/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/10/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/11/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/12/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/13/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/14/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/15/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/16/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/17/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/18/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/19/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/20/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	9/22/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	10/1/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	10/19/21	11:40	NA	NA	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	10/29/21	11:05	NA	NA	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	11/5/21	9:25	NA	NA	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	11/12/21	9:35	NA	NA	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	11/19/21	8:50	NA	NA	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	12/30/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	1/6/22	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	1/14/22	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	1/24/22	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-5	2/8/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS missing.
BB-5	2/10/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/11/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/12/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/13/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/14/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/15/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/16/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/17/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/18/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/19/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/20/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/21/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-5	2/23/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	3/2/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	3/9/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	3/17/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	4/1/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	4/8/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	4/26/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	5/5/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	5/12/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	5/18/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	6/2/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	6/8/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	6/17/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	6/30/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	7/15/22	15:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	8/2/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-5	8/15/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-1/BB-6	11/12/20	14:50	NA	NA	ND	Loc A	Background	
BB-6	11/23/20	13:50	NA	NA	ND	Loc A	Background	
BB-6	11/30/20	10:35	NA	NA	ND	Loc A	Background	
BB-6	12/3/20	12:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/4/20	9:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/5/20	9:25	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/6/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/7/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/8/20	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/9/20	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/10/20	12:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/11/20	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/12/20	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/13/20	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/14/20	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/15/20	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/16/20	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/23/20	13:25	NA	NA	ND	Loc A	Post-Injection	
BB-6	12/29/20	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-6	1/5/21	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-6	1/12/21	12:25	NA	NA	ND	Loc A	Post-Injection	
BB-6	1/21/21	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-6	1/26/21	12:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	2/2/21	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-6	2/12/21	13:20	NA	NA	ND	Loc A	Post-Injection	
BB-6	2/23/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/1/21	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/5/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/11/21	14:05	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/17/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/24/21	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-6	3/31/21	13:35	NA	NA	ND	Loc A	Post-Injection	
BB-6	4/14/21	12:00	NA	NA	ND	Loc A	Post-Injection	
BB-6	5/3/21	13:10	NA	NA	ND	Loc A	Post-Injection	
BB-6	5/14/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-6	6/3/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/4/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/5/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/6/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/7/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/8/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/9/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/10/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/11/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/12/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/13/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/14/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/15/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/16/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/17/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	6/25/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	7/3/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	7/9/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	7/14/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	7/23/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	7/30/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	8/8/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	8/13/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-6	8/20/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	8/27/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	9/7/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-6	9/9/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/10/21	8:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/11/21	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/12/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/13/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/14/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/15/21	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/16/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/17/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/18/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/19/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/20/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	9/22/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	10/1/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	10/19/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	10/29/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	11/5/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	11/12/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	11/19/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	12/30/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	1/6/22	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	1/14/22	12:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	1/24/22	9:45	NA	NA	NA	Loc A, CH-73, CH-71	Post-Injection	
BB-6	2/8/22	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-6	2/10/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/11/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/12/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/13/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/14/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/15/22	13:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/16/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/17/22	13:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/18/22	13:30	NA	NA	NA	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/19/22	12:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/20/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/21/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/22/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	2/23/22	13:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	3/2/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	3/9/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	3/17/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	4/1/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	4/8/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	4/26/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	5/5/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	5/12/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	5/24/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Charcoal missing
BB-6	6/2/22	13:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	6/8/22	12:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	6/17/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	6/30/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	7/16/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	8/2/22	13:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-6	8/15/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Charcoal missing

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-7	11/12/20	13:45	NA	NA	NA	Loc A	Background	
BB-7	11/23/20	13:45	NA	NA	ND	Loc A	Background	
BB-7	11/30/20	13:45	NA	NA	ND	Loc A	Background	
BB-7	12/3/20	11:20	NA	NA	ND	Loc A	Background	
BB-7	12/4/20	13:10	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/5/20	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/6/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/7/20	9:25	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/8/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/9/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/10/20	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/11/20	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/12/20	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/13/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/14/20	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/15/20	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/16/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/23/20	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-7	12/29/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-7	1/5/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-7	1/12/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-7	1/21/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-7	1/26/21	NA	NA	NA	NA	Loc A	Post-Injection	
BB-7	2/2/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-7	2/12/21	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	2/23/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/1/21	9:10	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/5/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/11/21	8:55	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/17/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/24/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-7	3/31/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-7	4/14/21	9:00	NA	NA	ND	Loc A	Post-Injection	
BB-7	5/3/21	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-7	5/14/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-7	6/3/21	9:15	NA	NA	ND	Loc A	Post-Injection	
BB-7	6/4/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-7	6/5/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/6/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/7/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/8/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/9/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/10/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/11/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/12/21	7:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/13/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/14/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/15/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/16/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/17/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	6/25/21	----	----	----	----	Loc A, CH-73	Post-Injection	ACS missing
BB-7	7/3/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	7/9/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	7/14/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	7/23/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	7/30/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	8/8/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	8/13/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-7	8/20/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	8/27/21	8:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	9/7/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	9/9/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	9/10/21	13:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-7	9/11/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/12/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/13/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/14/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/15/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/16/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/17/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/18/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/19/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/20/21	10:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	9/22/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	10/1/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	10/19/21	13:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	10/29/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	11/5/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	11/12/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	11/19/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	12/30/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	1/6/22	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	1/14/22	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	1/24/22	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	2/8/22	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-7	2/10/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/11/22	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/12/22	8:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/13/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/14/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/15/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/16/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/17/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/18/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-7	2/19/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/20/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/21/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected
BB-7	2/22/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	2/23/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	3/2/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	3/9/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	3/17/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	4/1/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	4/8/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	4/26/22	8:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	5/5/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	5/12/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	5/24/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	6/2/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	6/8/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	6/17/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	6/30/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	7/15/22	15:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	8/2/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-7	8/15/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-9	11/12/20	16:10	NA	NA	NA	Loc A	Background	
BB-9	11/23/20	15:45	NA	NA	ND	Loc A	Background	
BB-9	11/30/20	13:45	NA	NA	ND	Loc A	Background	
BB-9	12/3/20	----	----	----	----	Loc A	Background	Dye in stream, not collected.
BB-9	12/4/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/5/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/6/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/7/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/8/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/9/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/10/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/11/20	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-9	12/12/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/13/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/14/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/15/20	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-9	12/16/20	----	----	----	----	Loc A	Post-Injection	Dye in stream, not collected.
BB-9	12/23/20	14:15	NA	NA	ND	Loc A	Post-Injection	
BB-9	12/29/20	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-9	1/5/21	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-9	1/12/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-9	1/21/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-9	1/26/21	10:35	NA	NA	NA	Loc A	Post-Injection	
BB-9	2/2/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-9	2/12/21	12:55	NA	NA	ND	Loc A	Post-Injection	
BB-9	2/23/21	11:40	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/1/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/5/21	9:50	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/11/21	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/17/21	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/24/21	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-9	3/31/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-9	4/14/21	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-9	5/3/21	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-9	5/14/21	----	----	----	----	Loc A	Post-Injection	ACS missing.
BB-9	6/3/21	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-9	6/4/21	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-9	6/5/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/6/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/7/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/8/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/9/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/10/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/11/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/12/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/13/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/14/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/15/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/16/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/17/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	6/25/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	7/3/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	7/9/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	7/14/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	7/23/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	7/30/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	8/8/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	8/13/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-9	8/20/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	8/27/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	9/7/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	9/9/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	9/10/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-9	9/11/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/12/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/13/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/14/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/15/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/16/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/17/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/18/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/19/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/20/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	9/22/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	10/1/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	10/19/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	10/29/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	11/5/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	11/12/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	11/19/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	12/30/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	1/6/22	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	1/14/22	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	1/24/22	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	2/8/22	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-9	2/10/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/11/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/12/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/13/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/14/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/15/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/16/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing.
BB-9	2/18/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/19/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/20/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/21/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-9	2/23/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	3/2/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	3/9/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	3/17/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	4/1/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	4/8/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	4/26/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	5/5/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	5/12/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	5/18/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	6/2/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing
BB-9	6/8/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	6/17/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	6/30/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	7/15/22	16:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	8/2/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-9	8/15/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-10	11/12/20	16:25	NA	NA	NA	Loc A	Background	
BB-10	11/23/20	16:05	NA	NA	ND	Loc A	Background	
BB-10	11/30/20	14:05	NA	NA	ND	Loc A	Background	
BB-10	12/3/20	NA	NA	NA	ND	Loc A	Background	
BB-10	12/4/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/5/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/6/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/7/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/8/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/9/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/10/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/11/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/12/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/13/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/14/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/15/20	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/16/20	NA	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/23/20	14:40	NA	NA	ND	Loc A	Post-Injection	
BB-10	12/29/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-10	1/5/21	10:45	NA	NA	ND	Loc A	Post-Injection	
BB-10	1/12/21	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-10	1/21/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-10	1/26/21	10:45	NA	NA	NA	Loc A	Post-Injection	
BB-10	2/2/21	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-10	2/12/21	13:10	NA	NA	ND	Loc A	Post-Injection	
BB-10	2/23/21	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/1/21	10:35	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/5/21	10:05	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/11/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/17/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/24/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-10	3/31/21	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-10	4/14/21	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-10	5/3/21	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-10	5/14/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-10	6/3/21	10:35	NA	NA	ND	Loc A	Post-Injection	
BB-10	6/4/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-10	6/5/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/6/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/7/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/8/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/9/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/10/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/11/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/12/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/13/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/14/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/15/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/16/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/17/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	6/25/21	9:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	7/3/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	7/9/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	7/14/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	7/23/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	7/30/21	12:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	8/8/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	8/13/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-10	8/20/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	8/27/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	9/7/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	9/9/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	9/10/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-10	9/11/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/12/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/13/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/14/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/15/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/16/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/17/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/18/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/19/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/20/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	9/22/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	10/1/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	10/19/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	10/29/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	11/5/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	11/12/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	11/19/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	12/30/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	1/6/22	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	1/14/22	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	1/24/22	14:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	2/8/22	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-10	2/10/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/11/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/12/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/13/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/14/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/15/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/16/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/18/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/19/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/20/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/21/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-10	2/23/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	3/2/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	3/9/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	3/17/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	4/1/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	4/8/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	4/26/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	5/5/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	5/12/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	5/18/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	6/2/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	6/8/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	6/17/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	6/30/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	7/15/22	16:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	8/2/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-10	8/15/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-11	11/12/20	13:30	NA	NA	NA	Loc A	Background	
BB-11	11/23/20	14:55	NA	NA	ND	Loc A	Background	
BB-11	11/30/20	14:25	NA	NA	ND	Loc A	Background	
BB-11	12/3/20	8:55	NA	NA	ND	Loc A	Background	
BB-11	12/4/20	13:30	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/5/20	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/6/20	9:40	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/7/20	10:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/8/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/9/20	10:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/10/20	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/11/20	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/12/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/13/20	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/14/20	11:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/15/20	11:50	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/16/20	12:10	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/23/20	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-11	12/29/20	11:00	NA	NA	ND	Loc A	Post-Injection	
BB-11	1/5/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-11	1/12/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-11	1/21/21	11:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	1/26/21	11:45	NA	NA	NA	Loc A	Post-Injection	
BB-11	2/2/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-11	2/12/21	11:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	2/23/21	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-11	3/1/21	----	----	----	----	Loc A	Post-Injection	ACS missing
BB-11	3/5/21	8:35	NA	NA	ND	Loc A	Post-Injection	
BB-11	3/11/21	11:00	NA	NA	ND	Loc A	Post-Injection	
BB-11	3/17/21	10:40	NA	NA	ND	Loc A	Post-Injection	
BB-11	3/24/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-11	3/31/21	11:05	NA	NA	ND	Loc A	Post-Injection	
BB-11	4/14/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-11	5/3/21	12:45	NA	NA	ND	Loc A	Post-Injection	
BB-11	5/14/21	----	----	----	----	Loc A	Post-Injection	ACS missing
BB-11	6/3/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-11	6/4/21	8:50	NA	NA	ND	Loc A	Post-Injection	
BB-11	6/5/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/6/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/7/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/8/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/9/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/10/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/11/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/12/21	10:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/13/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/14/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/15/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/16/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/17/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	6/25/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	7/3/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	7/9/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	7/14/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	7/23/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	7/30/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	8/8/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	8/13/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-11	8/20/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	8/27/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	9/7/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	9/9/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	9/10/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-11	9/11/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/12/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/13/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/14/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/15/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/16/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/17/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/18/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/19/21	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/20/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	9/22/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	10/1/21	8:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	10/19/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	10/29/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	11/5/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	11/12/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	11/19/21	10:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	12/30/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	1/6/22	13:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	1/14/22	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	1/24/22	14:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	2/8/22	14:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-11	2/10/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/11/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/12/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/13/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/14/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/15/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/16/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/17/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/18/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/19/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/20/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/21/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-11	2/23/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	3/2/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	3/9/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	3/17/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	4/1/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	4/8/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	4/26/22	8:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	5/5/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	5/12/22	8:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	5/18/22	8:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	6/2/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS missing.
BB-11	6/8/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	6/17/22	12:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	6/30/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	7/15/22	16:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	8/2/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-11	8/15/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-12	11/12/20	13:40	NA	NA	NA	Loc A	Background	
BB-12	11/23/20	16:35	NA	NA	ND	Loc A	Background	
BB-12	11/30/20	14:40	NA	NA	ND	Loc A	Background	
BB-12	12/3/20	9:05	NA	NA	ND	Loc A	Background	
BB-12	12/4/20	13:45	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/5/20	10:40	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/6/20	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/7/20	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/8/20	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/9/20	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/10/20	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/11/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/12/20	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/13/20	10:05	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/14/20	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/15/20	12:05	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/16/20	12:30	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/23/20	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-12	12/29/20	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-12	1/5/21	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-12	1/12/21	11:00	NA	NA	ND	Loc A	Post-Injection	
BB-12	1/21/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	1/26/21	11:55	NA	NA	NA	Loc A	Post-Injection	
BB-12	2/2/21	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-12	2/12/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	2/23/21	8:40	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/1/21	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/5/21	8:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/11/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/17/21	10:45	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/24/21	11:00	NA	NA	ND	Loc A	Post-Injection	
BB-12	3/31/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-12	4/14/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-12	5/3/21	13:00	NA	NA	ND	Loc A	Post-Injection	
BB-12	5/14/21	11:05	NA	NA	ND	Loc A	Post-Injection	
BB-12	6/3/21	11:35	NA	NA	ND	Loc A	Post-Injection	
BB-12	6/4/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-12	6/5/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/6/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/7/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/8/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/9/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/10/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/11/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/12/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/13/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/14/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/15/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/16/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	6/17/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
BB-12	6/25/21	11:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	7/3/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	7/9/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	7/14/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	7/23/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	7/30/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	8/8/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	8/13/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-12	8/20/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	8/27/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	9/7/21	8:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	9/9/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	9/10/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-12	9/11/21	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/12/21	8:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/13/21	8:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/14/21	8:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/15/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/16/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/17/21	8:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/18/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/19/21	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/20/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	9/22/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	10/1/21	8:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	10/19/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	10/29/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	11/5/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	11/12/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	11/19/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	12/30/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	1/6/22	13:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	1/14/22	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	1/24/22	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	2/8/22	14:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-12	2/10/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/11/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/12/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/13/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/14/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/15/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/16/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/17/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/18/22	12:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/19/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/20/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/21/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-12	2/23/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	3/2/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	3/9/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	3/17/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	4/1/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	4/8/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	4/26/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	5/5/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	5/12/22	8:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	5/18/22	8:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	6/2/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	6/8/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	6/17/22	12:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	6/30/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	7/15/22	16:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	8/2/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-12	8/15/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-13	11/12/20	13:45	NA	NA	NA	Loc A	Background	
BB-13	11/23/20	15:00	NA	NA	ND	Loc A	Background	
BB-13	11/30/20	14:35	NA	NA	ND	Loc A	Background	
BB-13	12/3/20	8:30	NA	NA	ND	Loc A	Background	
BB-13	12/4/20	13:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/5/20	10:25	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/6/20	9:45	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/7/20	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/8/20	8:25	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/9/20	10:20	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/10/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/11/20	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/12/20	10:10	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/13/20	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/14/20	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/15/20	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/16/20	12:20	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/23/20	10:40	NA	NA	ND	Loc A	Post-Injection	
BB-13	12/29/20	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-13	1/5/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-13	1/12/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	1/21/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-13	1/26/21	11:50	NA	NA	NA	Loc A	Post-Injection	
BB-13	2/2/21	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-13	2/12/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-13	2/23/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-13	3/1/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-13	3/5/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-13	3/11/21	----	----	----	----	Loc A	Post-Injection	ACS missing.
BB-13	3/17/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-13	3/24/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	3/31/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-13	4/14/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-13	5/3/21	12:50	NA	NA	ND	Loc A	Post-Injection	
BB-13	5/14/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-13	6/3/21	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-13	6/4/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-13	6/5/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/6/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/7/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/8/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/9/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/10/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/11/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/12/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/13/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/14/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/15/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/16/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	6/17/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
BB-13	6/25/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	7/3/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	7/9/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	7/14/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	7/23/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	7/30/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	8/8/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	8/13/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-13	8/20/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	8/27/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	9/7/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	9/9/21	8:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	9/10/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-13	9/11/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/12/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/13/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/14/21	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/15/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/16/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/17/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/18/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/19/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/20/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	9/22/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	10/1/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	10/19/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-13	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	11/5/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	12/30/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	1/6/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	1/14/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	1/24/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	2/8/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No access, not collected.
BB-13	2/10/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/11/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/12/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/13/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/14/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/15/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/16/22	11:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/17/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/18/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/19/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/20/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/21/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-13	2/23/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	3/2/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	3/9/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	3/17/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	4/1/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	4/8/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	4/26/22	8:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	5/5/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	5/12/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
BB-13	5/18/22	8:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	6/2/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	6/8/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	6/17/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	6/30/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	7/15/22	16:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	8/2/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-13	8/15/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-14	11/12/2020	NA	NA	NA	NA	Loc A	Background	
BB-14	11/23/2020	NA	NA	NA	ND	Loc A	Background	
BB-14	11/30/20	14:40	NA	NA	ND	Loc A	Background	
BB-14	12/1/20	13:40	NA	NA	ND	Loc A	Background	
BB-14	12/4/20	14:00	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/5/20	10:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/6/20	9:50	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/7/20	10:25	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/8/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/9/20	10:25	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/10/20	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/11/20	9:55	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/12/20	10:15	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/13/20	10:00	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/14/20	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/15/20	11:55	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/16/20	12:20	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/23/20	10:40	NA	NA	ND	Loc A	Post-Injection	
BB-14	12/29/20	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-14	1/5/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BB-14	1/12/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-14	1/21/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-14	1/26/21	11:50	NA	NA	NA	Loc A	Post-Injection	
BB-14	2/2/21	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-14	2/12/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-14	2/23/21	8:45	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/1/21	11:25	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/5/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/11/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/17/21	10:50	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/24/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-14	3/31/21	11:10	NA	NA	ND	Loc A	Post-Injection	
BB-14	4/14/21	11:15	NA	NA	ND	Loc A	Post-Injection	
BB-14	5/3/21	12:50	NA	NA	ND	Loc A	Post-Injection	
BB-14	5/14/21	10:55	NA	NA	ND	Loc A	Post-Injection	
BB-14	6/3/21	11:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	6/4/21	8:30	NA	NA	ND	Loc A	Post-Injection	
BB-14	6/5/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/6/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/7/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/8/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/9/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/10/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/11/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/12/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/13/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/14/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/15/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/16/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	6/17/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected.
BB-14	6/25/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	7/3/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	7/9/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	7/14/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	7/23/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	7/30/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	8/8/21	10:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	8/13/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
BB-14	8/20/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	8/27/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	9/7/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	9/9/21	8:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	9/10/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BB-14	9/11/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/12/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/13/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/14/21	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/15/21	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/16/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/17/21	8:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/18/21	10:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/19/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/20/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	9/22/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	10/1/21	8:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	10/19/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	11/5/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	12/30/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	1/6/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	1/14/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	1/24/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No property access, not collected.
BB-14	2/8/22	14:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BB-14	2/10/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/11/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/12/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/13/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/14/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/15/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/16/22	12:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/17/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/18/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/19/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/20/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/21/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BB-14	2/23/22	11:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	3/2/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	3/9/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	3/17/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	4/1/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	4/8/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	4/26/22	8:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	5/5/22	12:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	5/12/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
BB-14	5/18/22	8:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	6/2/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	6/8/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	6/17/22	12:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	6/30/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	7/15/22	16:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	8/2/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BB-14	8/15/22	12:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
Outfall 003/004	11/12/20	10:20	NA	NA	NA	Loc A	Background	
Outfall 003/004	11/23/20	13:25	NA	NA	ND	Loc A	Background	
Outfall 003/004	11/30/20	13:50	NA	NA	ND	Loc A	Background	
Outfall 003/004	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/11/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/15/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/23/20	----	----	----	----	Loc A	Post-Injection	Not collected, dye in stream.
Outfall 003/004	12/29/20	13:10	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	1/5/21	13:25	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	1/12/21	13:25	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	1/21/21	13:10	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	1/26/21	13:55	NA	NA	NA	Loc A	Post-Injection	
Outfall 003/004	2/2/21	13:25	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	2/12/21	12:05	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	2/23/21	11:50	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/1/21	13:45	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/5/21	13:05	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/11/21	12:50	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/17/21	13:15	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/24/21	13:05	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	3/31/21	12:30	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	4/14/21	12:30	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	5/3/21	15:30	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	5/14/21	13:15	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	6/3/21	14:05	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	6/4/21	13:25	NA	NA	ND	Loc A	Post-Injection	
Outfall 003/004	6/5/21	11:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/6/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/7/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/8/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/9/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/10/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/11/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/12/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/13/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/14/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/15/21	12:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/16/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/17/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	6/25/21	13:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	7/3/21	13:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	7/9/21	14:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	7/14/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	7/23/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	7/30/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	8/8/21	12:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	8/13/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
Outfall 003/004	8/20/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	8/27/21	12:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	9/7/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	9/9/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	9/10/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
Outfall 003/004	9/11/21	15:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/12/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/13/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/14/21	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/15/21	14:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/16/21	14:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/17/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/18/21	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/19/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/20/21	8:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	9/22/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	10/1/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS Missing.
Outfall 003/004	10/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS Missing.
Outfall 003/004	10/29/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS Missing.
Outfall 003/004	11/5/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	11/12/21	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	11/19/21	14:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	12/30/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	1/6/22	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	1/14/22	14:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	1/24/22	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	2/8/22	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Outfall 003/004	2/10/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/11/22	15:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/12/22	14:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/13/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/14/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/15/22	14:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/16/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
Outfall 003/004	2/18/22	15:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/19/22	14:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/20/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/21/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
Outfall 003/004	2/23/22	15:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	3/2/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	3/9/22	13:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	3/17/22	13:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	4/1/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS Missing.
Outfall 003/004	4/8/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	4/26/22	13:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	5/5/22	14:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	5/12/22	13:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	5/24/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS Missing.
Outfall 003/004	6/2/22	15:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	6/8/22	14:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	6/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS Missing.
Outfall 003/004	6/30/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	7/15/22	17:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	8/2/22	14:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Outfall 003/004	8/15/22	15:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
NT-2	11/12/20	13:30	NA	NA	NA	Loc A	Background	
NT2	11/23/20	14:45	NA	NA	ND	Loc A	Background	
NT-2	11/30/20	14:20	NA	NA	ND	Loc A	Background	
NT-2	12/3/20	8:45	NA	NA	ND	Loc A	Post-Injection	
NT-2	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/11/20	11:55	NA	NA	ND	Loc A	Post-Injection	
NT-2	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/15/20	12:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
NT-2	12/23/20	10:25	NA	NA	ND	Loc A	Post-Injection	
NT-2	12/29/20	10:55	NA	NA	ND	Loc A	Post-Injection	
NT-2	1/5/21	11:10	NA	NA	ND	Loc A	Post-Injection	
NT-2	1/12/21	11:10	NA	NA	ND	Loc A	Post-Injection	
NT-2	1/21/21	11:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	1/26/21	11:40	NA	NA	NA	Loc A	Post-Injection	
NT-2	2/2/21	11:15	NA	NA	ND	Loc A	Post-Injection	
NT-2	2/12/21	11:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	2/23/21	8:55	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/1/21	11:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/5/21	8:40	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/11/21	10:55	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/17/21	10:35	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/24/21	10:45	NA	NA	ND	Loc A	Post-Injection	
NT-2	3/31/21	11:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	4/14/21	11:00	NA	NA	ND	Loc A	Post-Injection	
NT-2	5/3/21	12:40	NA	NA	ND	Loc A	Post-Injection	
NT-2	5/14/21	10:40	NA	NA	ND	Loc A	Post-Injection	
NT-2	6/3/21	11:10	NA	NA	ND	Loc A	Post-Injection	
NT-2	6/4/21	8:55	NA	NA	ND	Loc A	Post-Injection	
NT-2	6/5/21	10:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/6/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/7/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/8/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/9/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/10/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/11/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/12/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/13/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/14/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/15/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/16/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/17/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	6/25/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	7/3/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	7/9/21	12:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	7/14/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	7/23/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	7/30/21	11:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	8/8/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	8/13/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
NT-2	8/20/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	8/27/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	9/7/21	8:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	9/9/21	8:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	9/10/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
NT-2	9/11/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/12/21	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/13/21	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/14/21	8:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/15/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/16/21	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/17/21	8:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/18/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/19/21	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/20/21	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	9/22/21	10:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	10/1/21	8:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	10/19/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	10/29/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	11/5/21	10:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	11/12/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	11/19/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	12/30/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	1/6/22	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	1/14/22	11:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	1/24/22	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	2/8/22	14:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
NT-2	2/10/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/11/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/12/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/13/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/14/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/15/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/16/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/17/22	11:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/18/22	11:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/19/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/20/22	11:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/21/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
NT-2	2/23/22	11:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	3/2/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	3/9/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	3/17/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	4/1/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	4/8/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	4/26/22	8:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	5/5/22	12:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	5/12/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	5/18/22	8:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	6/2/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	ACS Missing.
NT-2	6/8/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	6/17/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	6/30/22	12:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	7/15/22	16:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	8/2/22	11:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
NT-2	8/15/22	12:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
TRIB 3-3	11/12/20	16:40	NA	NA	NA	Loc A	Background	
TRIB 3-3	11/23/20	11:30	NA	NA	ND	Loc A	Background	
TRIB 3-3	11/30/20	12:00	NA	NA	ND	Loc A	Background	
TRIB 3-3	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/11/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/15/20	11:50	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-3	12/23/20	9:40	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	12/29/20	9:10	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	1/5/21	9:25	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	1/12/21	9:25	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	1/21/21	9:15	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	1/26/21	10:05	NA	NA	NA	Loc A	Post-Injection	
TRIB 3-3	2/2/21	9:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	2/12/21	13:25	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	2/23/21	12:15	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/1/21	9:35	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/5/21	10:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/11/21	9:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/17/21	9:05	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/24/21	9:15	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	3/31/21	9:10	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	4/14/21	9:10	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	5/3/21	11:05	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	5/14/21	8:55	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	6/3/21	9:50	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	6/4/21	10:40	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-3	6/5/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/6/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/7/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/8/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/9/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/10/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/11/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/12/21	8:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/13/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/14/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/15/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/16/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/17/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	6/25/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	7/3/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	7/9/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	7/14/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	7/23/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	7/30/21	13:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	8/8/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	8/13/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
TRIB 3-3	8/20/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	8/27/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	9/7/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	9/9/21	9:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	9/10/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-3	9/11/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/12/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/13/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/14/21	10:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/15/21	10:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/16/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/17/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/18/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/19/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/20/21	10:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	9/22/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	10/1/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	10/19/21	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	10/29/21	12:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	11/5/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	11/12/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	11/19/21	8:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	12/30/21	10:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	1/6/22	12:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	1/14/22	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	1/24/22	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	2/8/22	12:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-3	2/10/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/11/22	8:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/12/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/13/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/14/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/15/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/16/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/17/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/18/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/19/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/20/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/21/22	9:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/22/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	2/23/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	3/2/22	9:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	3/9/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	3/17/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	4/1/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	4/8/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	4/26/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	5/5/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	5/12/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	5/18/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	6/2/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	6/8/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	6/17/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	6/30/22	9:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	7/15/22	8:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	8/2/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-3	8/15/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
TRIB 3-4	11/12/20	15:50	NA	NA	NA	Loc A	Background	
TRIB 3-4	11/23/20	15:30	NA	NA	ND	Loc A	Background	
TRIB 3-4	11/30/20	13:20	NA	NA	ND	Loc A	Background	
TRIB 3-4	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/11/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/15/20	11:45	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
TRIB 3-4	12/23/20	13:45	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	12/29/20	9:30	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	1/5/21	10:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	1/12/21	10:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	1/21/21	9:30	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	1/26/21	10:20	NA	NA	NA	Loc A	Post-Injection	
TRIB 3-4	2/2/21	9:45	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	2/12/21	13:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	2/23/21	12:10	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/1/21	9:50	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/5/21	9:30	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/11/21	9:35	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/17/21	9:25	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/24/21	9:25	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	3/31/21	9:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	4/14/21	9:20	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	5/3/21	11:15	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	5/14/21	9:05	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	6/3/21	10:05	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	6/4/21	9:35	NA	NA	ND	Loc A	Post-Injection	
TRIB 3-4	6/5/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/6/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/7/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/8/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/9/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/10/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/11/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/12/21	8:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/13/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/14/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/15/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/16/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/17/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	6/25/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	7/3/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	7/9/21	10:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	7/14/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	7/23/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	7/30/21	12:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	8/8/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	8/13/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
TRIB 3-4	8/20/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	8/27/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	9/7/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	9/9/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	9/10/21	11:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
TRIB 3-4	9/11/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/12/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/13/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/14/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/15/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/16/21	10:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/17/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/18/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/19/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/20/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	9/22/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	10/1/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	10/19/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	10/29/21	11:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	11/5/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	11/12/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	11/19/21	8:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	12/30/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	1/6/22	12:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	1/14/22	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	1/24/22	13:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	2/8/22	12:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
TRIB 3-4	2/10/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/11/22	9:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/12/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/13/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/14/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/15/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/16/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/17/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/18/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/19/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/20/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/21/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
TRIB 3-4	2/23/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	3/2/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	3/9/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	3/17/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	4/1/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	4/8/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	4/26/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	5/5/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	5/12/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	5/18/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	6/2/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	6/8/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	6/17/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	6/30/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	7/15/22	15:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	8/2/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
TRIB 3-4	8/15/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WT-1	12/10/21	8:30	ND	ND	ND	GUS	Background	Far-field Background
WT-1	12/17/21	8:10	ND	ND	ND	GUS	Background	Far-field Background
WT-1	12/22/21	8:10	ND	ND	ND	GUS	Background	Far-field Background
WT-1	12/30/21	8:10	ND	ND	ND	GUS	Background	Far-field Background
WT-1	1/6/22	8:30	ND	ND	ND	GUS	Background	Far-field Background
WT-1	1/14/22	8:30	ND	ND	ND	GUS	Background	Far-field Background
WT-1	1/24/22	8:20	ND	ND	ND	GUS	Background	Far-field Background
WT-1	2/8/22	8:10	ND	ND	ND	GUS	Background	Far-field Background
WT-1	2/10/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-1	2/11/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-1	2/12/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	2/13/22	8:55	ND	ND	ND	GUS	Post-injection	
WT-1	2/14/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	2/15/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	2/16/22	8:45	ND	ND	ND	GUS	Post-injection	
WT-1	2/17/22	8:30	ND	ND	ND	GUS	Post-injection	
WT-1	2/18/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	2/19/22	8:10	ND	ND	ND	GUS	Post-injection	
WT-1	2/20/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	2/21/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-1	2/22/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-1	2/23/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-1	3/2/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	3/9/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	3/17/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	4/1/22	8:30	ND	ND	ND	GUS	Post-injection	
WT-1	4/8/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-1	4/26/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-1	5/5/22	9:55	ND	ND	ND	GUS	Post-injection	
WT-1	5/12/22	8:10	ND	ND	ND	GUS	Post-injection	
WT-1	5/24/22	8:35	ND	ND	ND	GUS	Post-injection	
WT-1	6/2/22	8:40	ND	ND	ND	GUS	Post-injection	
WT-1	6/8/22	8:40	ND	ND	ND	GUS	Post-injection	
WT-1	6/17/22	9:45	ND	ND	ND	GUS	Post-injection	
WT-1	6/30/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-1	7/16/22	15:00	ND	ND	ND	GUS	Post-injection	
WT-1	8/2/22	9:15	ND	ND	ND	GUS	Post-injection	
WT-1	8/15/22	9:30	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine (ppb)	Pyranine (ppb)	Rhodamine WT (ppb)	Injection	Type	Notes
WT-2	12/10/21	8:35	ND	ND	ND	GUS	Background	Far-field Background
WT-2	12/17/21	8:15	ND	ND	ND	GUS	Background	Far-field Background
WT-2	12/22/21	8:15	ND	ND	ND	GUS	Background	Far-field Background
WT-2	12/30/21	8:15	ND	ND	ND	GUS	Background	Far-field Background
WT-2	1/6/22	8:35	ND	ND	ND	GUS	Background	Far-field Background
WT-2	1/14/22	8:35	ND	ND	ND	GUS	Background	Far-field Background
WT-2	1/24/22	8:25	ND	ND	ND	GUS	Background	Far-field Background
WT-2	2/8/22	8:05	ND	ND	ND	GUS	Background	Far-field Background
WT-2	2/10/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	2/11/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	2/12/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	2/13/22	9:00	ND	ND	ND	GUS	Post-injection	
WT-2	2/14/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	2/15/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	2/16/22	8:40	ND	ND	ND	GUS	Post-injection	
WT-2	2/17/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	2/18/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	2/19/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-2	2/20/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	2/21/22	8:30	ND	ND	ND	GUS	Post-injection	
WT-2	2/22/22	8:30	ND	ND	ND	GUS	Post-injection	
WT-2	2/23/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	3/2/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	3/9/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	3/17/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	4/1/22	8:35	ND	ND	ND	GUS	Post-injection	
WT-2	4/8/22	8:30	ND	ND	ND	GUS	Post-injection	
WT-2	4/26/22	8:25	ND	ND	ND	GUS	Post-injection	
WT-2	5/5/22	9:50	ND	ND	ND	GUS	Post-injection	
WT-2	5/12/22	8:15	ND	ND	ND	GUS	Post-injection	
WT-2	5/24/22	----	----	----	----	GUS	Post-injection	Not collected.
WT-2	6/2/22	8:45	ND	ND	ND	GUS	Post-injection	
WT-2	6/8/22	8:45	ND	ND	ND	GUS	Post-injection	
WT-2	6/17/22	9:50	ND	ND	ND	GUS	Post-injection	
WT-2	6/30/22	8:20	ND	ND	ND	GUS	Post-injection	
WT-2	7/16/22	15:05	ND	ND	ND	GUS	Post-injection	
WT-2	8/2/22	9:20	ND	ND	ND	GUS	Post-injection	
WT-2	8/15/22	9:25	ND	ND	ND	GUS	Post-injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 009	12/11/20	11:35	ND	ND	ND	Loc A	Background	
SPG 009	12/15/20	11:15	ND	ND	ND	Loc A	Background	
SPG 009	12/23/20	14:30	ND	ND	ND	Loc A	Background	
SPG 009	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/11/20	11:35	NA	NA	ND	Loc A	Post-Injection	
SPG 009	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/15/20	11:15	NA	NA	ND	Loc A	Post-Injection	
SPG 009	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/23/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 009	12/29/20	9:55	NA	NA	ND	Loc A	Post-Injection	
SPG 009	1/5/21	10:10	NA	NA	ND	Loc A	Post-Injection	
SPG 009	1/12/21	10:10	NA	NA	ND	Loc A	Post-Injection	
SPG 009	1/21/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 009	1/26/21	10:45	NA	NA	ND	Loc A	Post-Injection	
SPG 009	2/2/21	10:10	NA	NA	ND	Loc A	Post-Injection	
SPG 009	2/12/21	13:00	NA	NA	ND	Loc A	Post-Injection	
SPG 009	2/23/21	11:50	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/1/21	10:20	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/5/21	10:00	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/11/21	10:05	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/17/21	9:55	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/24/21	9:55	NA	NA	ND	Loc A	Post-Injection	
SPG 009	3/31/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 009	4/14/21	10:25	NA	NA	ND	Loc A	Post-Injection	
SPG 009	5/3/21	11:45	NA	NA	ND	Loc A	Post-Injection	
SPG 009	5/14/21	9:35	NA	NA	ND	Loc A	Post-Injection	
SPG 009	6/3/21	10:25	NA	NA	ND	Loc A	Post-Injection	
SPG 009	6/4/21	10:05	NA	NA	ND	Loc A	Post-Injection	
SPG 009	6/5/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/6/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/7/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/8/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/9/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/10/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/11/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/12/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/13/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/14/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/15/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/16/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/17/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	6/25/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	7/3/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	7/9/21	10:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	7/14/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	7/23/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	7/30/21	12:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	8/8/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	8/13/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 009	8/20/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	8/27/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	9/7/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	9/9/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	9/10/21	11:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 009	9/11/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/12/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/13/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/14/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/15/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/16/21	11:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/17/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/18/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/19/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/20/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	9/22/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	10/1/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	10/19/21	NA	NA	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS Missing
SPG 009	10/29/21	NA	NA	----	----	Loc A, CH-73, CH-71	Post-Injection	ACS Missing
SPG 009	11/5/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	11/12/21	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	11/19/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	12/30/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	1/6/22	13:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	1/14/22	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	1/24/22	13:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	2/8/22	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 009	2/10/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/11/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/12/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/13/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/14/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/15/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/16/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/17/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/18/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/19/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/20/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/21/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
SPG 009	2/23/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	3/2/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	3/9/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	3/17/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	4/1/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	4/8/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	4/26/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	5/5/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	5/12/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	5/18/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	6/2/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	6/8/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	6/17/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	6/30/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	7/15/22	16:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	8/2/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 009	8/15/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 020-002	11/12/20	16:15	NA	NA	NA	Loc A	Background	
SPG 020-002	11/23/20	15:50	NA	NA	ND	Loc A	Background	
SPG 020-002	11/30/20	13:50	NA	NA	ND	Loc A	Background	
SPG 020-002	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/11/20	11:45	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/15/20	12:15	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 020-002	12/23/20	14:20	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	12/29/20	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	1/5/21	10:25	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	1/12/21	10:25	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	1/21/21	9:45	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	1/26/21	10:40	NA	NA	NA	Loc A	Post-Injection	
SPG 020-002	2/2/21	10:05	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	2/12/21	13:05	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	2/23/21	11:45	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/1/21	10:15	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/5/21	9:55	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/11/21	10:00	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/17/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/24/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	3/31/21	9:45	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	4/14/21	10:20	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	5/3/21	11:40	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	5/14/21	9:30	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	6/3/21	10:20	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	6/4/21	10:00	NA	NA	ND	Loc A	Post-Injection	
SPG 020-002	6/5/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/6/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/7/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/8/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/9/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/10/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/11/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/12/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/13/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/14/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/15/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/16/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	6/17/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected
SPG 020-002	6/25/21	9:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	7/3/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	7/9/21	10:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	7/14/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	7/23/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	7/30/21	12:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	8/8/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	8/13/21	----	----	----	----	Loc A, CH-73	Post-Injection	Not collected

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 020-002	8/20/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	8/27/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	9/7/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	9/9/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	9/10/21	11:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 020-002	9/11/21	12:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/12/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/13/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/14/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/15/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/16/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/17/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/18/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/19/21	12:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/20/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	9/22/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	10/1/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	10/19/21	11:45	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
SPG 020-002	10/29/21	11:45	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
SPG 020-002	11/5/21	9:50	NA	ND	ND	Loc A, CH-73, CH-74	Post-Injection	
SPG 020-002	11/12/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	11/19/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	12/30/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	1/6/22	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	1/14/22	9:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	1/24/22	13:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	2/8/22	13:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 020-002	2/10/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/11/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/12/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/13/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/14/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/15/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/16/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/17/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/18/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/19/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/20/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/21/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
SPG 020-002	2/23/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	3/2/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	3/9/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	3/17/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	4/1/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	4/8/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	4/26/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	5/5/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	5/12/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	5/18/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	6/2/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	6/8/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	6/17/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	6/30/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	7/15/22	16:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	8/2/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 020-002	8/15/22	11:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 021-004	11/12/20	16:05	NA	NA	ND	Loc A	Background	
SPG 021-004	11/23/20	15:10	NA	NA	ND	Loc A	Background	
SPG 021-004	11/30/20	13:40	NA	NA	ND	Loc A	Background	
SPG 021-004	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/11/20	11:30	NA	NA	NA	Loc A	Post-Injection	Dye in stream.
SPG 021-004	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/15/20	11:35	NA	NA	NA	Loc A	Post-Injection	Dye in stream.
SPG 021-004	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
SPG 021-004	12/23/20	14:05	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	12/29/20	9:40	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	1/5/21	10:35	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	1/12/21	10:35	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	1/21/21	9:40	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	1/26/21	10:35	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	2/2/21	9:55	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	2/12/21	12:50	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	2/23/21	11:35	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/1/21	10:05	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/5/21	9:45	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/11/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/17/21	9:40	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/24/21	9:40	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	3/31/21	9:35	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	4/14/21	10:10	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	5/3/21	11:30	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	5/14/21	9:20	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	6/3/21	10:30	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	6/4/21	9:50	NA	NA	ND	Loc A	Post-Injection	
SPG 021-004	6/5/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/6/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/7/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/8/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/9/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/10/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/11/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/12/21	8:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/13/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/14/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/15/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/16/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	6/17/21	9:15	NA	ND	ND	Loc A, CH-74	Post-Injection	
SPG 021-004	6/25/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	7/3/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	7/9/21	10:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	7/14/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	7/23/21	10:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	7/30/21	12:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	8/8/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	8/13/21	9:05	NA	ND	ND	Loc A, CH-74	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
SPG 021-004	8/20/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	8/27/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	9/7/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	9/9/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	9/10/21	11:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
SPG 021-004	9/11/21	11:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/12/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/13/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/14/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/15/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/16/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/17/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/18/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/19/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/20/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	9/22/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	10/1/21	9:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	10/19/21	12:00	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
SPG 021-004	10/29/21	12:00	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
SPG 021-004	11/5/21	9:45	NA	ND	ND	Loc A, CH-73, CH-74	Post-Injection	
SPG 021-004	11/12/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	11/19/21	9:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	12/30/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	1/6/22	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	1/14/22	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	1/24/22	13:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	2/8/22	13:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
SPG 021-004	2/10/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/11/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/12/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/13/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/14/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/15/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/16/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/17/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/18/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/19/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/20/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/21/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
SPG 021-004	2/23/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	3/2/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	3/9/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	3/17/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	4/1/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	4/8/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	4/26/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	5/5/22	11:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	5/12/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	5/18/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	6/2/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	6/8/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	6/17/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	6/30/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	7/15/22	16:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	8/2/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
SPG 021-004	8/15/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
Spring 018C	11/12/20	13:55	NA	NA	ND	Loc A	Background	
Spring 018C	11/23/20	16:10	NA	NA	ND	Loc A	Background	
Spring 018C	11/30/20	13:35	NA	NA	ND	Loc A	Background	
Spring 018C	12/3/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/4/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/5/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/6/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/7/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/8/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/9/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/10/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/11/20	10:50	NA	NA	NA	Loc A	Post-Injection	Dye in stream.
Spring 018C	12/12/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/13/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/14/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/15/20	11:45	NA	NA	NA	Loc A	Post-Injection	Dye in stream.
Spring 018C	12/16/20	----	----	----	----	Loc A	Post-Injection	Not collected. Dye in stream.
Spring 018C	12/23/20	13:55	NA	NA	NA	Loc A	Post-Injection	
Spring 018C	12/29/20	9:35	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	1/5/21	10:15	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	1/12/21	10:15	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	1/21/21	9:35	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	1/26/21	10:30	NA	NA	NA	Loc A	Post-Injection	
Spring 018C	2/2/21	9:50	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	2/12/21	12:45	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	2/23/21	11:30	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/1/21	10:00	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/5/21	9:40	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/11/21	9:45	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/17/21	9:35	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/24/21	9:35	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	3/31/21	9:30	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	4/14/21	10:05	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	5/3/21	11:25	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	5/14/21	9:15	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	6/3/21	10:15	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	6/4/21	9:45	NA	NA	ND	Loc A	Post-Injection	
Spring 018C	6/5/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/6/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/7/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/8/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/9/21	9:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/10/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/11/21	9:05	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/12/21	8:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/13/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	Outlet valves closed, water ponded around spring.
Spring 018C	6/14/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/15/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/16/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	6/17/21	9:10	NA	ND	ND	Loc A, CH-74	Post-Injection	
Spring 018C	6/25/21	9:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	7/3/21	9:00	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	7/9/21	10:30	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	7/14/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	7/23/21	10:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	7/30/21	12:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	8/8/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	8/13/21	9:00	NA	ND	ND	Loc A, CH-74	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
Spring 018C	8/20/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	Outlet valves closed, water ponded around spring.
Spring 018C	8/27/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	9/7/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	9/9/21	9:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	9/10/21	11:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
Spring 018C	9/11/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/12/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/13/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/14/21	9:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/15/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/16/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	Outlet valves closed, water ponded around spring.
Spring 018C	9/17/21	9:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/18/21	11:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/19/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/20/21	11:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	9/22/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	10/1/21	9:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	10/19/21	12:00	NA	ND	ND	Loc A, CH-73, CH-72	Post-Injection	
Spring 018C	10/29/21	12:00	NA	ND	ND	Loc A, CH-73, CH-73	Post-Injection	
Spring 018C	11/5/21	9:35	NA	ND	ND	Loc A, CH-73, CH-74	Post-Injection	
Spring 018C	11/12/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	11/19/21	8:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	12/30/21	9:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	Outlet valves closed, water ponded around spring.
Spring 018C	1/6/22	12:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	1/14/22	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	1/24/22	13:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	2/8/22	13:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
Spring 018C	2/10/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/11/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/12/22	9:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/13/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/14/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
Spring 018C	2/15/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected.
Spring 018C	2/16/22	10:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/17/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/18/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/19/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/20/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/21/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Not collected. Flooded.
Spring 018C	2/23/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	3/2/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	3/9/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	3/17/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	4/1/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	4/8/22	9:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	4/26/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	5/5/22	11:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	Outlet valves closed, water ponded around spring.
Spring 018C	5/12/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	5/24/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	6/2/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	6/8/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	6/17/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	6/30/22	9:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	7/15/22	15:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	8/2/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
Spring 018C	8/15/22	10:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
BDFD I	11/12/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD I	11/23/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD I	11/30/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD I	12/3/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/4/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/5/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/6/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/7/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/8/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/9/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/10/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/11/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/12/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/13/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/14/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/15/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/16/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/23/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	12/29/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	1/5/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	1/12/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	1/21/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	1/26/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	2/2/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	2/12/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	2/23/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD I	3/1/21	10:30	NA	NA	ND	Loc A	Post-Injection	
BDFD I	3/5/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BDFD I	3/11/21	10:15	NA	NA	ND	Loc A	Post-Injection	
BDFD I	3/17/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BDFD I	3/24/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BDFD I	3/31/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BDFD I	4/14/21	10:35	NA	NA	ND	Loc A	Post-Injection	
BDFD I	5/3/21	11:55	NA	NA	ND	Loc A	Post-Injection	
BDFD I	5/14/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BDFD I	6/3/21	10:35	NA	NA	ND	Loc A	Post-Injection	
BDFD I	6/4/21	10:15	NA	NA	ND	Loc A	Post-Injection	
BDFD I	6/5/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/6/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/7/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/8/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/9/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/10/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/11/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/12/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/13/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/14/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/15/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/16/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	6/17/21	----	----	----	----	Loc A, CH-74	Post-Injection	No flow, not collected.
BDFD I	6/25/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	7/3/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	7/9/21	10:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	7/14/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	7/23/21	9:35	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	7/30/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	8/8/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	8/13/21	----	----	----	----	Loc A, CH-74	Post-Injection	No flow, not collected.

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
BDFD I	8/20/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	8/27/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD I	9/7/21	9:20	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	9/9/21	9:40	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	9/10/21	11:45	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD I	9/11/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/12/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/13/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/14/21	10:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/15/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/16/21	11:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/17/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/18/21	12:00	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/19/21	12:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/20/21	11:35	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	9/22/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	10/1/21	9:50	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	10/19/21	----	----	----	----	Loc A, CH-73, CH-72	Post-Injection	No flow, not collected.
BDFD I	10/29/21	----	----	----	----	Loc A, CH-73, CH-73	Post-Injection	No flow, not collected.
BDFD I	11/5/21	----	----	----	----	Loc A, CH-73, CH-74	Post-Injection	No flow, not collected.
BDFD I	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD I	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD I	12/30/21	10:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	1/6/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD I	1/14/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD I	1/24/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD I	2/8/22	13:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD I	2/10/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/11/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/12/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/13/22	10:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/14/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/15/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/16/22	10:35	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/17/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/18/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/19/22	10:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/20/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD I	2/21/22	9:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BDFD I	2/23/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	3/2/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	3/9/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	3/17/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	4/1/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	4/8/22	9:55	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	4/26/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	5/5/22	11:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	5/12/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	5/18/22	10:10	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	6/2/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	6/8/22	10:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	6/17/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	6/30/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	7/15/22	16:25	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	8/2/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD I	8/15/22	11:15	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
BDFD X	11/12/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD X	11/23/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD X	11/30/20	----	----	----	----	Loc A	Background	No flow, not collected.
BDFD X	12/3/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/4/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/5/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/6/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/7/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/8/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/9/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/10/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/11/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/12/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/13/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/14/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/15/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/16/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/23/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	12/29/20	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	1/5/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	1/12/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	1/21/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	1/26/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	2/2/21	----	----	----	----	Loc A	Post-Injection	No flow, not collected.
BDFD X	2/12/21	12:40	NA	NA	ND	Loc A	Post-Injection	
BDFD X	2/23/21	12:05	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/1/21	9:55	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/5/21	9:35	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/11/21	9:40	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/17/21	9:30	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/24/21	9:30	NA	NA	ND	Loc A	Post-Injection	
BDFD X	3/31/21	9:25	NA	NA	ND	Loc A	Post-Injection	
BDFD X	4/14/21	10:00	NA	NA	ND	Loc A	Post-Injection	
BDFD X	5/3/21	11:20	NA	NA	ND	Loc A	Post-Injection	
BDFD X	5/14/21	9:10	NA	NA	ND	Loc A	Post-Injection	
BDFD X	6/3/21	10:10	NA	NA	ND	Loc A	Post-Injection	
BDFD X	6/4/21	9:10	NA	NA	ND	Loc A	Post-Injection	
BDFD X	6/5/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/6/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/7/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/8/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/9/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/10/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/11/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/12/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/13/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/14/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/15/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/16/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	6/17/21	----	----	----	----	Loc A, CH-74	Post-Injection	No flow, not collected.
BDFD X	6/25/21	9:25	NA	ND	ND	Loc A, CH-72	Post-Injection	
BDFD X	7/3/21	8:55	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD X	7/9/21	10:25	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD X	7/14/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	7/23/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	7/30/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	8/8/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	8/13/21	----	----	----	----	Loc A, CH-74	Post-Injection	No flow, not collected.

Location	Date	Time	Eosine	Pyranine	Rhodamine WT	Injection	Type	Notes
BDFD X	8/20/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	8/27/21	----	----	----	----	Loc A, CH-73	Post-Injection	No flow, not collected.
BDFD X	9/7/21	8:50	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD X	9/9/21	9:10	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD X	9/10/21	11:15	NA	ND	ND	Loc A, CH-73	Post-Injection	
BDFD X	9/11/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/12/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/13/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/14/21	9:30	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/15/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/16/21	11:20	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/17/21	9:05	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/18/21	11:25	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/19/21	11:45	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/20/21	11:10	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	9/22/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	10/1/21	9:15	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	10/19/21	----	----	----	----	Loc A, CH-73, CH-72	Post-Injection	No flow, not collected.
BDFD X	10/29/21	----	----	----	----	Loc A, CH-73, CH-73	Post-Injection	No flow, not collected.
BDFD X	11/5/21	----	----	----	----	Loc A, CH-73, CH-74	Post-Injection	No flow, not collected.
BDFD X	11/12/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD X	11/19/21	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD X	12/30/21	9:40	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	1/6/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD X	1/14/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD X	1/24/22	----	----	----	----	Loc A, CH-73, CH-71	Post-Injection	No flow, not collected.
BDFD X	2/8/22	12:55	NA	ND	ND	Loc A, CH-73, CH-71	Post-Injection	
BDFD X	2/10/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/11/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/12/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/13/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/14/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/15/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/16/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/17/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	2/18/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	2/19/22	10:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	2/20/22	9:45	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	2/21/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	2/22/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	Flooded, not collected.
BDFD X	2/23/22	10:05	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	3/2/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	3/9/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	3/17/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	4/1/22	9:40	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	4/8/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	4/26/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	5/5/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	5/12/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	5/18/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	6/2/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	6/8/22	10:00	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	6/17/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	6/30/22	9:20	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	7/15/22	----	----	----	----	Loc A, CH-73, CH-71, GUS	Post-Injection	No flow, not collected.
BDFD X	8/2/22	10:30	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	
BDFD X	8/15/22	10:50	ND	ND	ND	Loc A, CH-73, CH-71, GUS	Post-Injection	

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PMP Dye Trace Study
Appendix F - Analytical Narrative

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Overview

The following describes the conditions and fluorescence observed at each sampling location. Any sampling location described as “standard” has the physical possibility that the injected dye could reach that location. A “catch-all” sampling location indicates that the dye from the injection could not naturally travel to that location. Catch-all locations were included to detect sources of fluorescence other than the Near-field and Far-field injections. Dye trace sampling for this project began in November of 2020 and ended in August of 2022. As many as 121 samples were collected at some locations. Compared to the total duration of sampling, the initial background sampling prior to the Location A dye injection was small (3 samples). Due to the historical use of fluorescent dyes at the Site it was anticipated that background levels of the commonly used dyes would present.

Criteria For Dye Positive

The following attributes were required of any sample designated a dye positive:

1. Fluorescence peak within +/- 5 nanometers of accepted emission range for the dye in question.
2. Fluorescence peak must have a typical sharp symmetrical peak exhibited by fluorescent dyes. If a fluorescent peak is described as broad in the summary below it indicates that the peak does not satisfy criteria 2.
3. Fluorescence peak must be ten times greater than the detection limit for the dye in question.
4. Fluorescence peak must be ten times greater than any fluorescent peak within the typical range observed in the background samples for that location
5. It must be reasonable that the dye detection came from the dye injection and no other source. Factors such as local hydrogeology are considered as part of this step.
6. A minimum of two results meeting criteria 1-5. Due to the nearly two-year duration of sampling, it would be expected that the two results would occur relatively close to each other. For example, a fluorescent peak detected in December 2020 and second peak in July 2022 are unlikely to be related.

Surface Water

Location: BB-1

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 643 ft

Conditions: BB-1 receives surface flow from Outfall 002 from the GM Powertrain Facility. The flow at BB-1 is approximately 1-2 gpm with periods of higher flow and no flow. BB-1 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. BB-1 was a standard sampling location for the Far-field dye traces.

Fluorescence: BB-1 had periodic fluorescent peaks in the range for Eosine, Fluorescein, and Rhodamine WT. BB-1 is higher in elevation that the Rhodamine WT injection point (Location A), therefore the peaks in the range for Rhodamine WT are unrelated to that dye injection. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-2

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 618 ft

Conditions: BB-2 receives surface flow from Outfall 002 as wells as from an unnamed tributary to the south. The flow at BB-2 is approximately 3-4 gpm with periods of higher flow. BB-2 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. BB-2 was a standard sampling location for the Far-field dye traces.

Fluorescence: BB-2 had periodic fluorescent peaks in the range for Eosine, Fluorescein, and Rhodamine WT. BB-2 is higher in elevation that the Rhodamine WT injection point (Location A), therefore the peaks in the range for Rhodamine WT are unrelated to that dye injection. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-3

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 610 ft

Conditions: BB-3 receives surface flow from Outfall 002 as well as from two unnamed tributaries. The flow at BB-3 is approximately 5 gpm with periods of higher flow. BB-3 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. BB-3 was a standard sampling location for the Far-field dye traces.

Fluorescence: BB-3 had periodic fluorescent peaks in the range for Eosine, Fluorescein, and Rhodamine WT. BB-3 is higher in elevation that the Rhodamine WT injection point (Location A), therefore the peaks in the range for Rhodamine WT are unrelated to that dye injection. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-4

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 595 ft

Conditions: BB-4 receives surface flow from Outfall 002 as well as from two unnamed tributaries. The flow at BB-4 is approximately 5 gpm with periods of higher flow. BB-4 was a standard sampling location for all dye traces.

Fluorescence: BB-4 had periodic fluorescent peaks in the range for Eosine, Fluorescein, and Rhodamine WT. BB-4 had one broad peak in the range of Rhodamine WT in the background sample collected 11/20/20. Similar broad peaks were observed in samples collected throughout the Near-field dye trace. A peak in the range of Rhodamine WT was observed in the sample collected on 2-12-22. However, no additional peaks were observed in any of the remaining samples collected at BB-4. Based on this, the peak observed on 2-12-22 does not match the positive dye recovery criteria. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-5

Type: Surface Water

Elevation: 578 ft

Dye Trace: Near-field and Far-field

Conditions: BB-5 receives surface flow from Outfall 002 as well as from two unnamed tributaries. The flow at BB-5 is approximately 3 gpm with periods of higher flow. BB-5 was a standard sampling location for all dye traces.

Fluorescence: BB-5 had periodic fluorescent peaks in the range for Eosine, Fluorescein, and Rhodamine WT. Three upstream catch-all locations (BB-1, BB-2, and BB-3) have similar fluorescent peaks in the Rhodamine WT range, therefore the peaks in the range for Rhodamine WT are unrelated to Location A dye injection. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-6

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 634 ft

Conditions: BB-6 receives surface flow from the south, with no surface connection to the Site. The flow at BB-6 is approximately 2 gpm with periods of higher flow. BB-6 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. BB-6 was a standard sampling location for the Far-field dye traces.

Fluorescence: A peak in the range of Rhodamine WT was observed at BB-6 on 4-1-22. However, BB-6 is higher in elevation than Rhodamine WT injection well Location A, therefore the peak is unrelated to that dye injection. BB-6 had periodic fluorescent peaks in the range for Eosine, prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-7

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 620 ft

Conditions: BB-7 receives surface flow from the south, with no surface connection to the Site. The flow at BB-7 is approximately 1 gpm with periods of higher flow. BB-7 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. BB-7 was a standard sampling location for the Far-field dye traces.

Fluorescence: A peak in the range of Rhodamine WT was observed at BB-7 on 2-12-22. However, BB-7 is higher in elevation than Rhodamine WT injection well Location A, therefore the peak is unrelated to that dye injection. BB-7 had periodic fluorescent peaks in the range for Eosine, prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-8

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 620 ft

Conditions: BB-8 receives surface flow from the southeast, with no surface connection to the Site. Water is only present at BB-8 under high-flow conditions and was not suitable as a sampling location.

Fluorescence: No samples were collected from this location.

Location: BB-9

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 580 ft

Conditions: BB-9 receives surface flow from the east, with no surface connection to the Site. The flow at BB-9 is approximately 2 gpm with periods of higher flow. BB-9 was a standard sampling location for all dye traces.

Fluorescence: BB-9 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-10

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 535 ft

Conditions: BB-10 receives surface flow from Site, from both Outfall 002 and Outfall 003/004, as well as several unnamed tributaries from off Site. The flow at BB-10 is approximately 30 gpm with periods of higher flow. BB-10 was a standard sampling location for all dye traces.

Fluorescence: BB-10 had multiple Rhodamine WT detections due to the leaking Catch Basin 3. BB-10 also had periodic high intensity fluorescent peaks in the range for Eosine and Fluorescein. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-11

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 536 ft

Conditions: BB-11 receives surface flow from two unnamed tributaries. The flow at BB-11 is approximately 20 gpm with periods of higher flow. BB-11 was a standard sampling location for all dye traces.

Fluorescence: BB-11 had one background fluorescent peak in the range of Pyranine on 2/12/21. No peaks in the Pyranine range that met the criteria for positive dye recovery occurred after Pyranine injection at CH-71 and CH-73. BB-11 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-12

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 568 ft

Conditions: BB-12 receives surface flow from two unnamed tributaries. The flow at BB-12 is approximately 15 gpm with periods of higher flow. BB-12 was a standard sampling location for all dye traces.

Fluorescence: BB-12 had background fluorescent peaks in the range of Pyranine on 2/12/21, 5/3/21, and 5/14/21. No peaks in the Pyranine range met the criteria for positive dye recovery after Pyranine injection at CH-71 and CH-73. BB-12 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BB-13

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 578 ft

Conditions: BB-13 receives surface flow from one unnamed tributary to the south. The flow at BB-13 is approximately 5 gpm with periods of higher flow. BB-13 was a standard sampling location for all dye traces.

Fluorescence: BB-13 had two background fluorescent peak in the range of Pyranine on 2/12/21 and 4/14/21. No peaks in the Pyranine range that met the criteria for positive dye recovery occurred after Pyranine injection at CH-71 and CH-73. BB-13 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels). Two fluorescent peaks in the Rhodamine WT range were observed on 2/11/22 and 2/16/22, these peaks had a corresponding high intensity peak in the range of Fluorescein. No downstream locations (BB-11, BB-12) showed the same peaks, which would be expected with a positive detection. Based on these factors the Rhodamine WT fluorescent peaks seen at B-13 are considered the result of sample contamination.

Location: BB-14

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 578 ft

Conditions: BB-14 receives surface flow from one unnamed tributary. The flow at BB-14 is approximately 5 gpm with periods of higher flow. BB-14 was a standard sampling location for all dye traces.

Fluorescence: BB-14 had one background fluorescent peak in the range of Pyranine on 5/14/21. No peaks in the Pyranine range that met the criteria for positive dye recovery occurred after Pyranine injection at CH-71 and CH-73. BB-14 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels

Location: North Tributary 2 (NT-2)

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 523 ft

Conditions: NT-2 receives surface flow from Site, from both Outfall 002 and Outfall 003/004, as well as several unnamed tributaries not connected through surface drainage from the Site. The flow at NT-2 is approximately 50 gpm with periods of higher flow. NT-2 was a standard sampling location for all dye traces.

Fluorescence: NT-2 had multiple Rhodamine WT detections due to leak at Catch Basin 3. NT-2 also had periodic high intensity fluorescent peaks in the range for Eosine and Fluorescein. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive Eosine recovery.

Location: Outfall 003 / 004

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 603 ft

Conditions: Outflow 003/004 receives flow from Site from the water treatment plant. The flow at Outfall 003/004 varies from no flow to more than 200 gpm. Outfall 003/004 was a standard sampling location for all dye traces.

Fluorescence: Outfall 003 / 004 had one Rhodamine WT detection on 12/15/20 due to the leak at Catch Basin 3. The location of the ACS was moved closer to the pipe outlet to avoid upstream flow from Catch Basin 3. No Rhodamine WT detections occurred after the ACS location was moved. Outfall 003/004 also had periodic high intensity fluorescent peaks in the range for Eosine and Fluorescein. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery.

Location: Tributary 3-3 (Trib 3-3)

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 600 ft

Conditions: Trib 3-3 receives surface flow from the Site, from both Outfall 003/004 and an unnamed drainage to the west. The flow at Tributary varies from no flow to approximately 200 gpm. Trib 3-3 was a standard sampling location for all dye traces.

Fluorescence: Trib 3-3 had multiple Rhodamine WT detections due to the leak at Catch Basin 3. Trib 3-3 also had periodic high intensity fluorescent peaks in the range for Eosine and Fluorescein. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery. Trib 3-3 had one fluorescent peak in the range of Pyranine on 11/12/21. No additional peaks in the range of Pyranine were observed at Trib 3-3 and the peak on 11/12/21 does not meet the criteria for positive dye recovery.

Location: Tributary 3-4 (Trib 3-4)

Type: Surface Water

Dye Trace: Near-field and Far-field

Elevation: 580 ft

Conditions: Trib 3-4 receives surface flow from Site, from both Outfall 003/004 and an unnamed drainage to the west. The flow at Tributary varies from 1 gpm to approximately 200 gpm. Trib 3-4 was a standard sampling location for all dye traces.

Fluorescence: Trib 3-4 had multiple Rhodamine WT detections due to the leak at Catch Basin 3. Trib 3-4 also had periodic high intensity fluorescent peaks in the range for Eosine and Fluorescein. The peaks in

the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery.

Location: WT-1

Type: Surface Water

Dye Trace: Far-field

Elevation: 672 ft

Conditions: WT-1 receives surface flow from one unnamed tributary from the Site. The flow at WT-1 is approximately 5 gpm with periods of higher flow. WT-1 was a sampling location for only the Far-field dye trace.

Fluorescence: WT-1 had two broad background fluorescent peaks in the range of Eosine on 1/24/22 and 2/8/22. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: WT-2

Type: Surface Water

Dye Trace: Far-field

Elevation: 661 ft

Conditions: WT-2 receives surface flow from one unnamed tributary from the Site. The flow at WT-2 is approximately 5 gpm with periods of higher flow. WT-2 was a sampling location for only the Far-field dye trace.

Fluorescence: WT-2 had broad fluorescent peaks in the Eosine range in background samples. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

<u>Springs</u>

Location: Spring 009

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 553 ft

Conditions: Spring 009 is located on the west side of Bailey's Branch. The flow at Spring 009 is approximately 2 gpm with periods of higher flow. Spring 009 was a standard sampling location for all dye traces.

Fluorescence: Spring 009 had multiple background fluorescent peaks in the range for Pyranine. The peaks in the range for Pyranine were present prior to injection of Pyranine for the Far-field dye traces. No peaks in the Pyranine range after dye injection at CH-71 and CH-73 met the criteria for positive dye

recovery (10X background levels). Spring 009 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: Spring 020-002

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 553 ft

Conditions: Spring 020-002 is located on the west side of Bailey's Branch. The flow at Spring 020-002 is approximately 2 gpm with periods of higher flow. Spring 020-002 was a standard sampling location for all dye traces.

Fluorescence: Spring 020-002 had a single fluorescent peak in the Rhodamine WT range on 12/29/20. No additional samples had a peak in the Rhodamine WT range, therefore the peak on 12/29/20 does not fit the criteria for positive dye recovery. Spring 020-002 had multiple background fluorescent peaks in the range for Pyranine. The peaks in the range for Pyranine were present prior to injection of Pyranine for the Far-field dye traces. No peaks in the Pyranine range after dye injection at CH-71 and CH-73 met the criteria for positive dye recovery (10X background levels). Spring 020-002 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: Spring 021-002

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 553 ft

Conditions: Spring 021-002 was checked for flow for the duration of the dye trace study but was dry.

Fluorescence: No samples were collected from this location.

Location: Spring 021-003

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 553 ft

Conditions: Spring 021-003 was checked for flow for the duration of the dye trace study but was dry.

Fluorescence: No samples were collected from this location.

Location: Spring 021-004

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 551 ft

Conditions: Spring 021-004 is located on the west side of Bailey's Branch and appears to derive a portion of its flow from Bailey's Branch (see Inset 1). The flow at Spring 021-004 is approximately 2 gpm with periods of higher flow. Spring 021-004 was a standard sampling location for all dye traces.

Fluorescence: Spring 020-002 had multiple dye detections for Rhodamine WT that are attributed to Rhodamine WT release to the surface stream from Catch Basin 3. One additional Rhodamine WT fluorescent peak was identified in a sample collected on 2/13/22. Spring 021-004 had multiple high intensity fluorescent peaks in the range of Fluorescein. Spring 021-004 had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).



Inset 1: Spring 021-004.

Location: Spring 018C

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 552 ft

Conditions: Spring 018C is located on the east side of Bailey's Branch. The flow at Spring 018C is approximately 5 gpm with periods of higher flow. Spring 018C was a standard sampling location for all dye traces.

Fluorescence: Spring 018C had multiple dye detections for Rhodamine WT that are attributed to Rhodamine WT release to the surface stream from Catch Basin 3. Spring 018C had multiple high intensity fluorescent peaks in the range of Fluorescein. Spring 018C had periodic broad fluorescent peaks in the range for Eosine. The peaks in the range for Eosine were present prior to injection of Eosine for the Far-field dye traces. No peaks in the Eosine range during the Far-field dye traces met the criteria for positive dye recovery (10X background levels).

Location: BDFD A

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 580 ft

Conditions: BDFD A was identified during thermal imaging conducting by GHD. BDFD A was checked for flow for the duration of the dye trace study but was dry.

Fluorescence: No samples were collected from this location.

Location: BDFD I

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 535 ft

Conditions: BDFD I is located on the east side of Bailey's Branch. The flow at BDFD I is approximately 0.5 gpm and was often dry. The first sample collected at BDFD I was on 3/1/21, due to lack of flow during previous sampling events. BDFD I was a standard sampling location for all dye traces.

Fluorescence: BDFD I had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: BDFD W

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 572 ft

Conditions: BDFD W was identified during thermal imaging conducting by GHD. BDFD W was checked for flow for the duration of the dye trace study but was dry.

Fluorescence: No samples were collected from this location.

Location: BDFD X

Type: Spring

Dye Trace: Near-field and Far-field

Elevation: 573 ft

Conditions: BDFD X is located on the west side of Bailey's Branch. The flow at BDFD X is approximately 0.5 gpm and was often dry. The first sample collected at BDFD X was on 3/5/21, due to lack of flow previously. BDFD X was a standard sampling location for all dye traces.

Fluorescence: BDFD X had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Monitoring Wells

**Monitoring wells with a second numeric designation indicate the depth of the sample. For example, "CH-52-42" indicates the ACS was placed within well CH-52 at a depth of 42 below ground surface.*

Location: 9-4

Type: Well

Dye Trace: Far-field

Completed Elevation: 625.1 ft

Conditions: 9-4 is a well located 690 feet west of the Pilot Trench. 9-4 was a standard sampling location for the Far-field dye trace.

Fluorescence: 9-4 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-20

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 581.2 ft

Conditions: CH-20 is a well located 160 feet west of the Pilot Trench. CH-20 was a standard sampling location for all dye traces.

Fluorescence: CH-20 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-22

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.8 ft

Conditions: CH-22 is a well located 160 feet west of the Pilot Trench. CH-22 was a standard sampling location for all dye traces.

Fluorescence: CH-22 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-45

Type: Well

Dye Trace: Far-field

Completed Elevation: 608.3 ft

Conditions: CH-45 is a well located 850 feet west of the Pilot Trench. CH-45 was a standard sampling location for the Far-field dye trace.

Fluorescence: CH-45 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-46

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 602.6 ft

Conditions: CH-46 is a well located 815 feet west of the Pilot Trench. CH-46 was a standard sampling location for all dye traces.

Fluorescence: CH-46 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-47

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 609.4 ft

Conditions: CH-47 is a well located 580 feet west of the Pilot Trench. CH-47 was not part of the original Near-field sampling network. During groundwater sampling at CH-47, GHD personnel observed discolored water in CH-47. After discussion with GHD, CH-47 was added to the sampling network, with the first sample collected on 3/29/21. CH-47 was a standard sampling location for all dye traces.

Fluorescence: CH-47 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-48

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 607.1 ft

Conditions: CH-48 is a well located 430 feet west of the Pilot Trench. CH-48 was a standard sampling location for all dye traces.

Fluorescence: CH-48 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-49

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 606.9 ft

Conditions: CH-49 is a well located 280 feet west of the Pilot Trench. CH-49 was a standard sampling location for all dye traces.

Fluorescence: CH-49 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-52-42

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 613.3 ft

Conditions: CH-52-42 is a well located 220 feet south of the Pilot Trench. CH-52-42 was a standard sampling location for all dye traces.

Fluorescence: CH-52-42 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-52-53

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 613.3 ft

Conditions: CH-52-53 is a well located 220 feet south of the Pilot Trench. CH-52-53 was a standard sampling location for all dye traces.

Fluorescence: CH-52-53 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-53

Type: Well

Dye Trace: Far-field

Completed Elevation: 620.2 ft

Conditions: CH-53 is a well located 525 feet south of the Pilot Trench. CH-53 was a standard sampling location for the Far-field dye traces.

Fluorescence: CH-53 had no fluorescent peaks in the range of Eosine.

Location: CH-54

Type: Well

Dye Trace: Far-field

Completed Elevation: 626.7 ft

Conditions: CH-54 is a well located 755 feet south of the Pilot Trench. CH-54 was a standard sampling location for the Far-field dye traces.

Fluorescence: CH-54 had no fluorescent peaks in the range of Eosine.

Location: CH-61-17

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.0 ft

Conditions: CH-61-17 is a well located 45 feet west and down gradient of the Pilot Trench. CH-61-17 was a standard sampling location for all dye traces.

Fluorescence: CH-61-17 had no fluorescent peaks in the range of Eosine or Pyranine. CH-61-17 had one low intensity fluorescent peak in the range of Rhodamine WT on 6-6-21. The peak observed on 6-6-21 was determined to be sample contamination due to the use of a red marker on the sample container. No additional peaks in the range for Rhodamine WT were observed and the single peak on 6-6-21 does not meet the requirements for positive dye recovery.

Location: CH-61-30

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.0 ft

Conditions: CH-61-30 is a well located 45 feet east and down gradient of the Pilot Trench. CH-61-30 was a standard sampling location for all dye traces.

Fluorescence: CH-61-30 had no fluorescent peaks in the range of Eosine or Pyranine. CH-61-30 had one low intensity fluorescent peak in the range of Rhodamine WT on 6-6-21, which was sample contamination due to use of a colored marker on the sample bottle label. One additional peak in the range of Rhodamine WT was observed on 2/13/22. Several other sampling locations had similar peaks in this period, and these were also assumed to be due to sample contamination. The peaks observed at CH-61-30 do not meet the requirements for positive dye recovery.

Location: CH-62-15

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.5 ft

Conditions: CH-62-15 is a well located 25 feet east and down gradient of the Pilot Trench. CH-62-15 was a standard sampling location for all dye traces.

Fluorescence: CH-62-15 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-62-26

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.5 ft

Conditions: CH-62-26 is a well located 25 feet east and down gradient of the Pilot Trench. CH-62-26 was a standard sampling location for all dye traces.

Fluorescence: CH-62-26 had no fluorescent peaks in the range of Eosine or Pyranine. CH-62-26 had one fluorescent peak in the range of Rhodamine WT on 2-14-22. No additional peaks in the range for Rhodamine WT were observed and the single peak on 2-14-22 does not meet the requirements for positive dye recovery.

Location: CH-63

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 579.9 ft

Conditions: CH-63 is a well located 40 feet east and down gradient of the Pilot Trench. CH-63 was a standard sampling location for all dye traces.

Fluorescence: CH-63 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-64-24

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.1 ft

Conditions: CH-64-24 is a well located 90 feet east and down gradient of the Pilot Trench. CH-64-24 was a standard sampling location for all dye traces.

Fluorescence: CH-64-24 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-64-43

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.1 ft

Conditions: CH-64-43 is a well located 90 feet east and down gradient of the Pilot Trench. CH-64-43 was a standard sampling location for all dye traces.

Fluorescence: CH-64-43 had no fluorescent peaks in the range of Eosine or Pyranine. CH-62-26 had one fluorescent peak in the range of Rhodamine WT on 2-10-22. No additional peaks in the range for Rhodamine WT were observed and the single peak on 2-10-22 does not meet the requirements for positive dye recovery.

Location: CH-65-33

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 579.7 ft

Conditions: CH-65-33 is a well located 105 feet east of the Pilot Trench. CH-65-33 was a standard sampling location for all dye traces.

Fluorescence: CH-65-33 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-65-50

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 579.7 ft

Conditions: CH-65-50 is a well located 105 feet east of the Pilot Trench. CH-65-50 was a standard sampling location for all dye traces.

Fluorescence: CH-65-50 had no fluorescent peaks in the range of Eosine. CH-65-50 had one fluorescent peak in the range of Rhodamine WT on 10-1-21. No additional peaks in the range for Rhodamine WT were observed and the single peak on 10-1-21 does not meet the requirements for positive dye recovery. CH-65-50 had one fluorescent peak in the range of Pyranine on 2-22-22. No additional peaks in the range

for Pyranine were observed and the single peak on 2-22-22 does not meet the requirements for positive dye recovery.

Location: CH-66-37

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.1 ft

Conditions: CH-66-37 is a well located 20 feet west of the Pilot Trench. CH-66-37 was a standard sampling location for all dye traces.

Fluorescence: CH-66-37 had no fluorescent peaks in the range of Eosine or Rhodamine WT. CH-66-37 had one fluorescent peak in the range of Pyranine on 6-3-21. No additional peaks in the range for Pyranine were observed and the single peak on 6-3-21 does not meet the requirements for positive dye recovery.

Location: CH-66-50

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 580.1 ft

Conditions: CH-66-50 is a well located 20 feet west of the Pilot Trench. CH-66-50 was a standard sampling location for all dye traces.

Fluorescence: CH-66-50 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-67-40

Type: Well

Dye Trace: Near-field and Far-field

Elevation: 579.9 ft

Conditions: CH-67-40 is a well located 100 feet northwest of the Pilot Trench. CH-67-40 was a standard sampling location for all dye traces.

Fluorescence: CH-67-40 had no fluorescent peaks in the range of Pyranine. CH-67-40 had one fluorescent peak in the range of Eosine on 12-9-20, prior to injection of Eosine for the Far-field dye trace. CH-67-40 had two fluorescent peak in the range of Rhodamine WT on 2-12-22 and 2-13-22. It is believed these fluorescent peaks are due to sample contamination, as other sampling locations had similar fluorescent peaks in the range of Rhodamine WT that were unrelated to dye injection at Location A. No additional peaks in the range of Rhodamine WT were detected at this location for the remainder of the dye trace.

Note: I can elaborate on this explanation if necessary

Location: CH-67-67

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 579.9 ft

Conditions: CH-67-67 is a well located 100 feet northwest of the Pilot Trench. CH-67-67 was a standard sampling location for all dye traces.

Fluorescence: CH-67-67 had one fluorescent peak in the range of Eosine on 12-9-20, prior to injection of Eosine for the Far-field dye trace. CH-67-67 had one fluorescent peak in the range of Pyranine on 11-19-21. No additional peaks in the range for Pyranine were observed and the single peak on 11-19-21 does not meet the requirements for positive dye recovery. CH-67-67 had one fluorescent peak in the range of Rhodamine WT on 2-8-22. No additional peaks in the range for Rhodamine WT were observed and the single peak on 2-8-22 does not meet the requirements for positive dye recovery.

Location: CH-68-30

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 568.9 ft

Conditions: CH-68-30 is a well located 80 feet south of the Pilot Trench. CH-68-30 was a standard sampling location for all dye traces.

Fluorescence: CH-68-30 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-68-62

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 568.9 ft

Conditions: CH-68-62 is a well located 80 feet south of the Pilot Trench. CH-68-62 was a standard sampling location for all dye traces.

Fluorescence: CH-68-62 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-69-50

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 568.9 ft

Conditions: CH-69-50 is a well located 40 feet north of the Pilot Trench. CH-69-50 was a standard sampling location for all dye traces.

Fluorescence: CH-69-50 had no fluorescent peaks in the range of Eosine or Pyranine. CH-69-50 had one fluorescent peak in the range of Rhodamine WT on 2-17-22. The sample also had a high intensity peak in the range of Fluorescein. No additional peaks in the range for Rhodamine WT were observed and the single peak on 2-17-22 does not meet the requirements for positive dye recovery.

Location: CH-69-70

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 568.9 ft

Conditions: CH-69-70 is a well located 40 feet north of the Pilot Trench. CH-69-70 was a standard sampling location for all dye traces.

Fluorescence: CH-69-70 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-70-54

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 570.1 ft

Conditions: CH-70-54 is a well located 80 feet south of the Pilot Trench. CH-70-54 was a standard sampling location for all dye traces.

Fluorescence: CH-70-54 had no fluorescent peaks in the range of Eosine or Rhodamine WT. CH-70-50 had one fluorescent peak in the range of Pyranine on 6-3-21. No additional peaks in the range for Pyranine were observed and the single peak on 6-3-21 does not meet the requirements for positive dye recovery.

Location: CH-70-74

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 570.1 ft

Conditions: CH-70-74 is a well located 80 feet south of the Pilot Trench. CH-70-74 was a standard sampling location for all dye traces.

Fluorescence: CH-70-74 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-71

Type: Well

Dye Trace: Near-field (Location A and CH-73 injections)

Completed Elevation: 603.8 ft

Conditions: CH-71 is a well located 60 feet west and on the south end of the Pilot Trench. CH-71 was a standard sampling location the Location A and CH-73 dye injections. CH-71 was used as the second Pyranine injection location for the Near-field dye traces. After dye injection at CH-71 it was no longer used as sampling location.

Fluorescence: CH-71-22 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-72-30

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 601 ft

Conditions: CH-72-30 is a well located 40 feet east and on the south end of the Pilot Trench. CH-72-30 was a standard sampling location the Location A and CH-73 dye injections. CH-71-30 was frequently dry and was abandoned as a sampling location on 6/7/21.

Fluorescence: CH-72-30 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: CH-72-42

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 601 ft

Conditions: CH-72-42 is a well located 40 feet west and on the south end of the Pilot Trench. CH-72-42 was a standard sampling location for all dye traces.

Fluorescence: CH-72-42 had no fluorescent peaks in the range of Eosine or Rhodamine WT. CH-72-42 had one fluorescent peak in the range of Pyranine on 3-4-21. No additional peaks in the range for Pyranine were observed and the single peak on 3-4-21 does not meet the requirements for positive dye recovery.

Location: CH-73

Type: Well

Dye Trace: Near-field (Location A injection)

Completed Elevation: 602.2 ft

Conditions: CH-73 is a well located 40 feet west and on the north end of the Pilot Trench. CH-73 was a standard sampling location for the Location A dye injection. CH-73 was used as the first Pyranine injection location for the Near-field dye traces. After dye injection at CH-73 it was no longer used as sampling location.

Fluorescence: CH-73 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: Location B

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 591.98 ft

Conditions: Location B is a well located 30 feet west of the Pilot Trench. Location B was a standard sampling location all dye traces.

Fluorescence: Location B had no fluorescent peaks in the range of Eosine. Location B had two background fluorescent peaks in the range of Pyranine on 11/30/20 and 3/31/21. There were three post-injections peaks in the range of Pyranine on 8/27/21, 11/12/21, and 8/15/22. None of the post-injection peaks were 10 times the background level for Pyranine and do not meet the requirements for positive dye recovery. Location B had one fluorescent peak in the range of Rhodamine WT on 2-14-22. No additional peaks in the range for Rhodamine WT were observed and the single peak on 2-14-22 does not meet the requirements for positive dye recovery.

Location: MW-X033Y147S

Type: Well

Dye Trace: Far-field

Completed Elevation: 663 ft

Conditions: MW-X033Y147S is located on the west side of the General Motors Powertrain Facility. MW-X033Y147S was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X033Y147S had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X128Y255

Type: Well

Dye Trace: Far-field

Completed Elevation: 628.5 ft

Conditions: MW-X128Y255 is located 1600 feet west of the Pilot Trench. MW-X128Y255 was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X128Y255 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X143Y193

Type: Well

Dye Trace: Near-field (CH-71 & CH-73) and Far-field

Completed Elevation: 668.1 ft

Conditions: MW-X143Y193 is located 1400 feet southwest of the Pilot Trench. MW-X143Y193 was obstructed during the initial background sampling and Location A dye trace. The well was redeveloped and able to be sampled beginning on 6/16/21, after dye injection at CH-73. It was a catch-all location for the CH-71 and CH-73 dye traces and a standard sampling location for the Far-field dye traces.

Fluorescence: MW-X143Y193 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X184Y285

Type: Well

Dye Trace: Far-field

Completed Elevation: 621.3 ft

Conditions: MW-X184Y285 is located 1100 feet west of the Pilot Trench. MW-X184Y285 was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X184Y285 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X209Y078S

Type: Well

Dye Trace: Far-field

Completed Elevation: 662.1 ft

Conditions: MW-X209Y187S is located 1600 feet southwest of the Pilot Trench. MW-X209Y187S was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X209Y187S had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X233Y071B

Type: Well

Dye Trace: Far-field

Completed Elevation: 633.8 ft

Conditions: MW-X233Y071B is located 1600 feet southwest of the Pilot Trench. MW-X233Y071B was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y071B had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X233Y095

Type: Well

Dye Trace: Far-field

Completed Elevation: 642.8 ft

Conditions: MW-X233Y095 is located 1400 feet southwest of the Pilot Trench. MW-X233Y095 was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y095 had no fluorescent peaks in the range of Eosine or Pyranine. MW-X233Y095 had four fluorescent peaks in the range of Rhodamine WT on 12/10/21, 12/17/21, 1/6/22, and 1/24/22. However, MW-X233Y095 is higher in elevation than the Rhodamine WT injection point Location A. Based on this the peaks in the range for Rhodamine WT are unrelated to the injection to Location A.

Location: MW-X233Y100

Type: Well

Dye Trace: Far-field

Completed Elevation: 634.9 ft

Conditions: MW-X233Y100 is located 1340 feet southwest of the Pilot Trench. MW-X233Y100 was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y100 had no fluorescent peaks in the range of Eosine or Pyranine. MW-X233Y100 had one fluorescent peak in the range of Rhodamine WT on 12/22/21. However, MW-X233Y100 is higher in elevation than the Rhodamine WT injection point Location A. Based on this the peaks in the range for Rhodamine WT are unrelated to the injection to Location A.

Location: MW-X233Y105B

Type: Well

Dye Trace: Far-field

Completed Elevation: 665.2 ft

Conditions: MW-X233Y105B is located 1290 feet southwest of the Pilot Trench. MW-X233Y105B was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y105B had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X233Y110B

Type: Well

Dye Trace: Far-field

Completed Elevation: 675.2 ft

Conditions: MW-X233Y110B is located 1250 feet southwest of the Pilot Trench. MW-X233Y110B was dry for the duration of the Far-field dye trace and was not sampled.

Fluorescence: No samples were collected at MW-X233Y110B.

Location: MW-X233Y115B

Type: Well

Dye Trace: Far-field

Completed Elevation: 668 ft

Conditions: MW-X233Y115B is located 1200 feet southwest of the Pilot Trench. MW-X233Y115B was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y115B had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X233Y120B

Type: Well

Dye Trace: Far-field

Completed Elevation: 669.3 ft

Conditions: MW-X233Y120B is located 1150 feet southwest of the Pilot Trench. MW-X233Y120B was dry for the duration of the Far-field dye trace and was not sampled.

Fluorescence: No samples were collected at MW-X233Y120B.

Location: MW-X233Y125B

Type: Well

Dye Trace: Far-field

Completed Elevation: 672.6 ft

Conditions: MW-X233Y125B is located 1100 feet southwest of the Pilot Trench. MW-X233Y125B was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X233Y125B had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X234Y157S

Type: Well

Dye Trace: Far-field

Completed Elevation: 635.5 ft

Conditions: MW-X234Y157S is located 790 feet southwest of the Pilot Trench. MW-X234Y157S was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X234Y157S had no fluorescent peaks in the range of Eosine or Pyranine. MW-X234Y157S had fluorescent peaks in the range of Rhodamine WT in 30 of the 35 samples collected. However, MW-X234Y157S is higher in elevation than Location A, and unrelated to the Rhodamine WT injection at that well.

Location: MW-X242Y060S

Type: Well

Dye Trace: Far-field

Completed Elevation: 647.9 ft

Conditions: MW-X242Y060S is located 1700 feet southwest of the Pilot Trench. MW-X242Y060S was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X242Y060S had no fluorescent peaks in the range of Eosine or Pyranine. MW-X242Y060S had one fluorescent peak in the range of Rhodamine WT on 2/12/22. However, MW-X242Y060S is higher in elevation than Location A, and unrelated to the Rhodamine WT injection at that well.

Location: MW-X257Y073

Type: Well

Dye Trace: Far-field

Completed Elevation: 619.6 ft

Conditions: MW-X257Y073 is located 1520 feet southwest of the Pilot Trench. MW-X257Y073 was a standard sampling location for the Far-field dye trace.

Fluorescence: MW-X257Y073 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: MW-X344Y230

Type: Well

Dye Trace: Near-field and Far-field

Completed Elevation: 588.0 ft

Conditions: CH-72-30 is a well located 730 feet west and of the Pilot Trench. MW-X344Y230 was a standard sampling location for all dye traces.

Fluorescence: MW-X344Y230 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Waterloo Wells

Location: MW-X178Y367D-2

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 564.5 ft

Conditions: MW-X178Y367D-2 is located 1160 feet northwest of the Pilot Trench. MW-X178Y367D-2 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X178Y367D-2 had no fluorescent peaks in the range for Eosine or Pyranine. MW-X178Y367D-2 had one fluorescent peak in the range for Rhodamine WT in the background sample collected on 11-20-20. The sample collected on 3-1-21 also had a fluorescent peak in the range of Rhodamine WT, however this peak did not meet the criteria for positive dye recovery.

Location: MW-X178Y367D-5

Type: Waterloo Well

Dye Trace: Far-field

Port Elevation: 647 ft

Conditions: MW-X178Y367D-5 is located 1160 feet northwest of the Pilot Trench. MW-X178Y367D-5 was a standard sampling location for the Far-field dye traces.

Fluorescence: MW-X178Y367D-5 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Location: MW-X234Y157D-1

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 492.6 ft

Conditions: MW-X234Y157D-1 is located 790 feet southwest of the Pilot Trench. MW-X234Y157D-1 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X234Y157D-1 had no fluorescent peaks in the range for Eosine or Pyranine. MW-X234Y157D-1 had one fluorescent peak in the range for Rhodamine WT in the sample collected on 3-17-21, however a single peak does not meet the criteria for positive dye recovery. There is also evidence of a source of Rhodamine WT at higher elevation in this area seen in samples collected from well MW-X234Y157-S.

Location: MW-X234Y157D-2

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 551.1 ft

Conditions: MW-X234Y157D-2 is located 790 feet southwest of the Pilot Trench. MW-X234Y157D-2 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X234Y157D-2 had no fluorescent peaks in the range for Eosine or Pyranine. MW-X234Y157D-2 had two fluorescent peaks in the range for Rhodamine WT in samples collected on 12-10-21 and 12-11-21, however these peaks were below the limit of quantitation and did not meet the criteria for positive dye recovery. There is also evidence of a source of Rhodamine WT at higher elevation in this area seen in samples collected from well MW-X234Y157-S.

Location: MW-X234Y157D-4

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 584.1 ft

Conditions: MW-X234Y157D-4 is located 790 feet southwest of the Pilot Trench. MW-X234Y157D-4 was a standard sampling location for the Far-field dye traces.

Fluorescence: MW-X234Y157D-4 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Location: MW-X261Y356D-1

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 514.4 ft

Conditions: MW-X261Y356D-1 is located 500 feet north of the Pilot Trench. MW-X261Y356D-1 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X261Y356D-1 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT

Location: MW-X261Y356D-4

Type: Waterloo Well

Dye Trace: Far-field

Port Elevation: 624.9 ft

Conditions: MW-X261Y356D-4 is located 500 feet north of the Pilot Trench. MW-X261Y356D-1 was intended to be a standard sampling location for the Far-field dye traces; however, no water was able to be withdrawn from the port during sampling.

Fluorescence: No samples were collected at MW-X261Y356D-4.

Location: MW-X261Y356D-5

Type: Waterloo Well

Dye Trace: Far-field

Port Elevation: 654.5 ft

Conditions: MW-X261Y356D-5 is located 500 feet north of the Pilot Trench. MW-X261Y356D-5 was a standard sampling location for the Far-field dye traces.

Fluorescence: MW-X261Y356D-5 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Location: MW-X269Y201D-3

Type: Waterloo Well

Dye Trace: Far-field

Port Elevation: 642 ft

Conditions: MW-X269Y201D-3 is located 500 feet north of the Pilot Trench. MW-X269Y201D-3 was a standard sampling location for the Far-field dye traces.

Fluorescence: MW-X269Y201D-3 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Location: MW-X297Y305D-1

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 499.7 ft

Conditions: MW-X297Y305D-1 is located 140 feet east of the Pilot Trench. MW-X297Y305D-1 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X297Y305D-1 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Location: MW-X297Y305D-2

Type: Waterloo Well

Dye Trace: Far-field

Port Elevation: 545.5 ft

Conditions: MW-X297Y305D-2 is located 140 feet east of the Pilot Trench. MW-X297Y305D-2 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X297Y305D-2 had no fluorescent peaks in the range for Pyranine, or Rhodamine WT. MW-X297Y305D-2 had one fluorescent peak in the range for Eosine on 3/1/21, prior to Eosine injection for the Far-field dye traces.

Location: MW-X318Y217D-5

Type: Waterloo Well

Dye Trace: Near-field and Far-field

Port Elevation: 604.8 ft

Conditions: MW-X318Y217D-5 is located 380 feet east of the Pilot Trench. MW-X318Y217D-5 was a standard sampling location for the Near-field and Far-field dye traces.

Fluorescence: MW-X318Y217D-5 had no fluorescent peaks in the range for Eosine, Pyranine, or Rhodamine WT.

Groundwater Collection Systems

Location: Wet Well 1 (WW-1)

Type: Groundwater Collection System

Dye Trace: Near-field and Far-field

Elevation: 647 ft

Conditions: WW-1 is located 1475 feet south of the Pilot Trench. WW-1 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. WW-1 was a standard sampling location for the Far-field dye traces.

Fluorescence: WW-1 consistently had fluorescent peaks in the range of Fluorescein. WW-1 had no fluorescent peaks in the range of Eosine, Pyranine, or Rhodamine WT.

Location: Wet Well 2 (WW-2)

Type: Groundwater Collection System

Dye Trace: Near-field and Far-field

Elevation: 634 ft

Conditions: WW-2 is located 1415 feet south of the Pilot Trench. WW-2 was a catchall location for the Near-field dye traces as it is higher in elevation that the injection points. WW-2 was a standard sampling location for the Far-field dye traces.

Fluorescence: WW-2 had no fluorescent peaks in the range of Eosine. WW-2 had two fluorescent peaks in the range of Rhodamine WT on 6/5/21 and 2/12/22. WW-2 is higher in elevation than the Rhodamine

WT injection point (Location A), therefore the peaks in the range for Rhodamine WT are unrelated to that dye injection. WW-2 had two peaks in the range of Pyranine on 4/14/21 and 5/14/21, prior to Pyranine injection at CH-73. WW-2 is also higher in elevation than CH-73, therefore the peaks in the range for Pyranine are unrelated to that dye injection.

Location: Wet Well 3 (WW-3)

Type: Groundwater Collection System

Dye Trace: Near-field and Far-field

Elevation: 605 ft

Conditions: WW-3 is located 60 feet west of the Pilot Trench. WW-3 was a standard sampling location for the Far-field dye traces.

Fluorescence: WW-3 consistently had high intensity peaks in the range for Fluorescein. WW-3 had no peaks in the range of Pyranine or Rhodamine WT. WW-3 had multiple detections for Eosine from the Far-field dye traces.

Location: Wet Well 4 (WW-4)

Type: Groundwater Collection System

Dye Trace: Near-field and Far-field

Elevation: 590 ft (lowest elevation of the Pilot Trench)

Conditions: WW-4 is located 25 feet west of the Pilot Trench. WW-4 was a standard sampling location for the Far-field dye traces.

Fluorescence: WW-4 had consistent dye detections for Eosine, Pyranine, and Rhodamine WT from the Near-field and Far-field dye traces.

Appendix C

Field Sampling Forms

Well No.: CH-22 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 1:32:50 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 615.9 ft amsl

Screen End Depth: Static Water Depth: 9.53 Measurement Type:

Screen Length: Static Water Elev: 606.37 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 9:53			-9.53	17.74	932	5.0	0.01	6.73		-286.6		
8/3 10:25			-9.53	17.13	927	5.42	0.04	7.28		-766.8	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080322-TP-11	N	W	G	8/3 9:54	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-46 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/2/2022 11:07:56 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 645.1 ft amsl

Screen End Depth: Static Water Depth: 19.35 Measurement Type:

Screen Length: Static Water Elev: 625.75 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 11:04		20.55	1.20	15.96	422	41.2	.02	6.05		-141.4		
8/2 11:38		21.16	1.81	15.84	423	31.0	.02	6.65		-124.8	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080222-KH-01	N	WG	G	8/2 11:05	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-48 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** TP **Date:** 8/2/2022 5:27:20 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 644.2 ft amsl

Screen End Depth: Static Water Depth: 22.27 Measurement Type:

Screen Length: Static Water Elev: 621.93 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 11:18		22.27	0.00	16.25	1.246	55.8	0.02	5.75		-174.7		
8/2 12:00		28.16	5.89	16.47	1.233	1000	.16	6.59		-207.3	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080222-TP-02	N	WG	G	8/2 11:20	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-49 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** TP **Date:** 8/2/2022 5:33:15 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 643.8 ft amsl

Screen End Depth: Static Water Depth: 21.45 Measurement Type:

Screen Length: Static Water Elev: 622.35 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 14:07		21.45	0.00	16.28	1.002	11.2	0.01	6.73		-292.0		
8/2 14:42		23.40	1.95	16.5	1.013	4.56	0.05	6.69		-248.7	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080222-TP-04	N	WG	G	8/2 14:08	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-52 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/4/2022 3:41:07 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 671 ft amsl

Screen End Depth: Static Water Depth: 9.11 Measurement Type:

Screen Length: Static Water Elev: 661.89 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/4 15:44		10.51	1.40	15.69	661	8.04	0.04	6.15		-183.2		
8/4 16:20		12.33	3.22	16.17	675	8.20	0.06	7.01		-204.6	0	

Field Parameters:

Comments: Could use relabeling on outside

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080422-KH-22	N	WG	G	8/4 15:45	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-53 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/5/2022 11:56:44 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 683.4 ft amsl

Screen End Depth: Static Water Depth: 36.55 Measurement Type:

Screen Length: Static Water Elev: 646.85 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/5 11:56		37.20	0.65	15.65	.721	32.3	.19	8.07		52.7		
8/5 12:41		39.34	2.79	16.95	.727	17.0	.33	7.90		64.2		

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080522-mc-24	N	WG	G	8/5 12:00	Yes	Total PCB	4

Well No.: CH-54 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/5/2022 9:22:45 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 698.6 ft amsl

Screen End Depth: Static Water Depth: 38.15 Measurement Type:

Screen Length: Static Water Elev: 660.45 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/5 9:23		39.10	0.95	16.40	1.385	.07	.73	6.68		158.6		
8/5 11:13		44.83	6.68	16.83	1.351	.13	.63	6.65		114.4	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080522-mc-23	N	WG	G	8/5 9:30	Yes	Total PCB	12

Well No.: CH-61 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/2/2022 11:13:41 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 611.12 ft amsl

Screen End Depth: Static Water Depth: 8.39 Measurement Type:

Screen Length: Static Water Elev: 602.73 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 11:14		9.30	9.30	15.15	1.593	11.26	.5	6.97		-124.1		
8/2 11:46		10.17	1.78	15.76	1.593	9.68	1.0	7.14		-129.3	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080222-mc-03	N	WG	G	8/2 11:10	Yes	Total PCB	4

Well No.: CH-62 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/2/2022 2:05:26 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 612.73 ft amsl

Screen End Depth: Static Water Depth: 12.65 Measurement Type:

Screen Length: Static Water Elev: 600.08 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 14:05		12.08	-0.57	17.38	1.509	10.67	1.4	6.93		-88.7		
8/2 14:37		13.36	0.71	16.30	1.503	9.35	.6	6.84		-81.8	0	

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080222-mc-05	N	WG	G	8/2 14:05	Yes	Total PCB	4

Well No.: CH-63 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/2/2022 3:11:57 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 625.04 ft amsl

Screen End Depth: Static Water Depth: 17.55 Measurement Type:

Screen Length: Static Water Elev: 607.49 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 15:14		17.56	0.01	15.21	1.041	12.24	.8	7.11		-74.1		
8/2 15:48		20.80	3.25	16.68	1.042	12.84	.2	7.06		-84.6	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080222-mc-07	N	WG	G	8/2 15:15	Yes	Total PCB	4

Well No.: CH-64 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/3/2022 10:08:32 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 638.44 ft amsl

Screen End Depth: Static Water Depth: 23.22 Measurement Type:

Screen Length: Static Water Elev: 615.22 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 10:12		23.23	0.01	18.68	.867	9.49	1.5	6.74		8.7		
8/3 12:11		23.50	0.28	17.12	.851	8.22	.6	6.44		29.7	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080322-mc-09	N	WG	G	8/3 10:10	Yes	Total PCB	12

Well No.: CH-65 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/8/2022 4:32:33 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.59 ft amsl

Screen End Depth: Static Water Depth: 25.48 Measurement Type:

Screen Length: Static Water Elev: 623.11 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 13:30			-25.48	17.10	875	4.29	-188.2	6.45		0.02		
8/8 14:18		30.30	4.82	16.13	883	3.64	0.03	6.43		-255.4	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080822-TP-32	N	WG	G	8/8 13:31	Yes	Total PCBs, Dissolved PCBs	4
GW-080822-TP-33	FD	WG	G	8/8 13:44	Yes	Total PCBs, Dissolved PCBs	4

Well No.: CH-66 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/3/2022 2:53:49 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 641.04 ft amsl

Screen End Depth: Static Water Depth: 18.30 Measurement Type:

Screen Length: Static Water Elev: 622.74 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 14:54		19.44	1.14	15.94	1.170	4.09	4.5	6.26		150.5		
8/3 15:29		22.92	-18.30	15.94	1.185	3.06	4.8	6.70		84.0	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080322-mc-15	N	WG	G	8/3 14:55	Yes	Total PCB	4

Well No.: CH-67 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/8/2022 11:07:08 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.59 ft amsl

Screen End Depth: Static Water Depth: 30.55 Measurement Type:

Screen Length: Static Water Elev: 618.04 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 11:07		31.86	1.31	17.02	642	62.4	.07	6.66		37.3		
8/8 12:07		33.11	2.56	17.81	657	23.4	.20	6.79		69.4	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080822-mc-30	N	WG	G	8/8 11:20	Yes	Total PCB	4

Well No.: CH-68 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/4/2022 9:55:28 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.7 ft amsl

Screen End Depth: Static Water Depth: 11.44 Measurement Type:

Screen Length: Static Water Elev: 637.26 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/4 9:55		11.56	0.12	15.11	.932	11.50	3.4	6.79		99.5		
8/4 11:07		13.25	1.81	15.79	.938	6.30	2.0	6.83		95.3	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080422-mc-20	N	WG	G	8/4 10:00	Yes	Total PCB	4
Gw-080422-mc-21	FD	WG	G	8/4 10:30	Yes	Total PCB	4

Well No.: CH-69 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/8/2022 9:44:41 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 645.6 ft amsl

Screen End Depth: Static Water Depth: 33.96 Measurement Type:

Screen Length: Static Water Elev: 611.64 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 9:45		37.26	3.30	15.65	548	80.7	.05	6.58		101.7		
8/8 10:35		40.8	6.84	17.64	578	49.2	.19	6.92		102.2	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080822-mc-29	N	WG	G	8/8 9:45	Yes	Total PCB	4

Well No.: CH-70 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/3/2022 4:09:59 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 654.8 ft amsl

Screen End Depth: Static Water Depth: 18.67 Measurement Type:

Screen Length: Static Water Elev: 636.13 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 16:10		18.75	0.08	16.63	.754	12.38	2.7	6.63		26.3		
8/3 17:03		18.84	0.17	18.33	.764	7.71	1.4	6.97		56.3	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080322-mc-16	N	WG	G	8/3 16:10	Yes	Total PCB	4

Well No.: CH-72 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 1:38:09 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.154 ft amsl

Screen End Depth: Static Water Depth: 37.35 Measurement Type:

Screen Length: Static Water Elev: 610.804 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 10:48			-37.35	17.10	977	2.35	.10	6.69		-174.1		
8/3 11:53		39.40	2.05	17.11	792	3.35	0.08	6.92		-226.5	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080322-TP-12	N	WG	G	8/3 10:49	Yes	Total PCBs, Dissolved PCBs	4
GW-080322-TP-13	N	WG	G	8/3 11:07	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-LOC-B **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/8/2022 3:29:54 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 634.090 ft amsl

Screen End Depth: Static Water Depth: 31.35 Measurement Type:

Screen Length: Static Water Elev: 602.74 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 15:36		32.63	1.28	15.92	506	50	1.32	6.28		85.2		
8/8 16:06		34.99	3.64	15.53	501	42.0	1.02	6.89		72.1	0	

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080822-mc-35	N	WG	G	8/8 15:40	Yes	Total PCB	4

Well No.: MW-X143Y193CG **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/8/2022 12:20:30 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev: 704.86 ft amsl

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters: **Comments**: Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not sampled	N			8/8 12:20			

Well No.: MW-X234Y157S **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/5/2022 9:45:12 AM

Monitoring Well Data

Well Diameter:
Screen Material:
Screen Start Depth:
Screen End Depth:
Screen Length:

Constructed Well Depth: 39.400002 ft BGS
Ref Point Elev: 677.25 ft amsl
Static Water Depth: 10.35 ft BGS
Static Water Elev: 666.9 ft BGS

Measured Well Depth: ft BGS
Water Column Length: 29.05 ft
Measurement Type:
Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/5 10:27		10.50	0.15	15.29	0.884	4.14	0.706	6.54		-307.7		
8/5 11:02		10.60	0.25	15.23	0.882	3.91	0.705	6.55		-288.7	0	

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080522-DS-25	N	WG	G	8/5 10:25	Yes		
GW-080522-DS-27	FD	WG	G	8/5 10:30	Yes		

Well No.: MW-X178Y367D-2 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 2:56:23 PM

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 143.5 ft BGS
Measured Well Depth: ft BGS
Screen Material:
Water Column Length: 98.58 ft
Screen Start Depth:
Ref Point Elev: 670.57 ft amsl
Screen End Depth:
Static Water Depth: 44.92 ft BGS
Measurement Type:
Screen Length:
Static Water Elev: 625.65 ft BGS
Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 14:54		45.24	0.32	14.54	501	0.10	0.02	6.69		-315.5		
8/3 15:26		45.38	0.46	14.64	456	0.40	0.05	7.53		-305.6	0	

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080322-KH-17	N	WG	G	8/3 14:55	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-X178Y367D-5 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 3:31:45 PM

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 143.5 ft BGS
Measured Well Depth: ft BGS
Screen Material:
Water Column Length: ft
Screen Start Depth:
Ref Point Elev: 670.57 ft amsl
Screen End Depth:
Static Water Depth: ft BGS
Measurement Type:
Screen Length:
Static Water Elev: ft BGS
Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters:

Comments: Dry

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not Sampled	N			8/3 15:45			

Well No.: MW-X234Y157D-1 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/5/2022 10:19:29 AM

Monitoring Well Data

Well Diameter: | Constructed Well Depth: 180.39999 ft BGS | Measured Well Depth: ft BGS

Screen Material: | Water Column Length: ft

Screen Start Depth: | Ref Point Elev: 678.42 ft amsl

Screen End Depth: | Static Water Depth: ft BGS | Measurement Type:

Screen Length: | Static Water Elev: ft BGS | Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/5 10:26				18.15	684	5.54	0.04	6.25		-222.4		

Field Parameters:

Comments: Could not get water level meter past 28 ft.

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080522-KH-26	N	WG	G	8/5 10:25	Yes	Total PCBs, Dissolved PCBs	1

Well No.: MW-X234Y157D-2 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/1/2022 11:12:23 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: 180.39999 ft BGS Measured Well Depth: ft BGS

Screen Material: Water Column Length: ft

Screen Start Depth: Ref Point Elev: 678.42 ft amsl

Screen End Depth: Static Water Depth: ft BGS Measurement Type:

Screen Length: Static Water Elev: ft BGS Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/5 11:03				16.23	521	4.57	0.02	6.35		-223.3		
8/5 11:36				16.50	452	3.58	0.03	6.56		-225.4	0	

Field Parameters:

Comments: Could not get water level meter past 28 ft. Massive red hornet nest in lid, we're being swarmed by wasps for entire sampling duration. A DEFINITE safety hazard because of poor condition of lid.

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080522-KH-28	N	WG	G	8/5 11:05	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-X261Y356D-1 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/4/2022 11:16:23 AM

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 154.5 ft BGS
Measured Well Depth: ft BGS
Screen Material:
Water Column Length: User Entry ft
Screen Start Depth:
Ref Point Elev: 672.59 ft amsl
Screen End Depth:
Static Water Depth: ft BGS
Measurement Type:
Screen Length:
Static Water Elev: User Entry ft BGS
Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters:

Comments: Well ID stickers need replacing, only port working enough to collect sample is port 3, could not collect water level, meter almost got stuck at 108 ft.

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not sampled	N			8/4 10:45			

Well No.: MW-X261Y356D-4 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 5:24:17 PM

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 154.5 ft BGS
Measured Well Depth: ft BGS
Screen Material:
Water Column Length: ft
Screen Start Depth:
Ref Point Elev: 672.59 ft amsl
Screen End Depth:
Static Water Depth: ft BGS
Measurement Type:
Screen Length:
Static Water Elev: ft BGS
Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters:

Comments: Dry

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not Sampled	N			8/3 10:30			

Well No.: MW-X261Y356D-5 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/4/2022 10:23:01 AM

Monitoring Well Data

Well Diameter:
Screen Material:
Screen Start Depth:
Screen End Depth:
Screen Length:

Constructed Well Depth: 154.5 ft BGS
Ref Point Elev: 672.59 ft amsl
Static Water Depth: 11.34 ft BGS
Static Water Elev: 661.25 ft BGS

Measured Well Depth: ft BGS
Water Column Length: 143.16 ft
Measurement Type:
Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters:

Comments: Well ID stickers need replacing, only port working enough to collect sample is port 3.

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not sampled	N			8/4 10:30			

Well No.: MW-X297Y305D-1 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/1/2022 11:11:31 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev: 615.98 ft amsl

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 15:04				14.49	601	8.02	.01	7.48		-296.3		
8/2 15:55				15.24	555	3.25	0.04	7.89		-305.2	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080222-KH-06	N	WG	G	8/2 15:05	Yes	Total PCBs, Dissolved PCBs	4

Well No.: 9-4 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/8/2022 2:12:32 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 681.79 ft amsl

Screen End Depth: Static Water Depth: 30.93 Measurement Type:

Screen Length: Static Water Elev: 650.86 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 14:12		31.56	0.63	28.50	841	10.90	.09	7.28		-96.2		
8/8 14:57		33.38	2.45	30.80	881	10.65	.03	7.33		-108.2	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080822-mc-34	N	WG	G	8/8 14:15	Yes	Total PCB	4

Well No.: CH-20 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** Mike Cernicek **Date:** 8/9/2022 10:05:10 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 622.96 ft amsl

Screen End Depth: Static Water Depth: 21.46 Measurement Type:

Screen Length: Static Water Elev: 601.5 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/9 10:05		22.11	0.65	17.22	679	7.55	.04	8.45		-159.5		
8/9 10:49		23.92	2.46	16.73	669	6.01	.08	8.61		-192.5	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Gw-080922-mc-37	N	WG	G	8/9 10:10	Yes	Total PCB	4

Well No.: CH-71 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/8/2022 2:26:42 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev: 643.320 ft amsl

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters: **Comments**: Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
Not sampled	N			8/8 14:26			

Well No.: CH-73 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/8/2022 2:26:23 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 637.681 ft amsl

Screen End Depth: Static Water Depth: 30.42 Measurement Type:

Screen Length: Static Water Elev: 607.261 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 14:34		30.65	0.23	18.72	646	7.47	0.04	5.98		-180.5		
8/8 14:55		30.62	0.20	18.67	641	8.56	0.04	6.41		-188.2	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080822-KH-36	N	WG	G	8/8 14:35	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-LOC-A **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/8/2022 11:23:50 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 625.355 ft amsl

Screen End Depth: Static Water Depth: 14.73 Measurement Type:

Screen Length: Static Water Elev: 610.625 Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/8 11:32		15.85	1.12	23.12	1.199	33.7	0.01	6.79		-243.5		
8/8 12:02		16.40	1.67	18.21	1.085	25.1	0.01	7.29		-274.6	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080822-KH-31	N	WG	G	8/8 11:35	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-X26IY356D-3 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/3/2022 10:06:59 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: 58.52 Measurement Type:

Screen Length: Static Water Elev: User Entry Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/3 10:14		59.10	0.58	16.15	552	1.75	0.21	6.25		-197.8		
8/3 10:46		61.09	2.57	17.08	588	1.86	0.25	6.75		-144.9	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080322-KH-14	N	WG	G	8/3 10:15	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-X297Y305D-2 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/2/2022 4:16:53 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 615.98 ft amsl

Screen End Depth: Static Water Depth: 20.70 Measurement Type:

Screen Length: Static Water Elev: 595.28 Sampling Method: Bladder pump

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/2 16:14		21.34	0.64	16.01	602	4.65	0.04	7.07		-191.3		
8/2 16:38		23.04	2.34	15.14	590	3.40	0.01	6.71		-167.7	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080222-KH-08	N	WG	G	8/2 16:15	Yes	Total PCBs, Dissolved PCBs	4

Well No.: MW-X300Y199D-2 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** KH **Date:** 8/4/2022 11:10:33 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: 37.13 Measurement Type:

Screen Length: Static Water Elev: User Entry Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		
8/4 11:18			-37.13	18.18	538	2.08	0.02	6.50		-210.6	0	
8/4 12:00			-37.13	17.42	527	3.80	0.03	6.71		-246.4	0	

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080422-KH-10	N	WG	G	8/4 11:20	Yes	Total PCBs, Dissolved PCBs	4

Well No.: WET WELL 3 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** **Date:** 8/4/2022 10:47:32 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters: **Comments**: Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080422-KH-19	N			8/4 11:00			

Well No.: WET WELL 4 **Sampling Event:** 202208-Q3WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM LLC Bedford RFI **Ref. No.:** 11228036 **Personnel:** **Date:** 8/4/2022 10:21:47 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Pumping Rate (mL/ min)	Depth to Water (<Field Missing>)	Drawdown from Initial Water Level (ft)	Temperature deg C	Conductivity (uS/cm)	Turbidity NTU	DO (mg/L)	pH	TDS (mg/L)	ORP (millivolt)	Volume Purged, Vp (gal)	No. of Well Screen Volumes Purged
			Precision Required	±% 3	± 5 or ± 10	±% 10 or < 5	±% 10	± .1		± 10		

Field Parameters: **Comments**: Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	DateTime	Filtered	Analysis	Container #
GW-080422-KH-18	N			8/4 9:40			

GM-Bedford PMP Sampling Well Development Form

Personnel: Tim P., Jeff K., Julie L.
Well ID: CH-4Ce

Date: 11-1-22
Start Time: ~~10:2~~ 11:25
End Time: 12:30
Depth to Water: _____ (final)
Depth to Bottom: 41.85 (final)

Depth to Water: 19.9Ce (initial)
Depth to Bottom: 41.09 (initial)
Casing Depth: 20.5

One Well Volume: 12.88 (gal)
Ten Well Volumes: _____ (gal)
Total Volume Purged: 13.5 (gal)

Interval #1: 24.5	Inital Reading Temp: 18.3	Final Reading Temp:	Gallons Pumped: ~~2.5~~ 1.5	Cond: 418	Cond:	pH: 6.88	pH:	Time Pumped: 1 minute	Turbidity: >1000	Turbidity:
Interval #2: 28.5	Inital Reading Temp: 17.2	Final Reading Temp:	Gallons Pumped: 3	Cond: 512	Cond:	pH: 7.26	pH:	Time Pumped: 2 minute	Turbidity: >1000	Turbidity:
Interval #3: 32.5	Inital Reading Temp: 10.Ce	Final Reading Temp:	Gallons Pumped: 3.75	Cond: 540	Cond:	pH: 7.30	pH:	Time Pumped: 2.5 minute	Turbidity: >1000	Turbidity:
Interval #4: 36.5	Inital Reading Temp: 10.2	Final Reading Temp:	Gallons Pumped: 3.75	Cond: 552	Cond:	pH: 7.30	pH:	Time Pumped: 2.5 minute	Turbidity: >1000	Turbidity:
Interval #5: 41	Inital Reading Temp: 17.0	Final Reading Temp:	Gallons Pumped: 1.5	Cond: 49Ce	Cond:	pH: 7.39	pH:	Time Pumped: 1 minute	Turbidity:	Turbidity:
Interval #6:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond:	Cond:	pH:	pH:	Time Pumped:	Turbidity:	Turbidity:
Interval #7:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond:	Cond:	pH:	pH:	Time Pumped:	Turbidity:	Turbidity:

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

1 1/2 gallon/min
well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K., Julie L.
Well ID: CH-48

Depth to Water: 23.26 (initial)
Depth to Bottom: 32.68 (initial)
Casing Depth: 7.5

One Well Volume: 1.5 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 7.5 (gal)

Date: 11-1-22
Start Time: 14:33
End Time: 15:00
Depth to Water: (final)
Depth to Bottom: 34.35 (final)

Interval #1: 27.5
Inital Reading Temp: 18.5
Final Reading Temp:
Gallons Pumped: 3.75
Cond: 904 pH: 6.67
Cond: pH:
Time Pumped: 12.5 minute
Turbidity: >1000
Turbidity:

Interval #2: 32.6
Inital Reading Temp: 16.3
Final Reading Temp:
Gallons Pumped: 3.75
Cond: 813 pH: 6.90
Cond: pH:
Time Pumped: 2.5 minutes
Turbidity: >1000
Turbidity:

Interval #3:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #4:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #5:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #6:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #7:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

Note: 2-inch PVC well dried out
1½ gal/min

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff R., Julie L.
Well ID: CH-601

Date: 11-1-22
Start Time: 15:19
End Time: 15:57
Depth to Water: 30.00 (final)
Depth to Bottom: 31.25 (final)

Depth to Water: 10.07 (initial)
Depth to Bottom: 31.18 (initial)
Casing Depth: 12.5

One Well Volume: 12.91 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 18.37 (gal)

Interval #1: 10.5	Inital Reading Temp: 17.6	Gallons Pumped: 6.75	Cond: 879	pH: 7.05	Time Pumped: 4.5	Turbidity: 192
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #2: ~~20.5~~ 21.5	Inital Reading Temp: 10.5	Gallons Pumped: 3.37	Cond: 926	pH: 7.00	Time Pumped: 2.25	Turbidity: 98.7
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #3: ~~24.5~~ 26.5	Inital Reading Temp: 15.8	Gallons Pumped: 4.5	Cond: 958	pH: 7.04	Time Pumped: 3.0	Turbidity: 61.7
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #4: ~~28.5~~ 31.5	Inital Reading Temp: 15.4	Gallons Pumped: 3.75	Cond: 964	pH: 7.13	Time Pumped: 2.5	Turbidity: >1000
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #5:	Inital Reading Temp:	Gallons Pumped:	Cond:	pH:	Time Pumped:	Turbidity:
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #6:	Inital Reading Temp:	Gallons Pumped:	Cond:	pH:	Time Pumped:	Turbidity:
	Final Reading Temp:		Cond:	pH:		Turbidity:
Interval #7:	Inital Reading Temp:	Gallons Pumped:	Cond:	pH:	Time Pumped:	Turbidity:
	Final Reading Temp:		Cond:	pH:		Turbidity:

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

NOTE: 1 1/2 gallon/min
well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K., Julie L.
Well ID: CH-03

Date: 11-1-22
Start Time: 16:20
End Time: 17:05

Depth to Water: 19.10 (initial)
Depth to Bottom: 45.01 (initial)
Casing Depth: 13

One Well Volume: 15.80 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 23.25 (gal)

Depth to Water: (final)
Depth to Bottom: 45.00 (final)

Interval #1: 23.10	Gallons Pumped: 2.25	Time Pumped: 1.5
Inital Reading Temp: 16.2	Cond: 647	pH: 7.25	Turbidity: 61.7
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #2: 27.10	Gallons Pumped: 3	Time Pumped: 2
Inital Reading Temp: 15.5	Cond: 648	pH: 7.24	Turbidity: 22.3
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #3: 31.10	Gallons Pumped: 3	Time Pumped: 2
Inital Reading Temp: 15.1	Cond: 655	pH: 7.26	Turbidity: 15.2
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #4: 35.10	Gallons Pumped: 3	Time Pumped: 2
Inital Reading Temp: 14.9	Cond: 652	pH: 7.26	Turbidity: 16.9
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #5: 40.10	Gallons Pumped: 5.25	Time Pumped: 3.5
Inital Reading Temp: 14.5	Cond: 655	pH: 7.26	Turbidity: 14.0
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #6: 45.10	Gallons Pumped: 6.75	Time Pumped: 4.5
Inital Reading Temp: 14.5	Cond: 655	pH: 7.26	Turbidity: 8.07
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #7:	Gallons Pumped:	Time Pumped:
Inital Reading Temp:	Cond:	pH:	Turbidity:
Final Reading Temp:	Cond:	pH:	Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

Note: 1½ gal/min
well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L
Well ID: CH-04

Date: 11-2-22
Start Time: 10:25
End Time: 11:30

Depth to Water: 23.88 (initial)
Depth to Bottom: 57.82 (initial)
Casing Depth: 20.00

One Well Volume: 20.70 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 35.73 (gal)

Depth to Water: (final)
Depth to Bottom: 57.85 (final)

Interval #1: 27.88			Gallons Pumped: 3.3			Time Pumped: 2:20	
Inital Reading	Temp: ~~20.8~~ 14.5		Cond: ~~624~~ 810	pH: 6.71		Turbidity: 624	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #2: 31.88			Gallons Pumped: 3.27			Time Pumped: 2:18	
Inital Reading	Temp: 14.5		Cond: 799	pH: 6.74		Turbidity: 298	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #3: 35.88			Gallons Pumped: 3.18			Time Pumped: 2.12	
Inital Reading	Temp: 14.3		Cond: 798	pH: 6.76		Turbidity: 120	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #4: 39.88			Gallons Pumped: 3.57			Time Pumped: 2.38	
Inital Reading	Temp: 14.1		Cond: 797	pH: 6.77		Turbidity: 74.1	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #5: 43.88			Gallons Pumped: 3.82			Time Pumped: 2.55	
Inital Reading	Temp: 13.9		Cond: 798	pH: 6.82		Turbidity: 35.8	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #6: 47.88			Gallons Pumped: 5.05			Time Pumped: 3.37	
Inital Reading	Temp: 13.9		Cond: 800	pH: 6.76		Turbidity: 37.4	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #7: 51.88			Gallons Pumped: 4.77			Time Pumped: 3.18	
Inital Reading	Temp: 13.8		Cond: 805	pH: 6.80		Turbidity: 46.4	
Final Reading	Temp:		Cond:	pH:		Turbidity:	

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Note: 1½ gal/min
well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L.
Well ID: CH-04

Date: 11-2-22
Start Time: 10:25
End Time: 11:30

Interval #8: 55.88
Inital Reading Temp: 13.09 Gallons Pumped: 5.14 Cond: 804 pH: 6.82 Time Pumped: 3.43 Turbidity: 58.5
Final Reading Temp: Cond: pH: Turbidity:

Interval #9: 57.89
Inital Reading Temp: 14.1 Gallons Pumped: 3.03 Cond: 841 pH: 6.80 Time Pumped: 2.42 Turbidity: >1000
Final Reading Temp: Cond: pH: Turbidity:

Interval #10:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #11:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #12:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #13:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #14:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #15:
Inital Reading Temp: Gallons Pumped: Cond: pH: Time Pumped: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff B, Julie L.
Well ID: CH-52

Date: 11-2-22
Start Time: 14:06
End Time: 15:22

Interval #8: 45.02	Inital Reading Temp: 14.2	Final Reading Temp:	Gallons Pumped: 4.99	Cond: 836 pH: 7.03	Cond: pH:	Time Pumped: 3.06	Turbidity: 225	Turbidity:
Interval #9: 49.02	Inital Reading Temp: 14.2	Final Reading Temp:	Gallons Pumped: 4.95	Cond: 838 pH: 7.15	Cond: pH:	Time Pumped: 3.30	Turbidity: ~~838~~ 162	Turbidity:
Interval #10: 53.02	Inital Reading Temp: 14.4	Final Reading Temp:	Gallons Pumped: 1.99	Cond: 840 pH: 7.10	Cond: pH:	Time Pumped: 1.06	Turbidity: 857	Turbidity:
Interval #11: 57.46	Inital Reading Temp: 14.7	Final Reading Temp:	Gallons Pumped: 3.46	Cond: 841 pH: 6.99	Cond: pH:	Time Pumped: 2.31	Turbidity: >1000	Turbidity:
Interval #12:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond: pH:	Cond: pH:	Time Pumped:	Turbidity:	Turbidity:
Interval #13:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond: pH:	Cond: pH:	Time Pumped:	Turbidity:	Turbidity:
Interval #14:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond: pH:	Cond: pH:	Time Pumped:	Turbidity:	Turbidity:
Interval #15:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond: pH:	Cond: pH:	Time Pumped:	Turbidity:	Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

Note: 1 1/2 gal/min
well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff A, Julie L
Well ID: MW-X2314157S

Date: 11-2-22
Start Time: 16:29
End Time: 17:48

Depth to Water: 11.57 (initial)
Depth to Bottom: 35.28 (initial)
Casing Depth: 8.4

One Well Volume: 14.46 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 22.24 (gal)

Depth to Water: (final)
Depth to Bottom: 35.28 (final)

Interval #1: 15.57	Inital Reading Temp: 17.2	Final Reading Temp:	Gallons Pumped: 4.77	Cond: 798	pH: 6.99	Time Pumped: 3.18
				Cond:	pH:	Turbidity: 346
						Turbidity:
Interval #2: 19.57	Inital Reading Temp: 16.8	Final Reading Temp:	Gallons Pumped: 3.63	Cond: 816	pH: 6.84	Time Pumped: 2.42
				Cond:	pH:	Turbidity: 220
						Turbidity:
Interval #3: 23.57	Inital Reading Temp: 16.2	Final Reading Temp:	Gallons Pumped: 2.35	Cond: 858	pH: 6.74	Time Pumped: 1.57
				Cond:	pH:	Turbidity: 185
						Turbidity:
Interval #4: 27.57	Inital Reading Temp: 15.2	Final Reading Temp:	Gallons Pumped: 4.72	Cond: 883	pH: 6.78	Time Pumped: 3.15
				Cond:	pH:	Turbidity: 185
						Turbidity:
Interval #5: 31.57	Inital Reading Temp: 14.9	Final Reading Temp:	Gallons Pumped: 3.37	Cond: 901	pH: 6.72	Time Pumped: 2.25
				Cond:	pH:	Turbidity: 94.0
						Turbidity:
Interval #6: 35.28	Inital Reading Temp: 14.8	Final Reading Temp:	Gallons Pumped: 3.40	Cond: 958	pH: 6.84	Time Pumped: 2.27
				Cond:	pH:	Turbidity: >1000
						Turbidity:
Interval #7:	Inital Reading Temp:	Final Reading Temp:	Gallons Pumped:	Cond:	pH:	Time Pumped:
				Cond:	pH:	Turbidity:
						Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

NOTE: 1½ gal minute
Well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L.
Well ID: CH-52

Date: 11-2-22
Start Time: 14:06
End Time: 15:22

Depth to Water: 13.02 (initial)
Depth to Bottom: 57.46 (initial)
Casing Depth: 5

One Well Volume: 27.10 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 35.07 (gal)

Depth to Water: 55.62 (final)
Depth to Bottom: 57.80 (final)

Interval #1: 17.02	Inital Reading Temp: 16.8	Final Reading Temp:	Gallons Pumped: 2.02	Cond: 830	Cond:	pH: 7.39 pH:	Time Pumped: 1.35	Turbidity: 268 Turbidity:
Interval #2: 21.02	Inital Reading Temp: 16.1	Final Reading Temp:	Gallons Pumped: 2.10	Cond: 835	Cond:	pH: 7.24 pH:	Time Pumped: 1.40	Turbidity: 230 Turbidity:
Interval #3: 25.02	Inital Reading Temp: 15.5	Final Reading Temp:	Gallons Pumped: 3.07	Cond: 837	Cond:	pH: 7.10 pH:	Time Pumped: 2.05	Turbidity: 242 Turbidity:
Interval #4: 29.02	Inital Reading Temp: 15.00	Final Reading Temp:	Gallons Pumped: 3	Cond: 837	Cond:	pH: 7.16 pH:	Time Pumped: 2.0	Turbidity: 210 Turbidity:
Interval #5: 33.02	Inital Reading Temp: 14.7	Final Reading Temp:	Gallons Pumped: 3.24	Cond: 837	Cond:	pH: 7.06 pH:	Time Pumped: 2.16	Turbidity: 153 Turbidity:
Interval #6: 37.02	Inital Reading Temp: 14.3	Final Reading Temp:	Gallons Pumped: 3.39	Cond: 841	Cond:	pH: 7.07 pH:	Time Pumped: 2.26	Turbidity: 145 Turbidity:
Interval #7: 41.02	Inital Reading Temp: 14.2	Final Reading Temp:	Gallons Pumped: 3.66	Cond: 839	Cond:	pH: 7.19 pH:	Time Pumped: 2.44	Turbidity: 180 Turbidity:

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Note: 1½ gal/min
well went dry

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L
Well ID: LOCATION A

Date: 11-3-22
Start Time: 10:30
End Time: 11:04

Depth to Water: 18.17 (initial)
Depth to Bottom: 38.00 (initial)
Casing Depth: 10.00

One Well Volume: 12.09 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 17.75 (gal)

Depth to Water: 30.46 (final)
Depth to Bottom: 38.50 (final)

Interval #1:	22.17		Gallons Pumped:	4.92		Time Pumped:	3.28
Inital Reading	Temp: 16.9		Cond: 886		pH: 6.48	Turbidity: 45.3	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #2:	26.17		Gallons Pumped:	3.64		Time Pumped:	2.43
Inital Reading	Temp: 16.5		Cond: 905		pH: 6.64	Turbidity: 137	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #3:	30.17		Gallons Pumped:	3.52		Time Pumped:	2.35
Inital Reading	Temp: 16.0		Cond: 980		pH: 6.65	Turbidity: 132	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #4:	34.17		Gallons Pumped:	3.57		Time Pumped:	2.38
Inital Reading	Temp: 15.4		Cond: 1032		pH: 6.67	Turbidity: 113	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #5:	38.00		Gallons Pumped:	2.1		Time Pumped:	1.40
Inital Reading	Temp: 15.6		Cond: 879		pH: 6.65	Turbidity: >1000	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #6:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:		pH:	Turbidity:	
Final Reading	Temp:		Cond:		pH:	Turbidity:	
Interval #7:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:		pH:	Turbidity:	
Final Reading	Temp:		Cond:		pH:	Turbidity:	

UNITS: Temp: Cond: pH: Turbidity:

NOTE: 1½ gal/min
Slight pink tint in first 2 readings
well went dry

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L.
Well ID: CH-73

Depth to Water: @ 34.23 (initial)
Depth to Bottom: 35.09 (initial)
Casing Depth: 9.00

One Well Volume: _____ (gal)
Ten Well Volumes: _____ (gal)
Total Volume Purged: _____ (gal)

Date: 11-3-22
Start Time: _____
End Time: _____
Depth to Water: _____ (final)
Depth to Bottom: _____ (final)

Interval #1: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #2: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #3: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #4: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #5: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #6: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #7: _____ Gallons Pumped: _____ Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

NOTE: Not enough water to develop well

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L.
Well ID: LOCATION 3

Date: 11-3-22
Start Time: 13:35
End Time: 13:50

Depth to Water: 33.78 (initial) — One Well Volume: 3.62 (gal) — Depth to Water: 40.30 (final)
Depth to Bottom: 39.73 (initial) — Ten Well Volumes: (gal) — Depth to Bottom: 40.92 (final)
Casing Depth: 6.00 — Total Volume Purged: 3.97 (gal)

Interval #1: 37.78			Gallons Pumped: 1.8			Time Pumped: 1.20	
Inital Reading	Temp: 15.4		Cond: 545	pH: 7.28		Turbidity: 318	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #2: 39.73			Gallons Pumped: 2.17			Time Pumped: 1.45	
Inital Reading	Temp: 15.7		Cond: 373	pH: 7.45		Turbidity: >1000	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #3:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:	pH:		Turbidity:	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #4:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:	pH:		Turbidity:	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #5:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:	pH:		Turbidity:	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #6:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:	pH:		Turbidity:	
Final Reading	Temp:		Cond:	pH:		Turbidity:	
Interval #7:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:	pH:		Turbidity:	
Final Reading	Temp:		Cond:	pH:		Turbidity:	

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Note: 1 1/2 gal/min well dried out

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie Z.
Well ID: CH-72

Depth to Water: 41.60 (initial)
Depth to Bottom: 45.15 (initial)
Casing Depth: 8.00

One Well Volume: 2.16 (gal)
Ten Well Volumes: (gal)
Total Volume Purged: 1.83 (gal)

Date: 11-3-22
Start Time: 14:24
End Time: 14:27
Depth to Water: 43.50 (final)
Depth to Bottom: 45.15 (final)

Interval #1: 45.15
Inital Reading Temp: 15.5 Gallons Pumped: 1.83 Time Pumped: 1.22
Cond: 685 pH: 7.21 Turbidity: 504
Final Reading Temp: Cond: pH: Turbidity:

Interval #2:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #3:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #4:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #5:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #6:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

Interval #7:
Inital Reading Temp: Gallons Pumped: Time Pumped:
Cond: pH: Turbidity:
Final Reading Temp: Cond: pH: Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff K, Julie L.
Well ID: ~~CH-68~~ CH-70

Date: 11-3-22
Start Time: 15:04
End Time: 18:03

Depth to Water: 18.82 (initial)
Depth to Bottom: 85.43 (initial)
Casing Depth: 12.00

One Well Volume: _____ (gal)
Ten Well Volumes: _____ (gal)
Total Volume Purged: _____ (gal)

Depth to Water: 20.45 (final)
Depth to Bottom: 85.45 (final)

Interval #1: 22.82	Gallons Pumped: 10.5		Time Pumped: 7.00		
Inital Reading Temp: 16.3	Cond: 607	pH: 7.45	Turbidity: 30.4		
Final Reading Temp: 14.9	Cond: 683	pH: 7.12	Turbidity: 4.5		
Interval #2: 26.82	Gallons Pumped: 15		Time Pumped: 10.00		
Inital Reading Temp: 14.6	Cond: 851	pH: 6.99	Turbidity: ~~15.8~~		
Final Reading Temp: 14.6	Cond: 861	pH: 7.05	Turbidity: 20.00		
14.7	853	7.02	303		
Interval #3: 30.82	Gallons Pumped: 18		Time Pumped: 12.00		
Inital Reading Temp: 14.6	Cond: 856	pH: 7.02	Turbidity: 135		
Final Reading Temp: 14.3	Cond: 850	pH: 6.96	Turbidity: 35.7		
14.3	844	6.93	24.7		
Interval #4: 34.82	Gallons Pumped: 15		Time Pumped: 10.00		
Inital Reading Temp: 14.3	Cond: 830	pH: 6.95	Turbidity: 30.6		
Final Reading Temp: 14.4	Cond: 827	pH: 7.00	Turbidity: 30.4		
14.0	811	7.05	29.5		
Interval #5: 38.82	Gallons Pumped: 15		Time Pumped: 10.00		
Inital Reading Temp: 14.5	Cond: 805	pH: 6.98	Turbidity: 39.6		
Final Reading Temp: 14.3	Cond: 808	pH: 6.96	Turbidity: 29.0		
14.8	792	7.01	27.5		
Interval #6: 42.82	Gallons Pumped: 15		Time Pumped: 10.00		
Inital Reading Temp: 14.5	Cond: 786	pH: 6.91	Turbidity: 23.7		
Final Reading Temp: 14.5	Cond: 797	pH: 7.00	Turbidity: 22.5		
14.5	785	6.94	17.3		
Interval #7: 46.82	Gallons Pumped: 15		Time Pumped: 10.00		
Inital Reading Temp: 14.2	Cond: 790	pH: 6.91	Turbidity: 21.2		
Final Reading Temp: 14.3	Cond: 780	pH: 6.91	Turbidity: 12.7		
14.3	773	6.95	11.3		

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval 2 - dry @ 11.30 minutes

GM-Bedford PMP Sampling Well Development Form

Personnel: Jeff R, Julie L
Well ID: CH-70

Date: 11-3-22
Start Time:
End Time:

Interval #8: 50.82				Gallons Pumped: 15		Time Pumped: 10.0	
Inital Reading	Temp: 13.6	Cond: 853	pH: 6.90			Turbidity: 40.0	
Final Reading	Temp: 14.3	Cond: 783	pH: 7.03			Turbidity: 10.4	
	14.3	768	6.96			15.0	
Interval #9: 54.82				Gallons Pumped: 15		Time Pumped: 10.0	
Inital Reading	Temp: 13.7	Cond: 841	pH: 6.94			Turbidity: 25.9	
Final Reading	Temp: 14.1	Cond: 769	pH: 6.95			Turbidity: 14.0	
	14.3	761	6.98			9.55	
Interval #10: 58.82				Gallons Pumped: 15		Time Pumped: 10	
Inital Reading	Temp: 13.6	Cond: 848	pH: 6.87			Turbidity: 17.3	
Final Reading	Temp: 14.1	Cond: 762	pH: 7.13			Turbidity: 13.6	
	14.1	759	6.94			21.0	
Interval #11: 62.82				Gallons Pumped: 15		Time Pumped: 10	
Inital Reading	Temp: 13.8	Cond: 782	pH: 6.97			Turbidity: 22.9	
Final Reading	Temp: 13.9	Cond: 760	pH: 6.91			Turbidity: 26.9	
	14.1	761	6.95			48.4	
Interval #12: 66.82				Gallons Pumped: 15		Time Pumped: 10	
Inital Reading	Temp: 13.8	Cond: 783	pH: 6.97			Turbidity: 54.0	
Final Reading	Temp: 14.0	Cond: 760	pH: 6.93			Turbidity: 53.0	
	14.1	753	6.69			48.7	
Interval #13: 70.82				Gallons Pumped: 15		Time Pumped: 10	
Inital Reading	Temp: 13.8	Cond: 842	pH: 6.97			Turbidity: 19.6	
Final Reading	Temp: 13.8	Cond: 760	pH: 6.91			Turbidity: 39.8	
	13.9	756	6.93			34.8	
Interval #14: 74.82				Gallons Pumped: 15		Time Pumped: 10	
Inital Reading	Temp: 13.4	Cond: 851	pH: 6.89			Turbidity: 16.4	
Final Reading	Temp: 13.7	Cond: 773	pH: 6.95			Turbidity: 27.3	
	13.8	760	6.88			43.6	
Interval #15: ~~78.82~~				Gallons Pumped:		Time Pumped:	
Inital Reading	Temp:	Cond:	pH:			Turbidity:	
Final Reading	Temp:	Cond:	pH:			Turbidity:	

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: Tim Fraunz
Well ID: CMW9

Date: 11/1/22
Start Time: 1400
End Time: 1440

Depth to Water: 22.76 (initial)
Depth to Bottom: 37.27 (initial)
Casing Depth: 6.5

One Well Volume: 5.82 (gal)
Ten Well Volumes: 80.82 (gal)
Total Volume Purged: _____ (gal)

Depth to Water: 36.26 (final)
Depth to Bottom: 37.27 (final)

Interval #1:	22.50 - 26.50		Gallons Pumped:	2.5 g		Time Pumped:	1 min
Inital Reading	Temp:	19.0	Cond:	630 µS	pH:	7.46	Turbidity: 357
Final Reading	Temp:		Cond:	Dry @ 24 hrs	pH:		Turbidity:
Interval #2:	26.50 - 30.50		Gallons Pumped:	6.0 g		Time Pumped:	2.5 min
Inital Reading	Temp:	18.1	Cond:	624 µS	pH:	7.43	Turbidity: 243
Final Reading	Temp:		Cond:		pH:		Turbidity:
Interval #3:	30.50 - 34.50		Gallons Pumped:	8.0 g		Time Pumped:	2.0 min
Inital Reading	Temp:	18.2	Cond:	652 µS	pH:	7.30	Turbidity: 71000
Final Reading	Temp:		Cond:		pH:		Turbidity:
Interval #4:	34.50 - 37.27		Gallons Pumped:	4.0 g		Time Pumped:	2.0 min
Inital Reading	Temp:	18.30	Cond:	641 µS	pH:	7.21	Turbidity: 71000
Final Reading	Temp:		Cond:		pH:		Turbidity:
Interval #5:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:		pH:		Turbidity:
Final Reading	Temp:		Cond:		pH:		Turbidity:
Interval #6:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:		pH:		Turbidity:
Final Reading	Temp:		Cond:		pH:		Turbidity:
Interval #7:			Gallons Pumped:			Time Pumped:	
Inital Reading	Temp:		Cond:		pH:		Turbidity:
Final Reading	Temp:		Cond:		pH:		Turbidity:

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: NTU

GM-Bedford PMP Sampling Well Development Form

Personnel: T Shaw, J
Well ID: CH-22

TD: 37.13
WL: 10.51

Date: 11/1/22
Start Time: 1515
End Time: 1610

Interval #8: 12-16			Gallons Pumped: 4.5g			Time Pumped: 3.0min
Inital Reading	Temp: 20.1		Cond: 42[illegible]	pH: 8.70		Turbidity: 128
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #9: 16-20			Gallons Pumped: 4.5g			Time Pumped: 3.0min
Inital Reading	Temp: 18.8		Cond: 554	pH: 11.00		Turbidity: 56.7
Final Reading	Temp: ~~18.4~~		Cond:	pH:		Turbidity:
Interval #10: 20-24			Gallons Pumped: 4.5g			Time Pumped: 3.0min
Inital Reading	Temp: 18.4		Cond: 706µS	pH: 8.52		Turbidity: 55.5
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #11: 24-28			Gallons Pumped: 6.0g			Time Pumped: 4.0min
Inital Reading	Temp: 17.9		Cond: 817µS	pH: 7.84		Turbidity: 72.2
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #12: 28-32			Gallons Pumped: 6.5g			Time Pumped: 6.0min
Inital Reading	Temp: 19.8		Cond: ~~2850µS~~ 750µS	pH: 8.08		Turbidity: 1.5
Final Reading	Temp: 17.5		Cond: 773µS	pH: ~~7.53~~		Turbidity: 16.1
Interval #13: 32-37.13			Gallons Pumped: 4.5g			Time Pumped: 4.0min
Inital Reading	Temp: 19.2		Cond: 721	pH: 7.62		Turbidity: 7000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #14:			Gallons Pumped:			Time Pumped:
Inital Reading	Temp:		Cond:	pH:		Turbidity:
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #15:			Gallons Pumped:			Time Pumped:
Inital Reading	Temp:		Cond:	pH:		Turbidity:
Final Reading	Temp:		Cond:	pH:		Turbidity:

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Prouty
Well ID: CM-64

Date: 11/1/12
Start Time: 1625
End Time: 1650

Depth to Water: 17.60 (initial)
Depth to Bottom: 32.05 (initial)
Casing Depth: 13.0

One Well Volume: 11.86 (gal)
Ten Well Volumes: 1 (gal)
Total Volume Purged: 14.5 (gal)

Depth to Water: 31.82 (final)
Depth to Bottom: 32.26 (final)

Interval #1: 13-17	Gallons Pumped: 2.5	Time Pumped: 1.0 hr
Inital Reading	Temp: 30.9	Cond: 852 µs	pH: 7.33	Turbidity: 105
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #2: 17-21	Gallons Pumped: 3.5	Time Pumped: 1.5 hr
Inital Reading	Temp: 19.5	Cond: 965	pH: 7.13	Turbidity: 99.1
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #3: 21-25	Gallons Pumped: 3.5	Time Pumped: 2.0 hr
Inital Reading	Temp: 15.8	Cond: 995	pH: 7.13	Turbidity: 90.4
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #4: 25-29	Gallons Pumped: 3.0	Time Pumped: 1.5 hr
Inital Reading	Temp: 17.6	Cond: 939	pH: 7.12	Turbidity: ~~443~~ 113
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #5: 29-32.05	Gallons Pumped: 2.0	Time Pumped: 1.0 hr
Inital Reading	Temp: 15.4	Cond: 925	pH: 7.17	Turbidity: >1000
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #6:	Gallons Pumped:	Time Pumped:
Inital Reading	Temp:	Cond:	pH:	Turbidity:
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #7:	Gallons Pumped:	Time Pumped:
Inital Reading	Temp:	Cond:	pH:	Turbidity:
Final Reading	Temp:	Cond:	pH:	Turbidity:

UNITS: Temp: C Cond: µS pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: _____
Well ID: CH-66

Date: 11/2/22
Start Time: 1000
End Time: 1100

Interval #8: 30-34	Gallons Pumped: 2.5	Time Pumped: 1.5 min
Inital Reading Temp: 15.3	Cond: 898	pH: 7.36	Turbidity: 19.3
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #9: 34-38	Gallons Pumped: 3.5	Time Pumped: 2.0 min
Inital Reading Temp: 15.3	Cond: 951	pH: 7.19	Turbidity: 28.2
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #10: 38-42	Gallons Pumped: 4.0	Time Pumped: 2.0 min
Inital Reading Temp: 15.2	Cond: 984	pH: 7.14	Turbidity: 380
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #11: 42-46	Gallons Pumped: 3.5	Time Pumped: 1.5 min
Inital Reading Temp: 15.4	Cond: 997	pH: 7.09	Turbidity: 55.7
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #12: 46-50	Gallons Pumped: 4.0	Time Pumped: 2.0 min
Inital Reading Temp: 15.3	Cond: 998	pH: 7.89	Turbidity: 58.1
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #13: 50-54	Gallons Pumped: 4.0	Time Pumped: 2.0 min
Inital Reading Temp: 15.4	Cond: 1003	pH: 7.85	Turbidity: 74.7
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #14: 54-60	Gallons Pumped: 6.5	Time Pumped: 3.5 min
Inital Reading Temp: 15.1	Cond: 921	pH: 7.83	Turbidity: 230
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #15:	Gallons Pumped:	Time Pumped:
Inital Reading Temp:	Cond:	pH:	Turbidity:
Final Reading Temp:	Cond:	pH:	Turbidity:

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T. [illegible]
Well ID: CH-65

Date: 11/2/22
Start Time: 1125
End Time:

Interval #8: 30-34		Gallons Pumped: 3.0g		Time Pumped: 20min	
Inital Reading	Temp: 15.3	Cond: 572	pH: 7.53	Turbidity: 23.3	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #9: 34-38		Gallons Pumped: 3.0g		Time Pumped: 20min	
Inital Reading	Temp: 15.0	Cond: 567	pH: 7.49	Turbidity: 21.2	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #10: 38-42		Gallons Pumped: 3.0g		Time Pumped: 20min	
Inital Reading	Temp: 15.0	Cond: 569	pH: 7.46	Turbidity: 24.2	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #11: 42-46		Gallons Pumped: 3.0g		Time Pumped: 20min	
Inital Reading	Temp: 15.2	Cond: 566	pH: 7.48	Turbidity: 30.4	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #12: 46-50		Gallons Pumped: 4.0g		Time Pumped: 25min	
Inital Reading	Temp: 15.0	Cond: 568	pH: 7.49	Turbidity: 31.0	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #13: 50-54		Gallons Pumped: 4.0g		Time Pumped: 25min	
Inital Reading	Temp: 15.2	Cond: 567	pH: 7.53	Turbidity: 22.0	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #14: 54-58		Gallons Pumped: 4.0g		Time Pumped: 25min	
Inital Reading	Temp: 15.3	Cond: 566	pH: 7.47	Turbidity: 35.6	
Final Reading	Temp:	Cond:	pH:	Turbidity:	
Interval #15: 58-62		Gallons Pumped: 5.0g		Time Pumped: 30min	
Inital Reading	Temp: 15.5	Cond: 566	pH: 7.51	Turbidity: 43.8	
Final Reading	Temp:	Cond:	pH:	Turbidity:	

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Brungs
Well ID: CM-65

Date: 11/2/22
Start Time: 1125
End Time: _____

Interval #8: 62 - 65 (Below Ref)		Gallons Pumped: 10.0 g			Time Pumped: 6.0 mL	
Inital Reading	Temp: ~~7.46~~ 15.4	Cond: 568	pH: 7.46		Turbidity: 733	
Final Reading	Temp: 15.5	Cond: 565	pH: 7.50		Turbidity: 165	
Interval #9: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #10: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #11: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #12: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #13: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #14: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Interval #15: _____		Gallons Pumped: _____			Time Pumped: _____	
Inital Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	
Final Reading	Temp: _____	Cond: _____	pH: _____		Turbidity: _____	

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: Tim Greenough
Well ID: CH-53

Date: 11/2/17
Start Time: 1400
End Time: 1450

Interval #8: 40 - 44
Inital Reading Temp: 16.7
Final Reading Temp:
Gallons Pumped: 3.0g
Cond: 701 pH: 8.19
Cond: pH:
Time Pumped: 20 min
Turbidity: 59.5
Turbidity:

Interval #9: 44 - 48
Inital Reading Temp: 16.2
Final Reading Temp:
Gallons Pumped: 4.0g
Cond: 700 pH: 8.23
Cond: pH:
Time Pumped: 2.5 min
Turbidity: 65.7
Turbidity:

Interval #10: 48 - 52
Inital Reading Temp: 16.2
Final Reading Temp:
Gallons Pumped: 3.0g
Cond: 701 pH: 8.26
Cond: pH:
Time Pumped: 20 min
Turbidity: 76.7
Turbidity:

Interval #11: 52 - 56
Inital Reading Temp: 16.3
Final Reading Temp:
Gallons Pumped: 4.0g
Cond: 684 pH: 8.50
Cond: pH:
Time Pumped: 25 min
Turbidity: 97.4
Turbidity:

Interval #12: 56 - 61.55
Inital Reading Temp: 15.1
Final Reading Temp:
Gallons Pumped: 2.0g
Cond: 623 pH: 9.32
Cond: pH:
Time Pumped: 1.5 min
Turbidity: >1000
Turbidity:

Interval #13:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #14:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #15:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

UNITS: Temp: Cond: µS pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: Tim Boang S
Well ID: CH-57

Date: 11/2/22
Start Time: 0810
End Time: 1600

Interval #8: 50-54		Gallons Pumped: 3.0 g		Time Pumped: 2.0 min
Inital Reading	Temp: 17.0	Cond: 1153	pH: 7.52	Turbidity: 97.9
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #9: 54-58		Gallons Pumped: 4.5 g		Time Pumped: 3.5 min
Inital Reading	Temp: 16.5	Cond: 1161	pH: 7.23	Turbidity: 145
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #10: 58-62		Gallons Pumped: 6.0 g		Time Pumped: 4.0 min
Inital Reading	Temp: 16.5	Cond: 1163	pH: 7.17	Turbidity: 93
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #11: 62-66		Gallons Pumped: 7.0 g		Time Pumped: 4.5 min
Inital Reading	Temp: 16.6	Cond: 1172	pH: 7.25	Turbidity: 51.2
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #12: 66-70.70 (TD)		Gallons Pumped: 6.0 g		Time Pumped: 4.0 min
Inital Reading	Temp: 17.0	Cond: 1204	pH: 7.09	Turbidity: 24.6
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #13:		Gallons Pumped:		Time Pumped:
Inital Reading	Temp:	Cond:	pH:	Turbidity:
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #14:		Gallons Pumped:		Time Pumped:
Inital Reading	Temp:	Cond:	pH:	Turbidity:
Final Reading	Temp:	Cond:	pH:	Turbidity:
Interval #15:		Gallons Pumped:		Time Pumped:
Inital Reading	Temp:	Cond:	pH:	Turbidity:
Final Reading	Temp:	Cond:	pH:	Turbidity:

UNITS: Temp: C Cond: µS pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: T. Brown
Well ID: MW-Y (0134193CC)

Date: 11/2/17
Start Time: 1655
End Time: 1735

Interval #8: 18-22	Gallons Pumped: 2.0 g	Time Pumped: 1.0 hr
Inital Reading Temp: 19.8	Cond: 1989	pH: 7.72	Turbidity: 24.6
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #9: 22-26	Gallons Pumped: 3.0 g	Time Pumped: 1.5 hr
Inital Reading Temp: 19.0	Cond: 2140	pH: 7.93	Turbidity: 47.2
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #10: 26-30	Gallons Pumped: 3.0 g	Time Pumped: 1.5 hr
Inital Reading Temp: 18.2	Cond: 2190	pH: 8.14	Turbidity: 30.2
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #11: 30-34	Gallons Pumped: 3.0 g	Time Pumped: 1.5 hr
Inital Reading Temp: 17.9	Cond: 2180	pH: 8.23	Turbidity: 30.2
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #12: 34-38.40	Gallons Pumped: 6.0 g	Time Pumped: 3.0 hr
Inital Reading Temp: 17.8	Cond: 2210	pH: 7.97	Turbidity: 16.9
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #13:	Gallons Pumped:	Time Pumped:
Inital Reading Temp:	Cond:	pH:	Turbidity:
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #14:	Gallons Pumped:	Time Pumped:
Inital Reading Temp:	Cond:	pH:	Turbidity:
Final Reading Temp:	Cond:	pH:	Turbidity:
Interval #15:	Gallons Pumped:	Time Pumped:
Inital Reading Temp:	Cond:	pH:	Turbidity:
Final Reading Temp:	Cond:	pH:	Turbidity:

UNITS: Temp: _____ Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T. Scanga
Well ID: CH-67 (2 inch)

Date: 11/3/24
Start Time: 900
End Time: 1035

Depth to Water: 32.80 (initial)
Depth to Bottom: 66.62 (initial)
Casing Depth: ~~54.0~~ 58.0

One Well Volume: 5.40 (gal)
Ten Well Volumes: 54.0 (gal)
Total Volume Purged: ~~~~ (gal)

Depth to Water: 64.35 (final)
Depth to Bottom: 66.70 (final)

Interval #1: 33-37	Inital Reading Temp: 14.1	Final Reading Temp:	Gallons Pumped: 3.0	Cond: 745	pH: 7.40	Time Pumped: 3.0 min Turbidity: 7000 Turbidity:
Interval #2: 37-41	Inital Reading Temp: 14.3	Final Reading Temp:	Gallons Pumped: 3.0	Cond: 732	pH: 7.00	Time Pumped: 2.5 min Turbidity: 7000 Turbidity:
Interval #3: 41-45	Inital Reading Temp: 15.0	Final Reading Temp:	Gallons Pumped: 3.0	Cond: 735	pH: 6.85	Time Pumped: 3.0 min Turbidity: 7000 Turbidity:
Interval #4: 45-49	Inital Reading Temp: 15.4	Final Reading Temp:	Gallons Pumped: 4.0	Cond: 729	pH: 6.92	Time Pumped: 4.0 min Turbidity: 7000 Turbidity:
Interval #5: 49-53	Inital Reading Temp: 15.6	Final Reading Temp:	Gallons Pumped: 4.0	Cond: 730	pH: 7.00	Time Pumped: 4.0 min Turbidity: 7000 Turbidity:
Interval #6: 53-57	Inital Reading Temp: 16.0	Final Reading Temp:	Gallons Pumped: 3.0	Cond: 730	pH: 7.18	Time Pumped: 3.0 min Turbidity: 7000 Turbidity:
Interval #7: 57-61	Inital Reading Temp: 16.3	Final Reading Temp:	Gallons Pumped: 3.5	Cond: 732	pH: 6.89	Time Pumped: 3.5 min Turbidity: 7000 Turbidity:

UNITS: Temp: C Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Pompeo
Well ID: CH-67

Date: 11/3/17
Start Time: _____
End Time: _____

Interval #8: 61-66.6 ft
Gallons Pumped: 30
Time Pumped: 3.0 hr
Inital Reading Temp: 16.8 Cond: 733 pH: 7.00 Turbidity: 7,000
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #9: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #10: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #11: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #12: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #13: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #14: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

Interval #15: _____
Gallons Pumped: _____
Time Pumped: _____
Inital Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____
Final Reading Temp: _____ Cond: _____ pH: _____ Turbidity: _____

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Prange
Well ID: CH-69 (2-inch)

Date: 11/3/22
Start Time: 1100
End Time: 1300

Depth to Water: 35.07 (initial)
Depth to Bottom: ~~71.85~~ (initial)
Casing Depth: 58

One Well Volume: 5.88 (gal)
Ten Well Volumes: 58.80 (gal)
Total Volume Purged: 12.50 (gal)

Depth to Water: 67.30 (final)
Depth to Bottom: 72.90 (final)

Interval #1: 35-39			Gallons Pumped: 1.5g			Time Pumped: 1.5min
Inital Reading	Temp: 17.4		Cond: 665	pH: 7.45		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #2: 39-43			Gallons Pumped: 2.0g			Time Pumped: 1.5min
Inital Reading	Temp: 16.8		Cond: 650	pH: 7.17		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #3: 43-47			Gallons Pumped: 2.5g			Time Pumped: 2.0min
Inital Reading	Temp: 17.0		Cond: 732	pH: 7.25		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #4: 47-51			Gallons Pumped: 2.0g			Time Pumped: 1.0min
Inital Reading	Temp: 16.4		Cond: 644	pH: 7.23		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #5: 51-55			Gallons Pumped: 2.0g			Time Pumped: 2.0min
Inital Reading	Temp: 16.2		Cond: 645	pH: 7.23		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #6: 55-59			Gallons Pumped: 1.5g			Time Pumped: 1.5min
Inital Reading	Temp: 16.1		Cond: 655	pH: 7.21		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:
Interval #7: 59-63			Gallons Pumped: 2.0g			Time Pumped: 2.0min
Inital Reading	Temp: 16.5		Cond: 661	pH: 7.11		Turbidity: >1000
Final Reading	Temp:		Cond:	pH:		Turbidity:

UNITS: Temp: C Cond: µS pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Powers
Well ID: CH-69

Date: 11/2/2-4
Start Time: _____
End Time: _____

Interval #8: 63-67
Inital Reading Temp: 16.2
Final Reading Temp: _____
Gallons Pumped: 2.5g
Cond: 6.79 pH: 7.08
Cond: _____ pH: _____
Time Pumped: 2.0hr
Turbidity: 71000
Turbidity: _____

Interval #9: 67-71.55(TD)
Inital Reading Temp: 17.1
Final Reading Temp: _____
Gallons Pumped: 2.0g
Cond: 6.21 pH: 7.11
Cond: _____ pH: _____
Time Pumped: 2.0hr
Turbidity: 71000
Turbidity: _____

Interval #10: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

Interval #11: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

Interval #12: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

Interval #13: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

Interval #14: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

Interval #15: _____
Inital Reading Temp: _____
Final Reading Temp: _____
Gallons Pumped: _____
Cond: _____ pH: _____
Cond: _____ pH: _____
Time Pumped: _____
Turbidity: _____
Turbidity: _____

UNITS: Temp: _____ Cond: _____ pH: _____ Turbidity: _____

GM-Bedford PMP Sampling Well Development Form

Personnel: T Powers
Well ID: CH-68

Date: 11/3/17
Start Time: 1345
End Time: 1530

Depth to Water: 16.45 (initial)
Depth to Bottom: 79.30 (initial)
Casing Depth: 80

One Well Volume: 41.42 (gal)
Ten Well Volumes: 414.20 (gal)
Total Volume Purged: 62.50 (gal)

Depth to Water: 74.20 (final)
Depth to Bottom: 79.51 (final)

Interval #1:	16.45-16	Inital Reading	Temp: 18.4	Gallons Pumped: 2.5g	Cond: 875	pH: 7.54	Time Pumped: 1.5 min Turbidity: 37.2
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #2:	16-20	Inital Reading	Temp: 17.3	Gallons Pumped: 2.5g	Cond: 885	pH: 7.30	Time Pumped: 1.5 min Turbidity: 34.8
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #3:	20-24	Inital Reading	Temp: 16.9	Gallons Pumped: 2.5g	Cond: 890	pH: 7.29	Time Pumped: 1.5 min Turbidity: 20.1
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #4:	24-28	Inital Reading	Temp: 16.4	Gallons Pumped: 2.5g	Cond: 890	pH: 7.32	Time Pumped: 1.5 min Turbidity: 13.6
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #5:	28-32	Inital Reading	Temp: 16.0	Gallons Pumped: 2.5g	Cond: 898	pH: 7.27	Time Pumped: 1.5 min Turbidity: 13.0
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #6:	32.36	Inital Reading	Temp: 15.6	Gallons Pumped: 3.0g	Cond: 893	pH: 7.30	Time Pumped: 2.0 min Turbidity: 10.2
		Final Reading	Temp:		Cond:	pH:	Turbidity:
Interval #7:	36-40	Inital Reading	Temp: 15.5	Gallons Pumped: 3.0g	Cond: 900	pH: 7.24	Time Pumped: 2.0 min Turbidity: 8.0
		Final Reading	Temp:		Cond:	pH:	Turbidity:

UNITS: Temp: C Cond: µS pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: T
Well ID: CC-68

Date: 11/3/22
Start Time: 1345
End Time: 1530

Interval #8: 40-44	Inital Reading Temp: 15.3	Final Reading Temp:	Gallons Pumped: 3.0g	Cond: 899	Cond:	pH: 7.27	pH:	Time Pumped: 2.0 min	Turbidity: 6.11	Turbidity:
Interval #9: 44-48	Inital Reading Temp: 15.3	Final Reading Temp:	Gallons Pumped: 3.0g	Cond: 902	Cond:	pH: 7.23	pH:	Time Pumped: 2.0min	Turbidity: 4.58	Turbidity:
Interval #10: 48-52	Inital Reading Temp: 15.2	Final Reading Temp:	Gallons Pumped: 4.0g	Cond: 910	Cond:	pH: 7.10	pH:	Time Pumped: 2.5min	Turbidity: 6.33	Turbidity:
Interval #11: 52-56	Inital Reading Temp: 15.3	Final Reading Temp:	Gallons Pumped: 3.0g	Cond: 916	Cond:	pH: 7.10	pH:	Time Pumped: 2.0mL	Turbidity: 10.1	Turbidity:
Interval #12: 56-60	Inital Reading Temp: 15.3	Final Reading Temp:	Gallons Pumped: 4.5g	Cond: 913	Cond:	pH: 7.16	pH:	Time Pumped: 3.0min	Turbidity: 7.71	Turbidity:
Interval #13: 60-64	Inital Reading Temp: 15.6	Final Reading Temp:	Gallons Pumped: 5.0g	Cond: 898	Cond:	pH: 7.03	pH:	Time Pumped: 3.5min	Turbidity: 53.6	Turbidity:
Interval #14: 64-68	Inital Reading Temp: 15.5	Final Reading Temp:	Gallons Pumped: 4.5g	Cond: 866	Cond:	pH: 7.04	pH:	Time Pumped: 3.0min	Turbidity: 11.7	Turbidity:
Interval #15: 68-72	Inital Reading Temp: 15.5	Final Reading Temp:	Gallons Pumped: 6.0g	Cond: 917	Cond:	pH: 7.05	pH:	Time Pumped: 4.0min	Turbidity: 6.04	Turbidity:

UNITS: Temp: C Cond: µS pH: Turbidity:

GM-Bedford PMP Sampling Well Development Form

Personnel: T Chaves
Well ID: CH-68

Date: 1/13/17
Start Time: 1345
End Time: 1530

Interval #16: 72-76
Inital Reading Temp: 16.3
Final Reading Temp:
Gallons Pumped: 7.0 g
Cond: 911 pH: 7.16
Cond: pH:
Time Pumped: 4.5 min
Turbidity: 10.5
Turbidity:

Interval #17: 76-79.35(TD)
Inital Reading Temp: 15.8
Final Reading Temp:
Gallons Pumped: 4.0 g
Cond: 915 pH: 6.94
Cond: pH:
Time Pumped: 2.5 min
Turbidity: 203
Turbidity:

Interval #10:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #11:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #12:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #13:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #14:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

Interval #15:
Inital Reading Temp:
Final Reading Temp:
Gallons Pumped:
Cond: pH:
Cond: pH:
Time Pumped:
Turbidity:
Turbidity:

UNITS: Temp: Cond: pH: Turbidity:

Well No.: CH-48 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/16/2023 10:56:47

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 644.2 ft amsl

Screen End Depth: Static Water Depth: 22.05 Measurement Type:

Screen Length: Static Water Elev: 622.15 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
10:12	0.00		17.09	-4.96	6.74	14.58	0.626	1.24	18.7	127.1						
10:31	0.00		17.20	-4.85	6.72	14.55	0.610	2.45	12.08	125.1						

Field Parameters:

Comments: At 11:43, the well was dry within first 10 minutes. Only 1 total gallon removed. No readings collected. Top of pump at 29.35. 1/19/23: water level at 16.94. Had about an inch of rain in past 2 days. Will purge as normal

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011923-JK-37	N	WG		1/19 10:15		PCB	4

Well No.: MW-X234Y157D-2 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL GHD **Date:** 1/16/2023 2:01:01 PM

Monitoring Well Data

Well Diameter:		Constructed Well Depth:	180.39999 ft BGS	Measured Well Depth:	180.39999 ft BGS
Screen Material:				Water Column Length:	141.29 ft
Screen Start Depth:		Ref Point Elev:	678.42 ft amsl		
Screen End Depth:		Static Water Depth:	39.11 ft BGS	Measurement Type:	
Screen Length:		Static Water Elev:	639.31 ft BGS	Sampling Method:	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:20	0.00		54.01	14.9	6.59	12.92	0.515	1.84	4.28	-185.5						
14:54	0.00			-39.11	6.96	12.66	0.497	1.56	3.12	-167.0						Unable to

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JL-31	N	WG	G	1/18 14:25	Yes	PCB	4

Well No.: CH-69 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/17/2023 2:29:25 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 645.6 ft amsl

Screen End Depth: Static Water Depth: 33.60 Measurement Type:

Screen Length: Static Water Elev: 612 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:35	0.25		35.84	2.24	6.98	14.02	.418	3.39	5.2	-58.6						
15:02	0.50		41.15	7.55	6.96	14.13	.408	6.25	4.66	-86.5						

Field Parameters:

Comments: Begin purging 14:25. Moderate drawdown

Total Volume Purged (gal): .25

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JK-17	N	WG	G	1/17 14:35	N	PCB	2
GW-011723-JK-17	N	WG	G	1/17 14:35	Y	PCB	2

Well No.: CH-73 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL GHD **Date:** 1/17/2023 3:17:29 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 637.681 ft amsl

Screen End Depth: Static Water Depth: 30.00 Measurement Type:

Screen Length: Static Water Elev: 607.681 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
09:26	0.00		30.00	-2	6.85	13.51	0.505	6.13	5.33	120.0						
09:48	0.00		30.00	0	6.87	13.76	0.506	5.71	4.02	119.5						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011923-JK-35	N	WG	G	1/19 9:30		PCB	4

Well No.: MW-LOC-B **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/16/2023 4:05:38 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 634.090 ft amsl

Screen End Depth: Static Water Depth: 31.32 Measurement Type:

Screen Length: Static Water Elev: 602.77 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
09:58	0.00		32.75	1.43	7.20	12.89	0.406	0.49	2.04	-61.8						

Field Parameters:

Comments: Well went dry, couldn't collect second reading.

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-AC-26	N	WG	G	1/18 10:00		PCB	4
GW-011823-AC-30	FD	WG	G	1/18 10:05		PCB	4

Well No.: CH-54 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/16/2023 2:38:01 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 698.6 ft amsl

Screen End Depth: Static Water Depth: 37.83 Measurement Type:

Screen Length: Static Water Elev: 660.77 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:35	0.00		37.92	.09					0.27							
15:40	0.00		38.12	.29	6.98	12.78	735	6.83	0.41	107.9						

Field Parameters:

Comments: YSI battery died during first set of readings. Replaced batteries

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-SS-05	N	WG	G	1/16 14:40	Yes	PCB	4

Well No.: CH-62 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/16/2023 3:35:19 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 612.73 ft amsl

Screen End Depth: Static Water Depth: 11.60 Measurement Type:

Screen Length: Static Water Elev: 601.13 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
15:37	0.25		13.20	1.6	7.01	14.41	.518	0.81	19.6	-38.0						
16:00	0.75		16.83	5.23	7.01	14.34	.518	0.84	21.9	-42.7						

Field Parameters:

Comments: Begin purging at 15:27. Sample at 15:40

Total Volume Purged (gal): .75

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-JK-06	N	WG	G	1/16 15:40	No	PCB	2
GW-011623-JK-06	N	WG	G	1/16 15:40	Yes	PCB	2

Well No.: CH-61 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/16/2023 3:42:16 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 611.12 ft amsl

Screen End Depth: Static Water Depth: 8.73 Measurement Type:

Screen Length: Static Water Elev: 602.39 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
15:53	0.00		9.63	.9	7.37	14.00	0.481	0.20	35.4	-104.3						
16:28	0.00		11.45	2.72	7.39	13.94	0.480	0.20	38.8	-106.9						

Field Parameters: **Comments**: Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-AC-08	N	WG	G	1/16 15:55	Yes	Total, dissolved PCB	4

Well No.: MW-X178Y367D-2 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL GHD **Date:** 1/16/2023 4:21:36 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: 143.5 ft BGS Measured Well Depth: 143.5 ft BGS

Screen Material: Water Column Length: ft

Screen Start Depth: Ref Point Elev: 670.57 ft amsl

Screen End Depth: Static Water Depth: ft BGS Measurement Type:

Screen Length: Static Water Elev: ft BGS Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:09	0.00				7.06	12.75	0.362	0.85	8.16	-197.0						
11:40	0.00				7.25	12.95	0.338	1.73	2.3	-171.5						

Field Parameters:

Comments: Could not collect water level

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JL-14	N	W	G	1/17 11:11	Yes	PCB	4

Well No.: CH-67 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/17/2023 11:43:07

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.59 ft amsl

Screen End Depth: Static Water Depth: 30.10 Measurement Type:

Screen Length: Static Water Elev: 618.49 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
15:24	0.25		31.80	1.7	6.73	13.76	.421	0.68	4.9	-18.5						
15:52	0.50		34.80	4.7	6.75	13.86	.426	0.67	2.89	15.9						

Field Parameters:

Comments: Initial WL at 30.10. Begin purging at 15:15. Sample at 15.25.

Total Volume Purged (gal): .25

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JK-21	N	WG	G	1/17 15:25	N	PCB	2
GW-011723-JK-21	N	WG	G	1/17 15:25	Y	PCB	2

Well No.: CH-52 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** John GHD **Date:** 1/16/2023 3:27:48 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 671 ft amsl

Screen End Depth: Static Water Depth: 16.71 Measurement Type:

Screen Length: Static Water Elev: 654.29 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
15:45	0.00		18.85	2.14	7.08	12.71	0.442	1.94	4.61	-32.6						
16:10	0.00		23.38	6.67	.7.22	12.75	0.390	3.32	8.97	45.4						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-JL-07	N	W	G	1/16 15:53	Yes	PCB	4

Well No.: CH-70 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/17/2023 3:58:24 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 654.8 ft amsl

Screen End Depth: Static Water Depth: 18.89 Measurement Type:

Screen Length: Static Water Elev: 635.91 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
15:58	0.00		18.92	.03	6.87	12.98	0.713	0.38	11.58	-16.3						
16:51	0.00		19.05	.16	6.88	12.67	0.717	0.46	16.8	-5.0						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-AC-22	N	WG	G	1/17 16:00	No	PCB	4

Well No.: MW-LOC-A **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/16/2023 2:01:27 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 625.355 ft amsl

Screen End Depth: Static Water Depth: 17.00 Measurement Type:

Screen Length: Static Water Elev: 608.355 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:15	0.25		17.01	.01	6.71	13.91	.643	1.30	12.2	129.7						
14:39	0.75		17.20	.2	6.71	13.82	.584	1.46	11.8	129.2						
14:52	0.75			-17												

Field Parameters:

Comments: Start purge at 14:03. Minimal drawdown.

Total Volume Purged (gal): .75

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-JK-02	N	WG	G	1/16 14:15	No	PCB	2
GW-011623-JK-02	N	WG	G	1/16 14:15	Yes	PCB	2

Well No.: CH-65 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** John GHD **Date:** 1/16/2023 1:59:13 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.59 ft amsl

Screen End Depth: Static Water Depth: 25.30 Measurement Type:

Screen Length: Static Water Elev: 623.29 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:26	0.00		27.10	1.8	7.52	12.65	0.309	2.75	0.82	-132.7						
14:55	0.00		32.83	7.53	7.40	12.37	0.290	1.42	1.27	-103.7						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-JL-03	N	W	G	1/16 14:30	Yes	PCB	4

Well No.: MW-X234Y157D-1 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL GHD **Date:** 1/18/2023 10:26 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: 180.39999 ft BGS Measured Well Depth: 180.39999 ft BGS

Screen Material: Water Column Length: ft

Screen Start Depth: Ref Point Elev: 678.42 ft amsl

Screen End Depth: Static Water Depth: ft BGS Measurement Type:

Screen Length: Static Water Elev: ft BGS Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
10:40	0.00				5.92	12.06	0.661	5.01	2.53	-110.2						

Field Parameters:

Comments: Possibly dry at 85.91. Will attempt to purge. Well dried out during purging, only collected one total and one dissolved PCB

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JL-27	N	WG	G	1/18 10:45	Yes	PCB	2

Well No.: CH-22 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/17/2023 9:51:22 AM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 615.9 ft amsl

Screen End Depth: Static Water Depth: 9.29 Measurement Type:

Screen Length: Static Water Elev: 606.61 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
09:56	0.00		9.90	.61	7.00	14.34	0.800	1.00	17	-56.0						
11:00	0.00		12.40	3.11	6.99	14.63	0.811	0.73	11.7	-67.6						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-AC-11	N	WG	G	1/17 10:00	Yes	PCB	4
GW-011723-AC-12	FD	WG	G	1/17 10:05	Yes	PCB	4

Well No.: CH-49 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/16/2023 1:50:53 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 643.8 ft amsl

Screen End Depth: Static Water Depth: 21.74 Measurement Type:

Screen Length: Static Water Elev: 622.06 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:13	0.00		23.13	1.39	7.16	13.83	0.338	0.55	6.69	-57.8						
14:44	0.00		26.59	4.85	7.57	13.76	0.328	8.64	11.15	-59.9						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-AC-04	N	WG	G	1/16 14:15	N	Total,dissolved PCBs	4

Well No.: CH-68 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/17/2023 2:33 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.7 ft amsl

Screen End Depth: Static Water Depth: 11.65 Measurement Type:

Screen Length: Static Water Elev: 637.05 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:35	0.00		12.08	.43	6.96	13.26	757	0.85	2.88	23.7						
15:25	0.00		14.10	2.45	6.94	13.55	766	0.74	0.76	19.8						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-SS-18	N	WG	G	1/17 14:40	Yes	PCB	4

Well No.: MW-X234Y157S **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/18/2023 11:10:23

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 39.400002 ft BGS
Measured Well Depth: 39.400002 ft BGS
Screen Material:
Water Column Length: 27.84 ft
Screen Start Depth:
Ref Point Elev: 677.25 ft amsl
Screen End Depth:
Static Water Depth: 11.56 ft BGS
Measurement Type:
Screen Length:
Static Water Elev: 665.69 ft BGS
Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:20	0.00		11.80	.24	6.70	14.70	0.691	0.63	1.64	-158.2						
12:20	0.00		18.61	7.05	7.09	13.99	0.644	2.37	1.85	-20.6						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JL-29	N	W	G	1/18 11:25	Yes	PCB	12

Well No.: CH-46 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/16/2023 11:37:15

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 645.1 ft amsl

Screen End Depth: Static Water Depth: 19.63 Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:40	0.00	500	20.15	20.15	7.00	13.49	0.398	0.75	24.7	-72.3						
12:06	3.46	500	25.52	25.52	7.04	12.76	0.363	0.73	21.6	-68.5						

Field Parameters:

Comments:

Total Volume Purged (gal): 3.46

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-AC-01	N	WG	G	1/16 11:45	N	Total, dissolved PCBs	4

Well No.: CH-53 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/16/2023 12:07:11

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 683.4 ft amsl

Screen End Depth: Static Water Depth: 39.92 Measurement Type:

Screen Length: Static Water Elev: 643.48 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
16:05	0.00		40.21	.29	8.26	12.50	327	3.95	0.68	-74.1						
16:38	0.00		42.71	2.79	8.22	12.35	325	1.05	4.33	-45.3						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-SS-09	N	WG	G	1/16 16:10	Yes	PCB	4

Well No.: CH-63 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK GHD **Date:** 1/16/2023 4:22:10 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 625.04 ft amsl

Screen End Depth: Static Water Depth: 17.63 Measurement Type:

Screen Length: Static Water Elev: 607.41 Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
16:32	0.50		19.87	2.24	7.06	13.47	.352	1.31	4.16	-147.5						
16:54	1.00		23.60	5.97	7.18	13.52	.352	1.03	2.51	-153.2						

Field Parameters:

Comments: Begin purging at 16:20. Sample at 16.30

Total Volume Purged (gal): .5

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011623-JK-10	N	WG	G	1/16 16:30	No	PCB	2
GW-011623-JK-10	N	WG	G	1/16 16:30	Yes	PCB	2

Well No.: CH-72 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/17/2023 2:23:05 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 648.154 ft amsl

Screen End Depth: Static Water Depth: 34.94 Measurement Type:

Screen Length: Static Water Elev: 613.214 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:36	0.00		36.02	1.08	6.88	13.71	0.717	1.35	1.66	75.3						
15:14	0.00		37.40	2.46	6.91	13.95	0.592	6.77	1.4	86.3						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-AC-19	N	WG	G	1/17 14:40	Yes	PCB	4

Well No.: MW-X297Y305D-1 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** No GHD **Date:** 1/17/2023 2:18:20 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 615.98 ft amsl

Screen End Depth: Static Water Depth: 20.33 Measurement Type:

Screen Length: Static Water Elev: 595.65 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:44	0.00		18.60	-1.73	8.21	15.42	0.451	0.92	4.17	-245.6						
15:11	0.00		18.99	-1.34	8.46	15.51	0.434	1.08	2.6	-267.4						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JL-20	N	W	G	1/17 14:48	Yes	PCB	4

Well No.: CH-66 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC GHD **Date:** 1/17/2023 11:28:24

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 641.04 ft amsl

Screen End Depth: Static Water Depth: 23.40 Measurement Type:

Screen Length: Static Water Elev: 617.64 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:49	0.00		25.34	1.94	7.15	13.91	0.880	12.52	7.25	63.5						
12:28	0.00		27.10	3.7	7.20	14.41	0.904	7.01	4.07	70.1						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW+011623-AC-16	N	WG	G	1/17 11:50	Yes	PCB	4

Well No.: CH-64 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/17/2023 11:47:56

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 638.44 ft amsl

Screen End Depth: Static Water Depth: 22.85 Measurement Type:

Screen Length: Static Water Elev: 615.59 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:45	0.00		22.87	.02	6.90	13.74	842	2.14	1.51	12						
12:40	0.00		22.92	.07	6.86	13.47	728	1.10	0.91	30.6						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-SS-15	N	WG	G	1/17 11:50	Yes	PCB	4

Well No.: CH-71 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC **Date:** 1/17/2023 12:25:42

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev: 643.320 ft amsl

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: Well caved in, no sample collected

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: MW-X143Y193 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK **Date:** 1/17/2023 5:19:57 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: 31.78 Measurement Type:

Screen Length: Static Water Elev: 673.08 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:47	0.00			-31.78	7.45	14.13	2.431	0.95	19.8	-51.0						
15:09	0.00			-31.78	9.17	14.06	1.914	1.78	29.8	-182.3						

Field Parameters:

Comments: Begin purging at 14:33. Due to a very high water conductivity, I was unable to get the WL meter to function properly after the initial reading. Also, there was probable, significant drawdown based on final turbidity readings.

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JK-33	N	WG	G	1/18 14:45	No	PCB	2
GW-011823-JK-33	N	WG	G	1/18 14:45	Y	PCB	2

Well No.: MW-X178Y367D-5 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** No **Date:** 1/17/2023 11:43:27

Monitoring Well Data

Well Diameter: Constructed Well Depth: 143.5 ft BGS Measured Well Depth: ft BGS

Screen Material: Water Column Length: ft

Screen Start Depth: Ref Point Elev: 670.57 ft amsl

Screen End Depth: Static Water Depth: ft BGS Measurement Type:

Screen Length: Static Water Elev: ft BGS Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: Could not collect water level. Continued to blow air after 5 minutes, could not collect sample

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: MW-X261Y356D-1 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC **Date:** 1/19/2023 10:36:53

Monitoring Well Data

Well Diameter:
Constructed Well Depth: 154.5 ft BGS
Measured Well Depth: ft BGS
Screen Material:
Water Column Length: 43.88 ft
Screen Start Depth:
Ref Point Elev: 672.59 ft amsl
Screen End Depth:
Static Water Depth: 110.62 ft BGS
Measurement Type:
Screen Length:
Static Water Elev: 561.97 ft BGS
Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: Air leak, attempted to purge for 10 minutes, no sample collected

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: MW-X261Y356D-4 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC **Date:** 1/19/2023 10:37:03

Monitoring Well Data

Well Diameter: Constructed Well Depth: 154.5 ft BGS Measured Well Depth: ft BGS

Screen Material: Water Column Length: ft

Screen Start Depth: Ref Point Elev: 672.59 ft amsl

Screen End Depth: Static Water Depth: ft BGS Measurement Type:

Screen Length: Static Water Elev: ft BGS Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: Wells seems to be dry, apparent air leak, purger 10 minutes, no water, but water came out of closed port . No sample

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: MW-X261Y356D-5 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL **Date:** 1/19/2023 10:24:27

Monitoring Well Data

Well Diameter: Constructed Well Depth: 154.5 ft BGS Measured Well Depth: ft BGS

Screen Material: Water Column Length: 139.43 ft

Screen Start Depth: Ref Point Elev: 672.59 ft amsl

Screen End Depth: Static Water Depth: 15.07 ft BGS Measurement Type:

Screen Length: Static Water Elev: 657.52 ft BGS Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: After 10 minutes of purging only sporadic dribbles of water, obvious air leak in tubing could be heard. No sample collected

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: 9-4 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** AC **Date:** 1/18/2023 2:24:15 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 681.79 ft amsl

Screen End Depth: Static Water Depth: 31.04 Measurement Type:

Screen Length: Static Water Elev: 650.75 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
14:32	0.00		32.10	1.06	7.39	13.55	0.573	0.37	1.13	-84.4						
15:20	0.00		34.40	3.36	7.40	12.49	0.591	1.00	2.14	-69.9						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-AC-32	N	WG	G	1/18 14:35		PCB	4

Well No.: CH-20 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS **Date:** 1/17/2023 10:56:36

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 622.96 ft amsl

Screen End Depth: Static Water Depth: 21.41 Measurement Type:

Screen Length: Static Water Elev: 601.55 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
09:50	0.00		23.43	2.02	7.97	14.37	649	1.55	5.41	-172.9						
11:00	0.00		26.71	5.3	8.04	14.50	643	0.78	4.89	-168.2						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-SS-13	N	WG	G	1/17 9:55	Yes	PCB	12

Well No.: MW-X261Y356D-3 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** No **Date:** 1/17/2023 3:55:55 PM

Monitoring Well Data

Well Diameter: | Constructed Well Depth: 154.5 ft BGS | Measured Well Depth: ft BGS

Screen Material: | Water Column Length: 96.06 ft

Screen Start Depth: | Ref Point Elev: 672.59 ft amsl

Screen End Depth: | Static Water Depth: 58.44 ft BGS | Measurement Type:

Screen Length: | Static Water Elev: 614.15 ft BGS | Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
16:05	0.00		58.84	.4	7.24	14.41	.370	2.20	0.86	-162.0						
16:48	0.00		63.48	5.04	7.09	14.03	0.364	5.06	1.3	-72.0						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011723-JL-23	N	WG	G	1/17 16:11	N	PCB	2
GW-011723-JL-23	N	WG	G	1/17 16:12	Yes	PCB	2

Well No.: MW-X297Y305D-2 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS **Date:** 1/18/2023 3:06:56 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: 615.98 ft amsl

Screen End Depth: Static Water Depth: 19.15 Measurement Type:

Screen Length: Static Water Elev: 596.83 Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
09:50	0.00		19.60	.45	6.70	13.65	0.673	7.64	0.69	-52.3						
10:17	0.00		21.06	1.91	6.94	13.53	0.597	1.82	0.89	-5.0						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011923-JL-36	N	WG	G	1/19 9:55	No	PCB	4

Well No.: MW-X300Y199D-2 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** SS GHD **Date:** 1/18/2023 3:27:30 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev:

Screen End Depth: Static Water Depth: 39.50 Measurement Type:

Screen Length: Static Water Elev: User Entry Sampling Method: Bladder pump

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
16:13	0.00		41.60	2.1	6.88	12.08	0.509	1.23	1.71	-108.2						
16:40	0.00		77.71	38.21	7.09	11.39	0.496	1.37	1.81	-102.5						

Field Parameters:

Comments:

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JL-34	N	WG	G	1/18 15:35	Yes	PCB	4

Well No.: TRIBUTARY 3-3 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JL **Date:** 1/19/2023 2:36:32 PM

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length:

Screen Start Depth: Ref Point Elev: ft amsl

Screen End Depth: Static Water Depth: Measurement Type:

Screen Length: Static Water Elev: Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						

Field Parameters:

Comments: Not to be sampled, part of CA750

Total Volume Purged (gal):

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well No.: WET_WELL_3 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK **Date:** 1/18/2023 11:09:11

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: ft amsl

Screen End Depth: Static Water Depth: 8.00 Measurement Type:

Screen Length: Static Water Elev: User Entry Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
11:09	0.00		8.00	8	6.78	10.47	1.177	5.51	4.08	16.5						

Field Parameters:

Comments: Sample with disposable bailer.

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JK-28	N	WG	G	1/18 11:15	No	PCB	2
GW-011823-JK-28	N	WG	G	1/18 11:15	Yes	PCB	2

Well No.: WET_WELL_4 **Sampling Event:** 202301-Q1WG **SSOW Code:** **Monitoring Well Record for Low-Flow Purging**

Project Name: GM Bedford Facility **Ref. No.:** 11228036 **Personnel:** JK **Date:** 1/18/2023 10:00:48

Monitoring Well Data

Well Diameter: Constructed Well Depth: Measured Well Depth:

Screen Material: Water Column Length: User Entry

Screen Start Depth: Ref Point Elev: ft amsl

Screen End Depth: Static Water Depth: 16.03 Measurement Type:

Screen Length: Static Water Elev: User Entry Sampling Method:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	TDS (mg/L)		Color (describe)	Clarity (describe)	Odor (describe)	Notes
			Precision Required	< .4	± .1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10						
10:08	0.00		16.03	0	7.34	11.69	.649	8.16	4.08	221.5						

Field Parameters:

Comments: Sample with disposable bailer. Sample #25 is a duplicate

Total Volume Purged (gal): 0

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-011823-JK-24	N	WG	G	1/18 10:15	No	PCB	4
GW-011823-JK-25	N	WG	G	1/18 10:25	No	PCB	4

Well Number: 9-4 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** AC GHD **Date:** 5/23/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Constructed Well Depth:		**Ref Point Elev:**	681.79 ft amsl	**Measurement Type:**	
Measured Well Depth:	ft BREF	**Static Water Elev:**	650.62 ft amsl	**Sampling Method:**	Bladder Pump
Static Water Depth:	31.17 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	10:15
Well Diameter:		**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Screen Material: **Screen Start Depth:** **Screen End Depth:** **Screen Length:**

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 31.17 ft BREF** **Static Water Elevation: 650.62 ft amsl**
10:15		500	32.35	1.18	7.40	16.06	0.614	1.17	5.21	-248.5					
10:45	3.66	500	35.39	4.22	7.24	16.11	0.524	0.27	4.48	-267.2					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 3.66 gal

Water Depth at Sampling: 35.39 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052324-AC-23	N	WG	G	5/23 10:20	Y	PCB (dissolved), PCB (total), Chlorinated Organics	7
TB-052324-AC-03	TB	WG	G	5/23 15:00	N	Chlorinated Organics	1

Well Number: CH-20 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/23/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	622.96	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	601.91	ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	21.05 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	10:35
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 21.05 ft BREF** **Static Water Elevation: 601.91 ft amsl**
10:35			25.91	4.86	7.55	15.19	0.886	0.88	7.86	-14.4					
11:00	0.00			NA	7.44	14.93	0.884	0.30	6.69	-54.0					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 25.91 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052324-DS-24	N	WG	G	5/23 10:35	Y	PCB (dissolved), PCB (total), Chlorinated Organics	7

Well Number: CH-42 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/20/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	699.024 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	668.024 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:** 31 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	16:05
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 31.00 ft BREF** **Static Water Elevation: 668.024 ft amsl**
16:05			31.69	0.69	7.50	19.94	0.879	11.02	15.9	86.2					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** gal

Water Depth at Sampling: 31.69 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052024-DS-04	N	WG	G	5/20 16:15	Yes	PCB (dissolved), PCB (total)	2

Well Number: CH-42A **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** AC GHD **Date:** 5/20/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	699.301	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	643.381	ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:**	55.92 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	15:16
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
15:16		500	56.45	0.53	8.11	17.31	0.467	10.02	17.4	-70.1					

Additional Notes including Field Parameters: **Comments:** Well dried out filling the fourth bottle. No second reading. **Total Volume Purged:** gal

Water Depth at Sampling: 56.45 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052024-AC-03	N	WG	G	5/20 15:20	Y	PCB (dissolved), PCB (total)	4

Well Number: CH-43 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/20/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	710.813 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	675.313 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:** 35.5 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	14:55
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
14:55			36.39	0.89	7.19	17.71	0.893	1.17	12.6	131.0					
15:24	0.00		37.00	1.5	7.06	16.29	0.875	0.60	4.39	133.2					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 0 gal

Water Depth at Sampling: 37 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052024-DS-02	N	WG	G	5/20 14:55	Yes	PCB (dissolved), PCB (total)	4

Well Number: CH-44 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** AC GHD **Date:** 5/20/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	712.515 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	675.945 ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:** 36.57 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	14:18
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
14:18		500	37.01	0.44	7.32	15.62	0.681	0.86	3.69	-98.1					
14:45	3.61	500	37.20	0.63	7.62	15.33	0.599	0.48	2.02	-129.0					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 3.61 gal

Water Depth at Sampling: 37.2 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052024-AC-01	N	WG	G	5/20 14:20	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X033Y147S **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**	30.42	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	63.00 ft BGS	**Ref Point Elev:**	718.82	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	686.24	ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:**	32.58 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	10:07
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
10:07		500	33.06	0.48	6.97	17.40	1.392	0.57	45.0	-203.5					
10:34	3.65	500	34.36	1.78	6.87	18.81	1.310	1.10	35.9	-157.5					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 3.65 gal

Water Depth at Sampling: 34.36 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-AC-15	N	WG	G	5/22 10:10	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X043Y176 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	701.02 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	684.2 ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:** 16.82 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	14:35
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
14:35		500	17.23	0.41	7.41	14.82	1.220	1.09	30.4	-244.1					
15:05	3.90	500	17.83	1.01	7.59	14.57	1.119	1.73	15.2	-243.2					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 3.9 gal

Water Depth at Sampling: 17.83 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-AC-19	N	WG	G	5/22 14:40	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X047Y236 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** AC GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	693.69 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	681.18 ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:** 12.51 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	15:50
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
15:50		500	13.21	0.7	7.96	16.00	0.579	0.96	6.07	-213.4					
16:25	4.58	500	15.42	2.91	7.54	16.86	0.589	0.70	2.60	-210.0					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 4.58 gal

Water Depth at Sampling: 15.42 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-AC-21	N	WG	G	5/22 16:00	N	PCB (dissolved), PCB (total)	4

Well Number: MW-X085Y070S-1 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**	29.35	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	63.20 ft BGS	**Ref Point Elev:**	722.79	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	688.94	ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	33.85 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	11:30
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 33.85 ft BREF** **Static Water Elevation: 688.94 ft amsl**
11:30			34.56	0.71	6.84	20.29	10.14	0.71	9.98	-116.9					
12:04	0.00			NA	6.97	19.98	10.24	1.02	7.31	-128.9					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-DS-14	N	WG	G	5/22 11:30	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X085Y070S-2 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**	29.59	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	63.20	ft BGS	**Ref Point Elev:**	722.79	ft amsl	**Measurement Type:**
Screen Start Depth:	**Measured Well Depth:**		ft BREF	**Static Water Elev:**	689.18	ft amsl	**Sampling Method:**
Screen End Depth:	**Static Water Depth:**	33.61	ft BREF	**Well Volume:**	0	gal	**Purging Start Time:** 12:15
Screen Length:	**Well Diameter:**			**Screen Volume:**		gal	***Columns below may be blank if not applicable***

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 33.61 ft BREF** **Static Water Elevation: 689.18 ft amsl**
12:15			33.61	0	7.24	19.00	5.320	7.89	12.3	-72.7					
12:45	0.00			NA	7.21	20.49	5.268	8.25	11.9	-61.2					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 33.61 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-DS-16	N	WG	G	5/22 12:15	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X146Y084 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	722.47 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	665.84 ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:** 56.63 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	11:05
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 56.74 ft BREF** **Static Water Elevation: 665.73 ft amsl**
11:05		500	57.25	0.62	7.74	19.08	3.979	0.58	38.4	-236.6					
12:40	12.00	500	6.08	-50.55	7.53	24.03	4.535	0.90	67.2	-201.4					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 12 gal

Water Depth at Sampling: 6.08 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-AC-17	N	WG	G	5/22 11:10	Y	PCB (dissolved), PCB (total), Chloride, Vinyl Chloride	24
TB-052224-AC-02	TB	WG	G	5/22 18:00	N	Vinyl Chloride	1

Well Number: MW-X169Y058S-1 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	25.75 ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:** 63.50 ft BGS	**Ref Point Elev:**	723.9 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	686.15 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:** 37.75 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	10:59
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 37.75 ft BREF** **Static Water Elevation: 686.15 ft amsl**
10:59			37.98	0.23	7.53	17.43	2.349	1.51	7.99	129.9					
10:59	0.00		38.37	0.62	7.49	16.73	2.839	0.93	5.61	130.0					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 38.37 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-DS-12	N	WG	G	5/22 9:55	Yes	PCB (dissolved), PCB (total), Vinyl Chloride	7

Well Number: MW-X227Y054 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	702.88	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	685.33	ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	17.55 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	14:25
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
14:25		500	18.04	0.49	6.72	18.21	1.055	0.79	30.1	-228.4					
15:08	5.75	500	20.00	2.45	7.08	19.17	1.088	0.71	23.6	-311.7					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 5.75 gal

Water Depth at Sampling: 20 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-AC-11	N	WG	G	5/21 14:30	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X242Y060S **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	693.45	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	665.38	ft amsl	**Sampling Method:**	Bladder Pump
Screen End Depth:	**Static Water Depth:**	28.07 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	15:50
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
15:50		500	28.40	0.33	6.46	18.27	0.750	4.53	8.81	-147.5					
16:13	3.04	500	28.57	0.5	6.38	18.48	0.739	5.80	6.23	-150.8					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 3.04 gal

Water Depth at Sampling: 28.57 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-AC-13	N	WG	G	5/21 15:55	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X261Y356D-3 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**	97.95	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	154.50	ft BGS	**Ref Point Elev:**	672.59	ft amsl	**Measurement Type:**
Screen Start Depth:	**Measured Well Depth:**		ft BREF	**Static Water Elev:**	616.04	ft amsl	**Sampling Method:**
Screen End Depth:	**Static Water Depth:**	56.55	ft BREF	**Well Volume:**	0	gal	**Purging Start Time:** 15:05
Screen Length:	**Well Diameter:**			**Screen Volume:**		gal	***Columns below may be blank if not applicable***

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 56.55 ft BREF** **Static Water Elevation: 616.04 ft amsl**
15:05			56.55	0	6.99	21.31	0.734	3.96	19.2	125.2					
15:34	0.00			NA	7.21	16.13	0.678	1.24	7.89	119.8					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-DS-08	N	WG	G	5/21 15:05	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X277Y100 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	**Ref Point Elev:**	670.28 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:** ft BREF	**Static Water Elev:**	639.76 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:** 30.52 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	10:05
Screen Length:	**Well Diameter:**	**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 30.52 ft BREF** **Static Water Elevation: 639.76 ft amsl**
10:05			31.50	0.98	7.05	14.83	2.513	0.75	7.93	160.7					
12:00	0.00		36.65	6.13	6.96	14.91	2.543	0.80	5.46	154.0					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 36.65 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-DS-06	N	WG	G	5/21 10:05	Yes	PCB (dissolved), PCB (total), VOCs, SVOCs	27
TB-052124-DS-01	TB	WG	G	5/21 17:30	No	VOCs	1

Well Number: MW-X297Y305D-2 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/23/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014		
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	615.98	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**		ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	ft BREF	**Well Volume:**		gal	**Purging Start Time:**	
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					

Additional Notes including Field Parameters: **Comments:** Unable to sample due to missing tubing **Total Volume Purged:** gal

# of Screen Volumes:

# of Well Volumes:

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well Number: MW-X300Y199I-1 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	679.26	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	624.29	ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	54.97 ft BREF	**Well Volume:**	0	gal	**Purging Start Time:**	16:10
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 54.97 ft BREF** **Static Water Elevation: 624.29 ft amsl**
16:10			64.00	9.03	7.13	17.8	0.611	1.04	4.98	8.3					
17:06	0.00		67.01	12.04	7.20	16.60	0.585	0.51	5.11	-18.7					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 67.01 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-DS-20	N	WG	G	5/22 16:10	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X300Y199I-2 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**			**Ref Point Elev:**	679.26 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**		ft BREF	**Static Water Elev:**	641.74 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	37.52	ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	15:05
Screen Length:	**Well Diameter:**			**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 37.52 ft BREF** **Static Water Elevation: 641.74 ft amsl**
15:05			37.52	0	6.94	17.18	0.632	0.61	4.33	25.0					
16:05	0.00		38.62	1.1	7.13	17.28	0.611	1.04	5.61	8.3					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

Water Depth at Sampling: 38.62 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052224-DS-18	N	WG	G	5/22 15:05	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X315Y115 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** AC GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Constructed Well Depth:		**Ref Point Elev:**	655.8 ft amsl	**Measurement Type:**	
Measured Well Depth:	ft BREF	**Static Water Elev:**	637.2 ft amsl	**Sampling Method:**	Bladder Pump
Static Water Depth:	18.6 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	10:55
Well Diameter:		**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Screen Material: **Screen Start Depth:** **Screen End Depth:** **Screen Length:**

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 18.60 ft BREF** **Static Water Elevation: 637.2 ft amsl**
10:55		500	19.57	0.97	7.28	15.45	0.405	2.75	7.26	-191.8					
11:25	4.04	500	21.95	3.35	7.47	16.32	0.417	2.20	1.54	-190.1					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 4.04 gal

Water Depth at Sampling: 21.95 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-AC-09	N	WG	G	5/21 11:00	Y	PCB (dissolved), PCB (total)	4

Well Number: MW-X315Y150 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Constructed Well Depth:		**Ref Point Elev:**	670.45 ft amsl	**Measurement Type:**	
Measured Well Depth:	ft BREF	**Static Water Elev:**	633.24 ft amsl	**Sampling Method:**	Bladder Pump
Static Water Depth:	37.21 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	09:40
Well Diameter:		**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Screen Material: **Screen Start Depth:** **Screen End Depth:** **Screen Length:**

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 37.21 ft BREF** **Static Water Elevation: 633.24 ft amsl**
09:40		500	38.45	1.24	7.64	15.67	0.289	9.34	225	-167.0					
10:22	5.55	500	42.50	5.29	7.34	15.75	0.281	0.70	107	-201.7					

Additional Notes including Field Parameters: **Comments:**

Total Volume Purged: 5.55 gal

Water Depth at Sampling: 42.5 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-AC-05	N	WG	G	5/21 9:45	Y	PCB (dissolved), PCB (total)	4
GW-052124-AC-07	FD	WG	G	5/21 9:50	Y	PCB (dissolved), PCB (total)	4

Well Number: ST-59 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/23/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Constructed Well Depth:		**Ref Point Elev:**	ft amsl	**Measurement Type:**	
Measured Well Depth:	ft BREF	**Static Water Elev:**	ft amsl	**Sampling Method:**	Peristaltic Pump
Static Water Depth:	ft BREF	**Well Volume:**	gal	**Purging Start Time:**	13:40
Well Diameter:		**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Screen Material: **Screen Start Depth:** **Screen End Depth:** **Screen Length:**

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
13:40		500			8.00	16.93	0.480	7.96	4.18	-184.6					
14:30	6.24	500			8.29	16.62	0.480	8.89	6.47	-196.1					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 6.24 gal

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052324-AC-25	N	WG	G	5/23 13:45	Y	PCB (dissolved), PCB (total), Chloride	5
GW-052324-AC-26	FD	WG	G	5/23 13:50	Y	PCB (dissolved), PCB (total), Chloride	5

Well Number: TRIBUTARY 3-3 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** JL GHD **Date:** 5/23/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**		**Ref Point Elev:**	ft amsl	**Measurement Type:**
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**	ft amsl	**Sampling Method:** Peristaltic Pump
Screen End Depth:	**Static Water Depth:**	ft BREF	**Well Volume:**	gal	**Purging Start Time:** 10:17
Screen Length:	**Well Diameter:**		**Screen Volume:**	gal	***Columns below may be blank if not applicable***

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					
10:17					7.52	23.09	0.633	63.7	7.80	-19.1					
10:34	0.00				7.55	22.03	0.636	66.7	8.82	-31.4					

Additional Notes including Field Parameters: **Comments:** **Total Volume Purged:** 0 gal

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
SW-052324-JL-22	N	WS	G	5/23 10:17	Yes	PCB (dissolved), PCB (total)	4

Well Number: MW-X300Y199I-3 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:	ft BREF	**Water Column Length:**	ft	**SSOW Code:**	E117014
Constructed Well Depth:		**Ref Point Elev:**	679.26 ft amsl	**Measurement Type:**	
Measured Well Depth:	ft BREF	**Static Water Elev:**	643.36 ft amsl	**Sampling Method:**	
Static Water Depth:	35.9 ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	
Well Diameter:		**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Screen Material:
Screen Start Depth:
Screen End Depth:
Screen Length:

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 35.90 ft BREF** **Static Water Elevation: 643.36 ft amsl**

Additional Notes including Field Parameters: **Comments:** Blowing only air no sample **Total Volume Purged:** gal

# of Screen Volumes:
# of Well Volumes:

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well Number: MW-X300Y199I-4 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/22/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**			**Ref Point Elev:**	679.26 ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**		ft BREF	**Static Water Elev:**	650.53 ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	28.73	ft BREF	**Well Volume:**	0 gal	**Purging Start Time:**	
Screen Length:	**Well Diameter:**			**Screen Volume:**	gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 28.73 ft BREF** **Static Water Elevation: 650.53 ft amsl**

Additional Notes including Field Parameters: **Comments:** Flow cell didn't fill **Total Volume Purged:** gal

# of Screen Volumes:

# of Well Volumes:

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Well Number: MW-X261Y356D-1 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**	44.35	ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	154.50	ft BGS	**Ref Point Elev:**	672.59	ft amsl	**Measurement Type:**
Screen Start Depth:	**Measured Well Depth:**		ft BREF	**Static Water Elev:**	562.44	ft amsl	**Sampling Method:**
Screen End Depth:	**Static Water Depth:**	110.15	ft BREF	**Well Volume:**	0	gal	**Purging Start Time:** 15:55
Screen Length:	**Well Diameter:**			**Screen Volume:**		gal	***Columns below may be blank if not applicable***

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					**Gauging Details:** **Static Water Depth: 110.15 ft BREF** **Static Water Elevation: 562.44 ft amsl**
15:55			110.15	0	7.35	29.24	0.804	5.29	19.5	54.2					

Additional Notes including Field Parameters:

Comments: After 25 minutes of pumping no water. Will try again after sampling port three

Total Volume Purged: gal

Water Depth at Sampling: 110.15 ft BREF

# of Screen Volumes: ?

# of Well Volumes: ?

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers
GW-052124-DS-10	N	WG	G	5/21 16:50	No	PCB (total)	1

Well Number: MW-X261Y356D-4 **Project Name:** GM Bedford **Water Sampling Field Measurement Record Form**

Project Number: 11228036 **Sampling Event:** 202405-Q2WG **Personnel:** DS GHD **Date:** 5/21/2024

Monitoring Well Data:

Pump Depth:		ft BREF	**Water Column Length:**		ft	**SSOW Code:**	E117014
Screen Material:	**Constructed Well Depth:**	154.50 ft BGS	**Ref Point Elev:**	672.59	ft amsl	**Measurement Type:**	
Screen Start Depth:	**Measured Well Depth:**	ft BREF	**Static Water Elev:**		ft amsl	**Sampling Method:**	
Screen End Depth:	**Static Water Depth:**	ft BREF	**Well Volume:**		gal	**Purging Start Time:**	
Screen Length:	**Well Diameter:**		**Screen Volume:**		gal	***Columns below may be blank if not applicable***	

Time	Cumulative Volume Purged (gal)	Purge Rate (mL/min)	Depth To Water (ft BREF)	Drawdown from Initial Water Level (ft)	pH (standard units)	Temp (deg C)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (millivolts)	Column Not Applicable	Column Not Applicable	Column Not Applicable	Column Not Applicable	Notes
			Precision Required	< 0.4	± 0.1	±% 3	± 5 or ± 10	±% 10	±% 10 or < 5	± 10					

Additional Notes including Field Parameters: **Comments:** Dry **Total Volume Purged:** gal

# of Screen Volumes:

# of Well Volumes:

Sample ID	Type	Matrix	Comp/Grab	Date/Time	Filtered	Analysis	Containers

Appendix D

PCB Laboratory Reports and Data Validation Memoranda

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ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-170840-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
8/19/2022 4:30:16 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS
Review your project results through my EOL
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 8
Client Sample Results 9
QC Association Summary 25
QC Sample Results 26
Surrogate Summary 28
Lab Chronicle 29
Certification Summary 32
Chain of Custody 33

Client: GHD Services Inc. Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-170840-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170840-1

Comments
No additional comments.

Receipt
The samples were received on 8/3/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.2º C, 2.6º C, 3.5º C and 5.6º C.

GC Semi VOA
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080222-KH-01 (240-170840-1), GW-080222-MC-03 (240-170840-3), GW-080222-MC-05 (240-170840-5) and GW-080222-KH-06 (240-170840-6).

Method 8082A: The matrix spike (MS) recoveries for preparation batch 240-538659 and analytical batch 240-538991 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080222-MC-07 (240-170840-7), GW-080222-KH-08 (240-170840-8), GW-080222-MC-03 (240-170840-11) and GW-080222-MC-05 (240-170840-13).

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080222-MC-07 (240-170840-7). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-170840-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170840-1	GW-080222-KH-01	Water	08/02/22 11:05	08/03/22 09:45
240-170840-2	GW-080222-TP-02	Water	08/02/22 11:20	08/03/22 09:45
240-170840-3	GW-080222-MC-03	Water	08/02/22 11:10	08/03/22 09:45
240-170840-4	GW-080222-TP-04	Water	08/02/22 14:08	08/03/22 09:45
240-170840-5	GW-080222-MC-05	Water	08/02/22 14:05	08/03/22 09:45
240-170840-6	GW-080222-KH-06	Water	08/02/22 15:05	08/03/22 09:45
240-170840-7	GW-080222-MC-07	Water	08/02/22 15:15	08/03/22 09:45
240-170840-8	GW-080222-KH-08	Water	08/02/22 16:15	08/03/22 09:45
240-170840-9	GW-080222-KH-01	Water	08/02/22 11:05	08/03/22 09:45
240-170840-10	GW-080222-TP-02	Water	08/02/22 11:20	08/03/22 09:45
240-170840-11	GW-080222-MC-03	Water	08/02/22 11:10	08/03/22 09:45
240-170840-12	GW-080222-TP-04	Water	08/02/22 14:08	08/03/22 09:45
240-170840-13	GW-080222-MC-05	Water	08/02/22 14:05	08/03/22 09:45
240-170840-14	GW-080222-KH-06	Water	08/02/22 15:05	08/03/22 09:45
240-170840-15	GW-080222-MC-07	Water	08/02/22 15:15	08/03/22 09:45
240-170840-16	GW-080222-KH-08	Water	08/02/22 16:15	08/03/22 09:45

Detection Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-170840-1

Client Sample ID: GW-080222-KH-01 — Lab Sample ID: 240-170840-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.30		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080222-TP-02 — Lab Sample ID: 240-170840-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.27		0.096	0.073	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080222-MC-03 — Lab Sample ID: 240-170840-3

No Detections.

Client Sample ID: GW-080222-TP-04 — Lab Sample ID: 240-170840-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.091	J	0.10	0.078	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080222-MC-05 — Lab Sample ID: 240-170840-5

No Detections.

Client Sample ID: GW-080222-KH-06 — Lab Sample ID: 240-170840-6

No Detections.

Client Sample ID: GW-080222-MC-07 — Lab Sample ID: 240-170840-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.075	J	0.099	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080222-KH-08 — Lab Sample ID: 240-170840-8

No Detections.

Client Sample ID: GW-080222-KH-01 — Lab Sample ID: 240-170840-9

No Detections.

Client Sample ID: GW-080222-TP-02 — Lab Sample ID: 240-170840-10

No Detections.

Client Sample ID: GW-080222-MC-03 — Lab Sample ID: 240-170840-11

No Detections.

Client Sample ID: GW-080222-TP-04 — Lab Sample ID: 240-170840-12

No Detections.

Client Sample ID: GW-080222-MC-05 — Lab Sample ID: 240-170840-13

No Detections.

Client Sample ID: GW-080222-KH-06 — Lab Sample ID: 240-170840-14

No Detections.

Client Sample ID: GW-080222-MC-07 — Lab Sample ID: 240-170840-15

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080222-KH-08
Lab Sample ID: 240-170840-16

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-KH-01
Lab Sample ID: 240-170840-1
Date Collected: 08/02/22 11:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1242	**0.30**		0.095	0.072	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/11/22 09:49	08/15/22 15:05	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/11/22 09:49	08/15/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*08/11/22 09:49*	*08/15/22 15:05*	*1*
DCB Decachlorobiphenyl	*44*		*10 - 174*	*08/11/22 09:49*	*08/15/22 15:05*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-TP-02
Lab Sample ID: 240-170840-2
Date Collected: 08/02/22 11:20
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1242	**0.27**		0.096	0.073	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/11/22 09:49	08/15/22 15:22	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/11/22 09:49	08/15/22 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*08/11/22 09:49*	*08/15/22 15:22*	*1*
DCB Decachlorobiphenyl	*43*		*10 - 174*	*08/11/22 09:49*	*08/15/22 15:22*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-MC-03
Lab Sample ID: 240-170840-3
Date Collected: 08/02/22 11:10
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		08/11/22 09:49	08/15/22 15:38	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		08/11/22 09:49	08/15/22 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*08/11/22 09:49*	*08/15/22 15:38*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 174*	*08/11/22 09:49*	*08/15/22 15:38*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-TP-04
Lab Sample ID: 240-170840-4
Date Collected: 08/02/22 14:08
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1242	**0.091**	**J**	0.10	0.078	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		08/11/22 09:49	08/15/22 15:55	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		08/11/22 09:49	08/15/22 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*10 - 149*	*08/11/22 09:49*	*08/15/22 15:55*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*08/11/22 09:49*	*08/15/22 15:55*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-MC-05
Lab Sample ID: 240-170840-5
Date Collected: 08/02/22 14:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/11/22 09:49	08/15/22 16:11	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/11/22 09:49	08/15/22 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*10 - 149*	*08/11/22 09:49*	*08/15/22 16:11*	*1*
DCB Decachlorobiphenyl	*34*		*10 - 174*	*08/11/22 09:49*	*08/15/22 16:11*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-KH-06
Lab Sample ID: 240-170840-6
Date Collected: 08/02/22 15:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/11/22 09:49	08/15/22 16:28	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/11/22 09:49	08/15/22 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*08/11/22 09:49*	*08/15/22 16:28*	*1*
DCB Decachlorobiphenyl	*58*		*10 - 174*	*08/11/22 09:49*	*08/15/22 16:28*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-MC-07
Lab Sample ID: 240-170840-7
Date Collected: 08/02/22 15:15
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1242	**0.075**	**J**	0.099	0.075	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/12/22 09:03	08/16/22 08:59	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/12/22 09:03	08/16/22 08:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*08/12/22 09:03*	*08/16/22 08:59*	*1*
DCB Decachlorobiphenyl	*43*		*10 - 174*	*08/12/22 09:03*	*08/16/22 08:59*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080222-KH-08
Lab Sample ID: 240-170840-8
Date Collected: 08/02/22 16:15
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/12/22 09:03	08/16/22 09:15	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/12/22 09:03	08/16/22 09:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*08/12/22 09:03*	*08/16/22 09:15*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 174*	*08/12/22 09:03*	*08/16/22 09:15*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-KH-01
Lab Sample ID: 240-170840-9
Date Collected: 08/02/22 11:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		08/12/22 09:03	08/16/22 09:31	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		08/12/22 09:03	08/16/22 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*08/12/22 09:03*	*08/16/22 09:31*	*1*
DCB Decachlorobiphenyl	*62*		*10 - 174*	*08/12/22 09:03*	*08/16/22 09:31*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-TP-02
Lab Sample ID: 240-170840-10
Date Collected: 08/02/22 11:20
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 09:46	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 09:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*10 - 149*	*08/12/22 09:03*	*08/16/22 09:46*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 174*	*08/12/22 09:03*	*08/16/22 09:46*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-MC-03
Date Collected: 08/02/22 11:10
Date Received: 08/03/22 09:45

Lab Sample ID: 240-170840-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 10:02	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 10:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*10 - 149*	*08/12/22 09:03*	*08/16/22 10:02*	*1*
DCB Decachlorobiphenyl	*59*		*10 - 174*	*08/12/22 09:03*	*08/16/22 10:02*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-TP-04
Lab Sample ID: 240-170840-12
Date Collected: 08/02/22 14:08
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		08/12/22 09:03	08/16/22 10:18	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		08/12/22 09:03	08/16/22 10:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*10 - 149*	*08/12/22 09:03*	*08/16/22 10:18*	*1*
DCB Decachlorobiphenyl	*58*		*10 - 174*	*08/12/22 09:03*	*08/16/22 10:18*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-MC-05
Lab Sample ID: 240-170840-13
Date Collected: 08/02/22 14:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 10:34	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 10:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*10 - 149*	*08/12/22 09:03*	*08/16/22 10:34*	*1*
DCB Decachlorobiphenyl	*55*		*10 - 174*	*08/12/22 09:03*	*08/16/22 10:34*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-KH-06
Lab Sample ID: 240-170840-14
Date Collected: 08/02/22 15:05
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1242	0.11	U	0.11	0.081	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		08/12/22 09:03	08/16/22 10:50	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		08/12/22 09:03	08/16/22 10:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*10 - 149*	*08/12/22 09:03*	*08/16/22 10:50*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*08/12/22 09:03*	*08/16/22 10:50*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-MC-07
Lab Sample ID: 240-170840-15
Date Collected: 08/02/22 15:15
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 11:06	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*10 - 149*	*08/12/22 09:03*	*08/16/22 11:06*	*1*
DCB Decachlorobiphenyl	*50*		*10 - 174*	*08/12/22 09:03*	*08/16/22 11:06*	*1*

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080222-KH-08
Lab Sample ID: 240-170840-16
Date Collected: 08/02/22 16:15
Matrix: Water
Date Received: 08/03/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 11:22	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 11:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*08/12/22 09:03*	*08/16/22 11:22*	*1*
DCB Decachlorobiphenyl	*65*		*10 - 174*	*08/12/22 09:03*	*08/16/22 11:22*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 538486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170840-1	GW-080222-KH-01	Total/NA	Water	3510C	
240-170840-2	GW-080222-TP-02	Total/NA	Water	3510C	
240-170840-3	GW-080222-MC-03	Total/NA	Water	3510C	
240-170840-4	GW-080222-TP-04	Total/NA	Water	3510C	
240-170840-5	GW-080222-MC-05	Total/NA	Water	3510C	
240-170840-6	GW-080222-KH-06	Total/NA	Water	3510C	
MB 240-538486/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-538486/24-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 538659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170840-7	GW-080222-MC-07	Total/NA	Water	3510C	
240-170840-8	GW-080222-KH-08	Total/NA	Water	3510C	
240-170840-9	GW-080222-KH-01	Dissolved	Water	3510C	
240-170840-10	GW-080222-TP-02	Dissolved	Water	3510C	
240-170840-11	GW-080222-MC-03	Dissolved	Water	3510C	
240-170840-12	GW-080222-TP-04	Dissolved	Water	3510C	
240-170840-13	GW-080222-MC-05	Dissolved	Water	3510C	
240-170840-14	GW-080222-KH-06	Dissolved	Water	3510C	
240-170840-15	GW-080222-MC-07	Dissolved	Water	3510C	
240-170840-16	GW-080222-KH-08	Dissolved	Water	3510C	
MB 240-538659/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-538659/24-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 538788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170840-1	GW-080222-KH-01	Total/NA	Water	8082A	538486
240-170840-2	GW-080222-TP-02	Total/NA	Water	8082A	538486
240-170840-3	GW-080222-MC-03	Total/NA	Water	8082A	538486
240-170840-4	GW-080222-TP-04	Total/NA	Water	8082A	538486
240-170840-5	GW-080222-MC-05	Total/NA	Water	8082A	538486
240-170840-6	GW-080222-KH-06	Total/NA	Water	8082A	538486
MB 240-538486/23-A	Method Blank	Total/NA	Water	8082A	538486
LCS 240-538486/24-A	Lab Control Sample	Total/NA	Water	8082A	538486

Analysis Batch: 538991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170840-7	GW-080222-MC-07	Total/NA	Water	8082A	538659
240-170840-8	GW-080222-KH-08	Total/NA	Water	8082A	538659
240-170840-9	GW-080222-KH-01	Dissolved	Water	8082A	538659
240-170840-10	GW-080222-TP-02	Dissolved	Water	8082A	538659
240-170840-11	GW-080222-MC-03	Dissolved	Water	8082A	538659
240-170840-12	GW-080222-TP-04	Dissolved	Water	8082A	538659
240-170840-13	GW-080222-MC-05	Dissolved	Water	8082A	538659
240-170840-14	GW-080222-KH-06	Dissolved	Water	8082A	538659
240-170840-15	GW-080222-MC-07	Dissolved	Water	8082A	538659
240-170840-16	GW-080222-KH-08	Dissolved	Water	8082A	538659
MB 240-538659/23-A	Method Blank	Total/NA	Water	8082A	538659
LCS 240-538659/24-A	Lab Control Sample	Total/NA	Water	8082A	538659

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-538486/23-A
Matrix: Water
Analysis Batch: 538788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538486

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/11/22 09:49	08/15/22 09:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/11/22 09:49*	*08/15/22 09:35*	*1*
DCB Decachlorobiphenyl	*17*		*10 - 174*	*08/11/22 09:49*	*08/15/22 09:35*	*1*

Lab Sample ID: LCS 240-538486/24-A
Matrix: Water
Analysis Batch: 538788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538486

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.86		ug/L		74	28 - 140
Aroclor-1260	2.50	1.42		ug/L		57	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*84*		*10 - 149*
DCB Decachlorobiphenyl	*36*		*10 - 174*

Lab Sample ID: MB 240-538659/23-A
Matrix: Water
Analysis Batch: 538991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538659

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 08:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*10 - 149*	*08/12/22 09:03*	*08/16/22 08:20*	*1*
DCB Decachlorobiphenyl	*116*		*10 - 174*	*08/12/22 09:03*	*08/16/22 08:20*	*1*

Lab Sample ID: LCS 240-538659/24-A
Matrix: Water
Analysis Batch: 538991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.89		ug/L		75	28 - 140
Aroclor-1260	2.50	1.87		ug/L		75	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	81		10 - 149
DCB Decachlorobiphenyl	103		10 - 174

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-170840-1	GW-080222-KH-01	75	44
240-170840-2	GW-080222-TP-02	72	43
240-170840-3	GW-080222-MC-03	60	56
240-170840-4	GW-080222-TP-04	87	54
240-170840-5	GW-080222-MC-05	74	34
240-170840-6	GW-080222-KH-06	61	58
240-170840-7	GW-080222-MC-07	69	43
240-170840-8	GW-080222-KH-08	69	87
LCS 240-538486/24-A	Lab Control Sample	84	36
LCS 240-538659/24-A	Lab Control Sample	81	103
MB 240-538486/23-A	Method Blank	82	17
MB 240-538659/23-A	Method Blank	87	116

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-170840-9	GW-080222-KH-01	68	62
240-170840-10	GW-080222-TP-02	79	72
240-170840-11	GW-080222-MC-03	67	59
240-170840-12	GW-080222-TP-04	74	58
240-170840-13	GW-080222-MC-05	54	55
240-170840-14	GW-080222-KH-06	79	67
240-170840-15	GW-080222-MC-07	62	50
240-170840-16	GW-080222-KH-08	66	65

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080222-KH-01
Lab Sample ID: 240-170840-1
Date Collected: 08/02/22 11:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 15:05

Client Sample ID: GW-080222-TP-02
Lab Sample ID: 240-170840-2
Date Collected: 08/02/22 11:20
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 15:22

Client Sample ID: GW-080222-MC-03
Lab Sample ID: 240-170840-3
Date Collected: 08/02/22 11:10
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 15:38

Client Sample ID: GW-080222-TP-04
Lab Sample ID: 240-170840-4
Date Collected: 08/02/22 14:08
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 15:55

Client Sample ID: GW-080222-MC-05
Lab Sample ID: 240-170840-5
Date Collected: 08/02/22 14:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 16:11

Client Sample ID: GW-080222-KH-06
Lab Sample ID: 240-170840-6
Date Collected: 08/02/22 15:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 16:28

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080222-MC-07
Lab Sample ID: 240-170840-7
Date Collected: 08/02/22 15:15
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 08:59

Client Sample ID: GW-080222-KH-08
Lab Sample ID: 240-170840-8
Date Collected: 08/02/22 16:15
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 09:15

Client Sample ID: GW-080222-KH-01
Lab Sample ID: 240-170840-9
Date Collected: 08/02/22 11:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 09:31

Client Sample ID: GW-080222-TP-02
Lab Sample ID: 240-170840-10
Date Collected: 08/02/22 11:20
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 09:46

Client Sample ID: GW-080222-MC-03
Lab Sample ID: 240-170840-11
Date Collected: 08/02/22 11:10
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 10:02

Client Sample ID: GW-080222-TP-04
Lab Sample ID: 240-170840-12
Date Collected: 08/02/22 14:08
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 10:18

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080222-MC-05
Lab Sample ID: 240-170840-13
Date Collected: 08/02/22 14:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 10:34

Client Sample ID: GW-080222-KH-06
Lab Sample ID: 240-170840-14
Date Collected: 08/02/22 15:05
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 10:50

Client Sample ID: GW-080222-MC-07
Lab Sample ID: 240-170840-15
Date Collected: 08/02/22 15:15
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 11:06

Client Sample ID: GW-080222-KH-08
Lab Sample ID: 240-170840-16
Date Collected: 08/02/22 16:15
Matrix: Water
Date Received: 08/03/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 11:22

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-170840-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

3.5/3.5 0.2/0.2 5.6/5.6 1.9/2.6

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Kristen Heideman **PRINTED NAME:** Kristen Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCBs	PARAMETERS: Dissolved PCBs	REMARKS
1	8/2/22	1105	GW-080222-KH-01	Water	4	X	X	550W E117014
2		1120	-TP-02					*Dissolved, caps marked "D"
3		1110	-MC-03					
4		1408	-TP-04					
5		1405	-MC-05					
6		1505	-KH-06					
7		1515	-MC-07					
8		1615	-KH-08					

240-170840 Chain of Custody

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: ① Kristen Heideman / GHD	DATE: 8/2/22 TIME: 1800	RECEIVED BY: ② M. Ard. / EETNC	DATE: 8/3/22 TIME: 9:45
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex **TRACKING No.** 8172 5962 5520

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Kristen Heideman, Mike Cernicek, Danny Showalter, Tim Prangler

RECEIVED FOR LABORATORY BY: 9004
DATE: TIME:

11034001-00(PRES001)GN-CO001

8/19/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: M. M. M.

Cooler Received on 8/3/22 Opened on 8/3/22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +**0.7** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF **0.0**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/(N)) # of containers ((Y)N), and sample type of grab/comp(Y/(N))?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No (NA) pH Strip Lot# **HC286797**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-13 IR-15	3.5	3.5	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	0.2	0.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	5.6	5.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	1.9	2.6	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-170954-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
8/21/2022 9:50:31 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 8
Client Sample Results 9
QC Association Summary 25
QC Sample Results 27
Surrogate Summary 30
Lab Chronicle 31
Certification Summary 34
Chain of Custody 35

Job ID: 240-170954-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-170954-1

Comments
No additional comments.

Receipt
The samples were received on 8/4/2022 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.5º C, 2.0º C, 2.1º C, 2.7º C and 3.0º C.

GC Semi VOA
Method 8082A: Surrogate recovery for the following sample was outside control limits: GW-080322-MC-09 (240-170954-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A: The matrix spike (MS) recoveries for preparation batch 240-538659 and analytical batch 240-538991 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080322-KH-17 (240-170954-8).

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080322-TP-13 (240-170954-4), GW-080322-MC-15 (240-170954-6) and GW-080322-MC-16 (240-170954-7). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080322-TP-13 (240-170954-12). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-538696.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-170954-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-170954-1	GW-080322-MC-09	Water	08/03/22 10:10	08/04/22 09:40
240-170954-2	GW-080322-TP-11	Water	08/03/22 09:54	08/04/22 09:40
240-170954-3	GW-080322-TP-12	Water	08/03/22 10:49	08/04/22 09:40
240-170954-4	GW-080322-TP-13	Water	08/03/22 11:07	08/04/22 09:40
240-170954-5	GW-080322-KH-14	Water	08/03/22 10:15	08/04/22 09:40
240-170954-6	GW-080322-MC-15	Water	08/03/22 14:55	08/04/22 09:40
240-170954-7	GW-080322-MC-16	Water	08/03/22 16:10	08/04/22 09:40
240-170954-8	GW-080322-KH-17	Water	08/03/22 14:55	08/04/22 09:40
240-170954-9	GW-080322-MC-09	Water	08/03/22 10:10	08/04/22 09:40
240-170954-10	GW-080322-TP-11	Water	08/03/22 09:54	08/04/22 09:40
240-170954-11	GW-080322-TP-12	Water	08/03/22 10:49	08/04/22 09:40
240-170954-12	GW-080322-TP-13	Water	08/03/22 11:07	08/04/22 09:40
240-170954-13	GW-080322-KH-14	Water	08/03/22 10:15	08/04/22 09:40
240-170954-14	GW-080322-MC-15	Water	08/03/22 14:55	08/04/22 09:40
240-170954-15	GW-080322-MC-16	Water	08/03/22 16:10	08/04/22 09:40
240-170954-16	GW-080322-KH-17	Water	08/03/22 14:55	08/04/22 09:40

Detection Summary

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080322-MC-09 — Lab Sample ID: 240-170954-1

No Detections.

Client Sample ID: GW-080322-TP-11 — Lab Sample ID: 240-170954-2

No Detections.

Client Sample ID: GW-080322-TP-12 — Lab Sample ID: 240-170954-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.32		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080322-TP-13 — Lab Sample ID: 240-170954-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.35		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080322-KH-14 — Lab Sample ID: 240-170954-5

No Detections.

Client Sample ID: GW-080322-MC-15 — Lab Sample ID: 240-170954-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.13		0.096	0.073	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080322-MC-16 — Lab Sample ID: 240-170954-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.43		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080322-KH-17 — Lab Sample ID: 240-170954-8

No Detections.

Client Sample ID: GW-080322-MC-09 — Lab Sample ID: 240-170954-9

No Detections.

Client Sample ID: GW-080322-TP-11 — Lab Sample ID: 240-170954-10

No Detections.

Client Sample ID: GW-080322-TP-12 — Lab Sample ID: 240-170954-11

No Detections.

Client Sample ID: GW-080322-TP-13 — Lab Sample ID: 240-170954-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.057	J p	0.096	0.048	ug/L	1		8082A	Dissolved

Client Sample ID: GW-080322-KH-14 — Lab Sample ID: 240-170954-13

No Detections.

Client Sample ID: GW-080322-MC-15 — Lab Sample ID: 240-170954-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080322-MC-16
Lab Sample ID: 240-170954-15

No Detections.

Client Sample ID: GW-080322-KH-17
Lab Sample ID: 240-170954-16

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-MC-09
Lab Sample ID: 240-170954-1
Date Collected: 08/03/22 10:10
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/11/22 09:49	08/15/22 10:57	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/11/22 09:49	08/15/22 10:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*161*	*S1+*	*10 - 149*	*08/11/22 09:49*	*08/15/22 10:57*	*1*
DCB Decachlorobiphenyl	*95*		*10 - 174*	*08/11/22 09:49*	*08/15/22 10:57*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-TP-11
Lab Sample ID: 240-170954-2
Date Collected: 08/03/22 09:54
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/12/22 09:03	08/16/22 12:25	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/12/22 09:03	08/16/22 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*10 - 149*	*08/12/22 09:03*	*08/16/22 12:25*	*1*
DCB Decachlorobiphenyl	*98*		*10 - 174*	*08/12/22 09:03*	*08/16/22 12:25*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-TP-12
Lab Sample ID: 240-170954-3
Date Collected: 08/03/22 10:49
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1242	**0.32**		0.10	0.076	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 12:41	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 12:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*08/12/22 09:03*	*08/16/22 12:41*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*08/12/22 09:03*	*08/16/22 12:41*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-TP-13
Lab Sample ID: 240-170954-4
Date Collected: 08/03/22 11:07
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1242	**0.35**		0.10	0.076	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 13:44	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*10 - 149*	*08/12/22 09:03*	*08/16/22 13:44*	*1*
DCB Decachlorobiphenyl	*33*		*10 - 174*	*08/12/22 09:03*	*08/16/22 13:44*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-KH-14
Lab Sample ID: 240-170954-5
Date Collected: 08/03/22 10:15
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 14:00	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*08/12/22 09:03*	*08/16/22 14:00*	*1*
DCB Decachlorobiphenyl	*78*		*10 - 174*	*08/12/22 09:03*	*08/16/22 14:00*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-MC-15
Lab Sample ID: 240-170954-6
Date Collected: 08/03/22 14:55
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1242	**0.13**		0.096	0.073	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/12/22 09:03	08/16/22 14:16	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/12/22 09:03	08/16/22 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/12/22 09:03*	*08/16/22 14:16*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*08/12/22 09:03*	*08/16/22 14:16*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-MC-16
Lab Sample ID: 240-170954-7
Date Collected: 08/03/22 16:10
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1242	**0.43**		0.095	0.072	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 14:32	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*08/12/22 09:03*	*08/16/22 14:32*	*1*
DCB Decachlorobiphenyl	*106*		*10 - 174*	*08/12/22 09:03*	*08/16/22 14:32*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080322-KH-17
Lab Sample ID: 240-170954-8
Date Collected: 08/03/22 14:55
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 14:47	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*08/12/22 09:03*	*08/16/22 14:47*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*08/12/22 09:03*	*08/16/22 14:47*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-MC-09
Lab Sample ID: 240-170954-9
Date Collected: 08/03/22 10:10
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U F1	0.095	0.053	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 09:03	08/16/22 11:37	1
Aroclor-1260	0.095	U F1	0.095	0.044	ug/L		08/12/22 09:03	08/16/22 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*10 - 149*	*08/12/22 09:03*	*08/16/22 11:37*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 174*	*08/12/22 09:03*	*08/16/22 11:37*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-TP-11
Date Collected: 08/03/22 09:54
Date Received: 08/04/22 09:40

Lab Sample ID: 240-170954-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 15:03	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 15:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*08/12/22 09:03*	*08/16/22 15:03*	*1*
DCB Decachlorobiphenyl	*77*		*10 - 174*	*08/12/22 09:03*	*08/16/22 15:03*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-TP-12
Date Collected: 08/03/22 10:49
Date Received: 08/04/22 09:40

Lab Sample ID: 240-170954-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		08/12/22 09:03	08/16/22 15:19	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		08/12/22 09:03	08/16/22 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*08/12/22 09:03*	*08/16/22 15:19*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 174*	*08/12/22 09:03*	*08/16/22 15:19*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-TP-13
Date Collected: 08/03/22 11:07
Date Received: 08/04/22 09:40

Lab Sample ID: 240-170954-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1248	**0.057**	**J p**	0.096	0.048	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/12/22 10:39	08/16/22 12:25	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/12/22 10:39	08/16/22 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*10 - 149*	*08/12/22 10:39*	*08/16/22 12:25*	*1*
DCB Decachlorobiphenyl	*53*		*10 - 174*	*08/12/22 10:39*	*08/16/22 12:25*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-KH-14
Lab Sample ID: 240-170954-13
Date Collected: 08/03/22 10:15
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		08/12/22 10:39	08/16/22 12:42	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		08/12/22 10:39	08/16/22 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/12/22 10:39*	*08/16/22 12:42*	*1*
DCB Decachlorobiphenyl	*88*		*10 - 174*	*08/12/22 10:39*	*08/16/22 12:42*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-MC-15
Date Collected: 08/03/22 14:55
Date Received: 08/04/22 09:40

Lab Sample ID: 240-170954-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 10:39	08/16/22 12:58	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 10:39	08/16/22 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*10 - 149*	*08/12/22 10:39*	*08/16/22 12:58*	*1*
DCB Decachlorobiphenyl	*52*		*10 - 174*	*08/12/22 10:39*	*08/16/22 12:58*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-MC-16
Lab Sample ID: 240-170954-15
Date Collected: 08/03/22 16:10
Matrix: Water
Date Received: 08/04/22 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/12/22 10:39	08/16/22 13:31	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/12/22 10:39	08/16/22 13:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*08/12/22 10:39*	*08/16/22 13:31*	*1*
DCB Decachlorobiphenyl	*42*		*10 - 174*	*08/12/22 10:39*	*08/16/22 13:31*	*1*

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080322-KH-17
Date Collected: 08/03/22 14:55
Date Received: 08/04/22 09:40

Lab Sample ID: 240-170954-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		08/12/22 10:39	08/16/22 13:15	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		08/12/22 10:39	08/16/22 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*08/12/22 10:39*	*08/16/22 13:15*	*1*
DCB Decachlorobiphenyl	*91*		*10 - 174*	*08/12/22 10:39*	*08/16/22 13:15*	*1*

GC Semi VOA

Prep Batch: 538486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-1	GW-080322-MC-09	Total/NA	Water	3510C	
MB 240-538486/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-538486/24-A	Lab Control Sample	Total/NA	Water	3510C	
240-170954-1 MS	GW-080322-MC-09	Total/NA	Water	3510C	
240-170954-1 MSD	GW-080322-MC-09	Total/NA	Water	3510C	

Prep Batch: 538659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-2	GW-080322-TP-11	Total/NA	Water	3510C	
240-170954-3	GW-080322-TP-12	Total/NA	Water	3510C	
240-170954-4	GW-080322-TP-13	Total/NA	Water	3510C	
240-170954-5	GW-080322-KH-14	Total/NA	Water	3510C	
240-170954-6	GW-080322-MC-15	Total/NA	Water	3510C	
240-170954-7	GW-080322-MC-16	Total/NA	Water	3510C	
240-170954-8	GW-080322-KH-17	Total/NA	Water	3510C	
240-170954-9	GW-080322-MC-09	Dissolved	Water	3510C	
240-170954-10	GW-080322-TP-11	Dissolved	Water	3510C	
240-170954-11	GW-080322-TP-12	Dissolved	Water	3510C	
MB 240-538659/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-538659/24-A	Lab Control Sample	Total/NA	Water	3510C	
240-170954-9 MS	GW-080322-MC-09	Dissolved	Water	3510C	
240-170954-9 MSD	GW-080322-MC-09	Dissolved	Water	3510C	

Prep Batch: 538696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-12	GW-080322-TP-13	Dissolved	Water	3510C	
240-170954-13	GW-080322-KH-14	Dissolved	Water	3510C	
240-170954-14	GW-080322-MC-15	Dissolved	Water	3510C	
240-170954-15	GW-080322-MC-16	Dissolved	Water	3510C	
240-170954-16	GW-080322-KH-17	Dissolved	Water	3510C	
MB 240-538696/20-A	Method Blank	Total/NA	Water	3510C	
LCS 240-538696/21-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 538788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-1	GW-080322-MC-09	Total/NA	Water	8082A	538486
MB 240-538486/23-A	Method Blank	Total/NA	Water	8082A	538486
LCS 240-538486/24-A	Lab Control Sample	Total/NA	Water	8082A	538486
240-170954-1 MS	GW-080322-MC-09	Total/NA	Water	8082A	538486
240-170954-1 MSD	GW-080322-MC-09	Total/NA	Water	8082A	538486

Analysis Batch: 538987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-12	GW-080322-TP-13	Dissolved	Water	8082A	538696
240-170954-13	GW-080322-KH-14	Dissolved	Water	8082A	538696
240-170954-14	GW-080322-MC-15	Dissolved	Water	8082A	538696
240-170954-15	GW-080322-MC-16	Dissolved	Water	8082A	538696
240-170954-16	GW-080322-KH-17	Dissolved	Water	8082A	538696
MB 240-538696/20-A	Method Blank	Total/NA	Water	8082A	538696
LCS 240-538696/21-A	Lab Control Sample	Total/NA	Water	8082A	538696

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Analysis Batch: 538991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-170954-2	GW-080322-TP-11	Total/NA	Water	8082A	538659
240-170954-3	GW-080322-TP-12	Total/NA	Water	8082A	538659
240-170954-4	GW-080322-TP-13	Total/NA	Water	8082A	538659
240-170954-5	GW-080322-KH-14	Total/NA	Water	8082A	538659
240-170954-6	GW-080322-MC-15	Total/NA	Water	8082A	538659
240-170954-7	GW-080322-MC-16	Total/NA	Water	8082A	538659
240-170954-8	GW-080322-KH-17	Total/NA	Water	8082A	538659
240-170954-9	GW-080322-MC-09	Dissolved	Water	8082A	538659
240-170954-10	GW-080322-TP-11	Dissolved	Water	8082A	538659
240-170954-11	GW-080322-TP-12	Dissolved	Water	8082A	538659
MB 240-538659/23-A	Method Blank	Total/NA	Water	8082A	538659
LCS 240-538659/24-A	Lab Control Sample	Total/NA	Water	8082A	538659
240-170954-9 MS	GW-080322-MC-09	Dissolved	Water	8082A	538659
240-170954-9 MSD	GW-080322-MC-09	Dissolved	Water	8082A	538659

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-538486/23-A
Matrix: Water
Analysis Batch: 538788

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538486

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/11/22 09:49	08/15/22 09:35	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/11/22 09:49	08/15/22 09:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/11/22 09:49*	*08/15/22 09:35*	*1*
DCB Decachlorobiphenyl	*17*		*10 - 174*	*08/11/22 09:49*	*08/15/22 09:35*	*1*

Lab Sample ID: LCS 240-538486/24-A
Matrix: Water
Analysis Batch: 538788

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538486

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.86		ug/L		74	28 - 140		
Aroclor-1260			2.50	1.42		ug/L		57	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*84*		*10 - 149*
DCB Decachlorobiphenyl	*36*		*10 - 174*

Lab Sample ID: 240-170954-1 MS
Matrix: Water
Analysis Batch: 538788

Client Sample ID: GW-080322-MC-09
Prep Type: Total/NA
Prep Batch: 538486

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.10	U	2.43	1.63		ug/L		67	50 - 120		
Aroclor-1260	0.10	U	2.43	1.29		ug/L		53	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*140*		*10 - 149*
DCB Decachlorobiphenyl	*105*		*10 - 174*

Lab Sample ID: 240-170954-1 MSD
Matrix: Water
Analysis Batch: 538788

Client Sample ID: GW-080322-MC-09
Prep Type: Total/NA
Prep Batch: 538486

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.10	U	2.38	1.50		ug/L		63	50 - 120	8	25
Aroclor-1260	0.10	U	2.38	1.26		ug/L		53	39 - 135	3	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*72*		*10 - 149*
DCB Decachlorobiphenyl	*51*		*10 - 174*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-538659/23-A
Matrix: Water
Analysis Batch: 538991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538659

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 09:03	08/16/22 08:20	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 09:03	08/16/22 08:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*10 - 149*	*08/12/22 09:03*	*08/16/22 08:20*	*1*
DCB Decachlorobiphenyl	*116*		*10 - 174*	*08/12/22 09:03*	*08/16/22 08:20*	*1*

Lab Sample ID: LCS 240-538659/24-A
Matrix: Water
Analysis Batch: 538991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538659

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.89		ug/L		75	28 - 140
Aroclor-1260	2.50	1.87		ug/L		75	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*81*		*10 - 149*
DCB Decachlorobiphenyl	*103*		*10 - 174*

Lab Sample ID: MB 240-538696/20-A
Matrix: Water
Analysis Batch: 538987

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 538696

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/12/22 10:39	08/16/22 09:25	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/12/22 10:39	08/16/22 09:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*10 - 149*	*08/12/22 10:39*	*08/16/22 09:25*	*1*
DCB Decachlorobiphenyl	*64*		*10 - 174*	*08/12/22 10:39*	*08/16/22 09:25*	*1*

Lab Sample ID: LCS 240-538696/21-A
Matrix: Water
Analysis Batch: 538987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 538696

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.89		ug/L		75	28 - 140
Aroclor-1260	2.50	1.72		ug/L		69	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	83		10 - 149
DCB Decachlorobiphenyl	69		10 - 174

Lab Sample ID: 240-170954-9 MS
Matrix: Water
Analysis Batch: 538991

Client Sample ID: GW-080322-MC-09
Prep Type: Dissolved
Prep Batch: 538659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	0.095	U F1	2.38	1.04	F1	ug/L		44	50 - 120
Aroclor-1260	0.095	U F1	2.38	0.788	F1	ug/L		33	39 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	54		10 - 149
DCB Decachlorobiphenyl	29		10 - 174

Lab Sample ID: 240-170954-9 MSD
Matrix: Water
Analysis Batch: 538991

Client Sample ID: GW-080322-MC-09
Prep Type: Dissolved
Prep Batch: 538659

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U F1	2.38	1.23		ug/L		52	50 - 120	16	25
Aroclor-1260	0.095	U F1	2.38	1.01		ug/L		43	39 - 135	25	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	63		10 - 149
DCB Decachlorobiphenyl	37		10 - 174

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-170954-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-170954-1	GW-080322-MC-09	161 S1+	95
240-170954-1 MS	GW-080322-MC-09	140	105
240-170954-1 MSD	GW-080322-MC-09	72	51
240-170954-2	GW-080322-TP-11	77	98
240-170954-3	GW-080322-TP-12	66	69
240-170954-4	GW-080322-TP-13	74	33
240-170954-5	GW-080322-KH-14	84	78
240-170954-6	GW-080322-MC-15	82	54
240-170954-7	GW-080322-MC-16	72	106
240-170954-8	GW-080322-KH-17	64	75
LCS 240-538486/24-A	Lab Control Sample	84	36
LCS 240-538659/24-A	Lab Control Sample	81	103
MB 240-538486/23-A	Method Blank	82	17
MB 240-538659/23-A	Method Blank	87	116

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
LCS 240-538696/21-A	Lab Control Sample	83	69
MB 240-538696/20-A	Method Blank	88	64

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-149)	(10-174)	(10-174)
240-170954-9	GW-080322-MC-09	58		45	
240-170954-9 MS	GW-080322-MC-09	54		29	
240-170954-9 MSD	GW-080322-MC-09	63		37	
240-170954-10	GW-080322-TP-11	66		77	
240-170954-11	GW-080322-TP-12	75	78	82	83
240-170954-12	GW-080322-TP-13		70		53
240-170954-13	GW-080322-KH-14		82		88
240-170954-14	GW-080322-MC-15		76		52
240-170954-15	GW-080322-MC-16		69		42
240-170954-16	GW-080322-KH-17		86		91

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080322-MC-09
Lab Sample ID: 240-170954-1
Date Collected: 08/03/22 10:10
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538486	MDH	EET CAN	08/11/22 09:49
Total/NA	Analysis	8082A		1	538788	LSH	EET CAN	08/15/22 10:57

Client Sample ID: GW-080322-TP-11
Lab Sample ID: 240-170954-2
Date Collected: 08/03/22 09:54
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 12:25

Client Sample ID: GW-080322-TP-12
Lab Sample ID: 240-170954-3
Date Collected: 08/03/22 10:49
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 12:41

Client Sample ID: GW-080322-TP-13
Lab Sample ID: 240-170954-4
Date Collected: 08/03/22 11:07
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 13:44

Client Sample ID: GW-080322-KH-14
Lab Sample ID: 240-170954-5
Date Collected: 08/03/22 10:15
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 14:00

Client Sample ID: GW-080322-MC-15
Lab Sample ID: 240-170954-6
Date Collected: 08/03/22 14:55
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 14:16

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080322-MC-16
Lab Sample ID: 240-170954-7
Date Collected: 08/03/22 16:10
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 14:32

Client Sample ID: GW-080322-KH-17
Lab Sample ID: 240-170954-8
Date Collected: 08/03/22 14:55
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Total/NA	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 14:47

Client Sample ID: GW-080322-MC-09
Lab Sample ID: 240-170954-9
Date Collected: 08/03/22 10:10
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 11:37

Client Sample ID: GW-080322-TP-11
Lab Sample ID: 240-170954-10
Date Collected: 08/03/22 09:54
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 15:03

Client Sample ID: GW-080322-TP-12
Lab Sample ID: 240-170954-11
Date Collected: 08/03/22 10:49
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538659	MDH	EET CAN	08/12/22 09:03
Dissolved	Analysis	8082A		1	538991	LSH	EET CAN	08/16/22 15:19

Client Sample ID: GW-080322-TP-13
Lab Sample ID: 240-170954-12
Date Collected: 08/03/22 11:07
Matrix: Water
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538696	SDE	EET CAN	08/12/22 10:39
Dissolved	Analysis	8082A		1	538987	LSH	EET CAN	08/16/22 12:25

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080322-KH-14 Lab Sample ID: 240-170954-13

Date Collected: 08/03/22 10:15 **Matrix: Water**
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538696	SDE	EET CAN	08/12/22 10:39
Dissolved	Analysis	8082A		1	538987	LSH	EET CAN	08/16/22 12:42

Client Sample ID: GW-080322-MC-15 Lab Sample ID: 240-170954-14

Date Collected: 08/03/22 14:55 **Matrix: Water**
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538696	SDE	EET CAN	08/12/22 10:39
Dissolved	Analysis	8082A		1	538987	LSH	EET CAN	08/16/22 12:58

Client Sample ID: GW-080322-MC-16 Lab Sample ID: 240-170954-15

Date Collected: 08/03/22 16:10 **Matrix: Water**
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538696	SDE	EET CAN	08/12/22 10:39
Dissolved	Analysis	8082A		1	538987	LSH	EET CAN	08/16/22 13:31

Client Sample ID: GW-080322-KH-17 Lab Sample ID: 240-170954-16

Date Collected: 08/03/22 14:55 **Matrix: Water**
Date Received: 08/04/22 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			538696	SDE	EET CAN	08/12/22 10:39
Dissolved	Analysis	8082A		1	538987	LSH	EET CAN	08/16/22 13:15

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-170954-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

1.5/1.5

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: Kristin Heideman **PRINTED NAME:** Kristin Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Dissolved PCBs	PARAMETERS: Total PCBs	REMARKS
1	8/3/22	1010	GW-080322-MC-09	Water	12	X	X	MS/MSD on sample 09
2		0954	-TP-11		4			
3		1049	-TP-12					
4		1107	-TP-13					SSOW E117014
5		1015	-KH-14					
6		1455	-MC-15					
7		1610	-MC-16					
8		1455	-KH-17					
								5 Coolers

240-170954 Chain of Custody

TOTAL NUMBER OF CONTAINERS 40

RELINQUISHED BY: ① Kristin Heideman / GHD	DATE: 8/3/22 TIME: 1800	RECEIVED BY: ② M. D. J.	DATE: 8/4/22 TIME: 9:40
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex **TRACKING No.** 8172 5962 5943

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Kristin Heideman, Mike Cernicek, Tim Pranger

RECEIVED FOR LABORATORY BY: 9005

DATE: _____ TIME: _____

11034001-00(PRES001)GN-CO001

8/21/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: M. A. A.

Cooler Received on 8/4/22 Opened on 8/4/22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +**0.7** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF **0.0**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	(Y/N)	
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	(NA) pH Strip Lot# **HC286797**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No	(NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s):_____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(TA) Client Box Other	IR-13 (IR-15)	2.0	2.0	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 (IR-15)	~~1.0~~ 1.5	~~1.0~~ 1.5	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	(IR-13) IR-15	2.3	3.0	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	(IR-13) IR-15	2.0	2.7	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	(IR-13) IR-15	1.21	2.1	(Wet Ice) Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice Blue Ice Dry Ice Water None
☐ See Temperature Excursion Form				

WI-NC-099 Cooler Receipt Form Page 2 – Multiple Coolers

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-171091-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
8/19/2022 4:41:01 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS
Review your project results through my EOL
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 7
Client Sample Results 8
QC Association Summary 20
QC Sample Results 21
Surrogate Summary 22
Lab Chronicle 23
Certification Summary 25
Chain of Custody 26

Job ID: 240-171091-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171091-1

Comments
No additional comments.

Receipt
The samples were received on 8/5/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.3º C, 3.2º C and 4.5º C.

GC Semi VOA
Method 8082A: The following sample was diluted due to the abundance of target analytes: GW-080422-KH-19 (240-171091-3)

Method 8082A: Surrogate recovery for the following sample was outside control limits for Tetrachloro-m-xylene: GW-080422-KH-19 (240-171091-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080422-MC-21 (240-171091-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171091-1	GW-080422-KH-10	Water	08/04/22 11:20	08/05/22 09:50
240-171091-2	GW-080422-KH-18	Water	08/04/22 09:40	08/05/22 09:50
240-171091-3	GW-080422-KH-19	Water	08/04/22 11:00	08/05/22 09:50
240-171091-4	GW-080422-MC-20	Water	08/04/22 10:00	08/05/22 09:50
240-171091-5	GW-080422-MC-21	Water	08/04/22 10:30	08/05/22 09:50
240-171091-6	GW-080422-KH-22	Water	08/04/22 15:45	08/05/22 09:50
240-171091-7	GW-080422-KH-10	Water	08/04/22 11:20	08/05/22 09:50
240-171091-8	GW-080422-KH-18	Water	08/04/22 09:40	08/05/22 09:50
240-171091-9	GW-080422-KH-19	Water	08/04/22 11:00	08/05/22 09:50
240-171091-10	GW-080422-MC-20	Water	08/04/22 10:00	08/05/22 09:50
240-171091-11	GW-080422-MC-21	Water	08/04/22 10:30	08/05/22 09:50
240-171091-12	GW-080422-KH-22	Water	08/04/22 15:45	08/05/22 09:50

Detection Summary

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080422-KH-10 — Lab Sample ID: 240-171091-1

No Detections.

Client Sample ID: GW-080422-KH-18 — Lab Sample ID: 240-171091-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.26		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080422-KH-19 — Lab Sample ID: 240-171091-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	14		0.99	0.75	ug/L	10		8082A	Total/NA

Client Sample ID: GW-080422-MC-20 — Lab Sample ID: 240-171091-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.59	p	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080422-MC-21 — Lab Sample ID: 240-171091-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1.1	p	0.099	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080422-KH-22 — Lab Sample ID: 240-171091-6

No Detections.

Client Sample ID: GW-080422-KH-10 — Lab Sample ID: 240-171091-7

No Detections.

Client Sample ID: GW-080422-KH-18 — Lab Sample ID: 240-171091-8

No Detections.

Client Sample ID: GW-080422-KH-19 — Lab Sample ID: 240-171091-9

No Detections.

Client Sample ID: GW-080422-MC-20 — Lab Sample ID: 240-171091-10

No Detections.

Client Sample ID: GW-080422-MC-21 — Lab Sample ID: 240-171091-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.093	J p	0.098	0.075	ug/L	1		8082A	Dissolved

Client Sample ID: GW-080422-KH-22 — Lab Sample ID: 240-171091-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Method Summary

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-KH-10
Lab Sample ID: 240-171091-1
Date Collected: 08/04/22 11:20
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 09:24	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 09:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/17/22 09:02*	*08/18/22 09:24*	*1*
DCB Decachlorobiphenyl	*79*		*10 - 174*	*08/17/22 09:02*	*08/18/22 09:24*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-KH-18
Lab Sample ID: 240-171091-2
Date Collected: 08/04/22 09:40
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1242	**0.26**		0.10	0.076	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 09:41	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 09:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*08/17/22 09:02*	*08/18/22 09:41*	*1*
DCB Decachlorobiphenyl	*42*		*10 - 174*	*08/17/22 09:02*	*08/18/22 09:41*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-KH-19
Lab Sample ID: 240-171091-3
Date Collected: 08/04/22 11:00
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.99	U	0.99	0.55	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1221	0.99	U	0.99	0.56	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1232	0.99	U	0.99	0.73	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1242	**14**		0.99	0.75	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1248	0.99	U	0.99	0.50	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1254	0.99	U	0.99	0.40	ug/L		08/17/22 09:02	08/18/22 09:59	10
Aroclor-1260	0.99	U	0.99	0.46	ug/L		08/17/22 09:02	08/18/22 09:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*332*	*S1+*	*10 - 149*	*08/17/22 09:02*	*08/18/22 09:59*	*10*
DCB Decachlorobiphenyl	*47*		*10 - 174*	*08/17/22 09:02*	*08/18/22 09:59*	*10*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-MC-20
Lab Sample ID: 240-171091-4
Date Collected: 08/04/22 10:00
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1242	**0.59**	**p**	0.095	0.072	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/17/22 09:02	08/18/22 10:17	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/17/22 09:02	08/18/22 10:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*10 - 149*	*08/17/22 09:02*	*08/18/22 10:17*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*08/17/22 09:02*	*08/18/22 10:17*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-MC-21
Lab Sample ID: 240-171091-5
Date Collected: 08/04/22 10:30
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1242	**1.1**	**p**	0.099	0.075	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/17/22 09:02	08/18/22 10:34	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/17/22 09:02	08/18/22 10:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*10 - 149*	*08/17/22 09:02*	*08/18/22 10:34*	*1*
DCB Decachlorobiphenyl	*37*		*10 - 174*	*08/17/22 09:02*	*08/18/22 10:34*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080422-KH-22
Lab Sample ID: 240-171091-6
Date Collected: 08/04/22 15:45
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 10:52	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/17/22 09:02*	*08/18/22 10:52*	*1*
DCB Decachlorobiphenyl	*48*		*10 - 174*	*08/17/22 09:02*	*08/18/22 10:52*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-KH-10
Lab Sample ID: 240-171091-7
Date Collected: 08/04/22 11:20
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		08/17/22 09:02	08/18/22 11:09	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		08/17/22 09:02	08/18/22 11:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*10 - 149*	*08/17/22 09:02*	*08/18/22 11:09*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 174*	*08/17/22 09:02*	*08/18/22 11:09*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-KH-18
Lab Sample ID: 240-171091-8
Date Collected: 08/04/22 09:40
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 11:27	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*10 - 149*	*08/17/22 09:02*	*08/18/22 11:27*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*08/17/22 09:02*	*08/18/22 11:27*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-KH-19
Lab Sample ID: 240-171091-9
Date Collected: 08/04/22 11:00
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		08/17/22 09:02	08/18/22 11:44	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		08/17/22 09:02	08/18/22 11:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*10 - 149*	*08/17/22 09:02*	*08/18/22 11:44*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*08/17/22 09:02*	*08/18/22 11:44*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-MC-20
Lab Sample ID: 240-171091-10
Date Collected: 08/04/22 10:00
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/17/22 09:02	08/18/22 12:02	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/17/22 09:02	08/18/22 12:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*08/17/22 09:02*	*08/18/22 12:02*	*1*
DCB Decachlorobiphenyl	*50*		*10 - 174*	*08/17/22 09:02*	*08/18/22 12:02*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-MC-21
Lab Sample ID: 240-171091-11
Date Collected: 08/04/22 10:30
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1242	**0.093**	**J p**	0.098	0.075	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		08/17/22 09:02	08/18/22 12:20	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		08/17/22 09:02	08/18/22 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*147*		*10 - 149*	*08/17/22 09:02*	*08/18/22 12:20*	*1*
DCB Decachlorobiphenyl	*106*		*10 - 174*	*08/17/22 09:02*	*08/18/22 12:20*	*1*

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080422-KH-22
Lab Sample ID: 240-171091-12
Date Collected: 08/04/22 15:45
Matrix: Water
Date Received: 08/05/22 09:50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/17/22 09:02	08/18/22 12:38	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/17/22 09:02	08/18/22 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/17/22 09:02*	*08/18/22 12:38*	*1*
DCB Decachlorobiphenyl	*49*		*10 - 174*	*08/17/22 09:02*	*08/18/22 12:38*	*1*

GC Semi VOA

Prep Batch: 539203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171091-1	GW-080422-KH-10	Total/NA	Water	3510C	
240-171091-2	GW-080422-KH-18	Total/NA	Water	3510C	
240-171091-3	GW-080422-KH-19	Total/NA	Water	3510C	
240-171091-4	GW-080422-MC-20	Total/NA	Water	3510C	
240-171091-5	GW-080422-MC-21	Total/NA	Water	3510C	
240-171091-6	GW-080422-KH-22	Total/NA	Water	3510C	
240-171091-7	GW-080422-KH-10	Dissolved	Water	3510C	
240-171091-8	GW-080422-KH-18	Dissolved	Water	3510C	
240-171091-9	GW-080422-KH-19	Dissolved	Water	3510C	
240-171091-10	GW-080422-MC-20	Dissolved	Water	3510C	
240-171091-11	GW-080422-MC-21	Dissolved	Water	3510C	
240-171091-12	GW-080422-KH-22	Dissolved	Water	3510C	
MB 240-539203/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-539203/24-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 539315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171091-1	GW-080422-KH-10	Total/NA	Water	8082A	539203
240-171091-2	GW-080422-KH-18	Total/NA	Water	8082A	539203
240-171091-3	GW-080422-KH-19	Total/NA	Water	8082A	539203
240-171091-4	GW-080422-MC-20	Total/NA	Water	8082A	539203
240-171091-5	GW-080422-MC-21	Total/NA	Water	8082A	539203
240-171091-6	GW-080422-KH-22	Total/NA	Water	8082A	539203
240-171091-7	GW-080422-KH-10	Dissolved	Water	8082A	539203
240-171091-8	GW-080422-KH-18	Dissolved	Water	8082A	539203
240-171091-9	GW-080422-KH-19	Dissolved	Water	8082A	539203
240-171091-10	GW-080422-MC-20	Dissolved	Water	8082A	539203
240-171091-11	GW-080422-MC-21	Dissolved	Water	8082A	539203
240-171091-12	GW-080422-KH-22	Dissolved	Water	8082A	539203
MB 240-539203/23-A	Method Blank	Total/NA	Water	8082A	539203
LCS 240-539203/24-A	Lab Control Sample	Total/NA	Water	8082A	539203

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-539203/23-A
Matrix: Water
Analysis Batch: 539315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 08:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*08/17/22 09:02*	*08/18/22 08:49*	*1*
DCB Decachlorobiphenyl	*84*		*10 - 174*	*08/17/22 09:02*	*08/18/22 08:49*	*1*

Lab Sample ID: LCS 240-539203/24-A
Matrix: Water
Analysis Batch: 539315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539203

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.92		ug/L		77	28 - 140		
Aroclor-1260			2.50	1.76		ug/L		71	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*10 - 149*
DCB Decachlorobiphenyl	*80*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-149)	(10-174)	(10-174)
240-171091-1	GW-080422-KH-10	82		79	
240-171091-2	GW-080422-KH-18	72		42	
240-171091-3	GW-080422-KH-19	332 S1+		47	
240-171091-4	GW-080422-MC-20	71	47 p	38	25
240-171091-5	GW-080422-MC-21	73		37	
240-171091-6	GW-080422-KH-22	82		48	
LCS 240-539203/24-A	Lab Control Sample	82		80	
MB 240-539203/23-A	Method Blank	84		84	

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171091-7	GW-080422-KH-10	81	87
240-171091-8	GW-080422-KH-18	76	73
240-171091-9	GW-080422-KH-19	85	69
240-171091-10	GW-080422-MC-20	64	50
240-171091-11	GW-080422-MC-21	147	106
240-171091-12	GW-080422-KH-22	82	49

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080422-KH-10
Lab Sample ID: 240-171091-1
Date Collected: 08/04/22 11:20
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 09:24

Client Sample ID: GW-080422-KH-18
Lab Sample ID: 240-171091-2
Date Collected: 08/04/22 09:40
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 09:41

Client Sample ID: GW-080422-KH-19
Lab Sample ID: 240-171091-3
Date Collected: 08/04/22 11:00
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		10	539315	BPM	EET CAN	08/18/22 09:59

Client Sample ID: GW-080422-MC-20
Lab Sample ID: 240-171091-4
Date Collected: 08/04/22 10:00
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 10:17

Client Sample ID: GW-080422-MC-21
Lab Sample ID: 240-171091-5
Date Collected: 08/04/22 10:30
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 10:34

Client Sample ID: GW-080422-KH-22
Lab Sample ID: 240-171091-6
Date Collected: 08/04/22 15:45
Matrix: Water
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 10:52

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080422-KH-10 Lab Sample ID: 240-171091-7

Date Collected: 08/04/22 11:20 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 11:09

Client Sample ID: GW-080422-KH-18 Lab Sample ID: 240-171091-8

Date Collected: 08/04/22 09:40 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 11:27

Client Sample ID: GW-080422-KH-19 Lab Sample ID: 240-171091-9

Date Collected: 08/04/22 11:00 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 11:44

Client Sample ID: GW-080422-MC-20 Lab Sample ID: 240-171091-10

Date Collected: 08/04/22 10:00 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 12:02

Client Sample ID: GW-080422-MC-21 Lab Sample ID: 240-171091-11

Date Collected: 08/04/22 10:30 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 12:20

Client Sample ID: GW-080422-KH-22 Lab Sample ID: 240-171091-12

Date Collected: 08/04/22 15:45 **Matrix: Water**
Date Received: 08/05/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Dissolved	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 12:38

Laboratory References:
EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-171091-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

3.2/3.2 4.5/4.5 2.3/2.3

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: Kristin Heideman **PRINTED NAME:** Kristin Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Dissolved RCRA 8 Total RCRA 8	REMARKS
1	8/19/21	1120	GW-080422-KH-18	Water	4	XX	SSOW E117014
2		0940	-KH-18				
3		1100	-KH-19				
4		1000	-MC-20				
5		1030	-MC-21				
6		1545	-KH-22				

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171091**
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: Mandy Blu

Cooler Received on 8-5-22 Opened on 8-5-22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	(Yes)	No
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	(Y)	(N)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No (NA) pH Strip Lot# **HC286797**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	(No) (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : 171091

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(TA) Client Box Other	IR-13 IR-15	3.2	3.2	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 IR-15	4.5	4.5	(Wet Ice) Blue Ice Dry Ice Water None
(TA) Client Box Other	IR-13 IR-15	2.3	2.3	(Wet Ice) Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15			Wet Ice

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-171123-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
8/24/2022 7:56:06 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS

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Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 7
Client Sample Results 8
QC Association Summary 19
QC Sample Results 21
Surrogate Summary 23
Lab Chronicle 24
Certification Summary 26
Chain of Custody 27

Job ID: 240-171123-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171123-1

Comments
No additional comments.

Receipt
The samples were received on 8/6/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.7º C, 1.2º C and 3.0º C.

GC Semi VOA
Method 8082A: The surrogate spiking solution was inadvertently omitted during the extraction process for the laboratory control sample (LCS) associated with preparation batch 240-539403; therefore, percent recoveries are unavailable. However, the aroclors 1016 and 1260 are both present. The surrogate recoveries for tetrachloro-m-xylene and decachlorobiphenyl are within range for all samples and the method blank. Therefore the results have been reported.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080522-DS-25 (240-171123-3), GW-080522-KH-26 (240-171123-4) and GW-080522-KH28 (240-171123-6).

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080522-DS-25 (240-171123-3) and GW-080522-DS-27 (240-171123-5). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080522-MC-23 (240-171123-7), GW-080522-MC-23 (240-171123-7[MS]), GW-080522-MC-23 (240-171123-7[MSD]), GW-080522-MC-24 (240-171123-8), GW-080522-DS-25 (240-171123-9) and GW-080522-DS-27 (240-171123-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-539403.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171123-1	GW-080522-MC-23	Water	08/05/22 09:30	08/06/22 10:00
240-171123-2	GW-080522-MC-24	Water	08/05/22 12:00	08/06/22 10:00
240-171123-3	GW-080522-DS-25	Water	08/05/22 10:25	08/06/22 10:00
240-171123-4	GW-080522-KH-26	Water	08/05/22 10:25	08/06/22 10:00
240-171123-5	GW-080522-DS-27	Water	08/05/22 10:30	08/06/22 10:00
240-171123-6	GW-080522-KH-28	Water	08/05/22 11:05	08/06/22 10:00
240-171123-7	GW-080522-MC-23	Water	08/05/22 09:30	08/06/22 10:00
240-171123-8	GW-080522-MC-24	Water	08/05/22 12:00	08/06/22 10:00
240-171123-9	GW-080522-DS-25	Water	08/05/22 10:25	08/06/22 10:00
240-171123-10	GW-080522-DS-27	Water	08/05/22 10:30	08/06/22 10:00
240-171123-11	GW-080522-KH-28	Water	08/05/22 11:05	08/06/22 10:00

Detection Summary

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080522-MC-23 — Lab Sample ID: 240-171123-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.27		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080522-MC-24 — Lab Sample ID: 240-171123-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.41		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080522-DS-25 — Lab Sample ID: 240-171123-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.18		0.095	0.048	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080522-KH-26 — Lab Sample ID: 240-171123-4

No Detections.

Client Sample ID: GW-080522-DS-27 — Lab Sample ID: 240-171123-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.19		0.095	0.048	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080522-KH-28 — Lab Sample ID: 240-171123-6

No Detections.

Client Sample ID: GW-080522-MC-23 — Lab Sample ID: 240-171123-7

No Detections.

Client Sample ID: GW-080522-MC-24 — Lab Sample ID: 240-171123-8

No Detections.

Client Sample ID: GW-080522-DS-25 — Lab Sample ID: 240-171123-9

No Detections.

Client Sample ID: GW-080522-DS-27 — Lab Sample ID: 240-171123-10

No Detections.

Client Sample ID: GW-080522-KH-28 — Lab Sample ID: 240-171123-11

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Method Summary

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-MC-23
Lab Sample ID: 240-171123-1
Date Collected: 08/05/22 09:30
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1242	**0.27**		0.095	0.072	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/17/22 09:02	08/18/22 12:55	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/17/22 09:02	08/18/22 12:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*08/17/22 09:02*	*08/18/22 12:55*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 174*	*08/17/22 09:02*	*08/18/22 12:55*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-MC-24
Lab Sample ID: 240-171123-2
Date Collected: 08/05/22 12:00
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1242	**0.41**		0.10	0.076	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 13:48	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*10 - 149*	*08/17/22 09:02*	*08/18/22 13:48*	*1*
DCB Decachlorobiphenyl	*65*		*10 - 174*	*08/17/22 09:02*	*08/18/22 13:48*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-DS-25
Lab Sample ID: 240-171123-3
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1248	**0.18**		0.095	0.048	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/19/22 16:33	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/19/22 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*43*		*10 - 149*	*08/18/22 11:16*	*08/19/22 16:33*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*08/18/22 11:16*	*08/19/22 16:33*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-KH-26
Lab Sample ID: 240-171123-4
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/19/22 16:50	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/19/22 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*10 - 149*	*08/18/22 11:16*	*08/19/22 16:50*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*08/18/22 11:16*	*08/19/22 16:50*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-DS-27
Lab Sample ID: 240-171123-5
Date Collected: 08/05/22 10:30
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1248	**0.19**		0.095	0.048	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/19/22 17:08	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/19/22 17:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*08/18/22 11:16*	*08/19/22 17:08*	*1*
DCB Decachlorobiphenyl	*58*		*10 - 174*	*08/18/22 11:16*	*08/19/22 17:08*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080522-KH-28
Lab Sample ID: 240-171123-6
Date Collected: 08/05/22 11:05
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		08/18/22 11:16	08/19/22 17:26	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		08/18/22 11:16	08/19/22 17:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*46*		*10 - 149*	*08/18/22 11:16*	*08/19/22 17:26*	*1*
DCB Decachlorobiphenyl	*64*		*10 - 174*	*08/18/22 11:16*	*08/19/22 17:26*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080522-MC-23
Lab Sample ID: 240-171123-7
Date Collected: 08/05/22 09:30
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/19/22 07:07	08/22/22 14:16	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/19/22 07:07	08/22/22 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*08/19/22 07:07*	*08/22/22 14:16*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*08/19/22 07:07*	*08/22/22 14:16*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080522-MC-24
Lab Sample ID: 240-171123-8
Date Collected: 08/05/22 12:00
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/19/22 07:07	08/22/22 15:05	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/19/22 07:07	08/22/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*10 - 149*	*08/19/22 07:07*	*08/22/22 15:05*	*1*
DCB Decachlorobiphenyl	*70*		*10 - 174*	*08/19/22 07:07*	*08/22/22 15:05*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080522-DS-25
Lab Sample ID: 240-171123-9
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/19/22 07:07	08/22/22 15:21	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/19/22 07:07	08/22/22 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*08/19/22 07:07*	*08/22/22 15:21*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 174*	*08/19/22 07:07*	*08/22/22 15:21*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080522-DS-27
Lab Sample ID: 240-171123-10
Date Collected: 08/05/22 10:30
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/19/22 07:07	08/22/22 15:38	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/19/22 07:07	08/22/22 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*10 - 149*	*08/19/22 07:07*	*08/22/22 15:38*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*08/19/22 07:07*	*08/22/22 15:38*	*1*

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080522-KH-28
Lab Sample ID: 240-171123-11
Date Collected: 08/05/22 11:05
Matrix: Water
Date Received: 08/06/22 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/19/22 07:07	08/22/22 15:54	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/19/22 07:07	08/22/22 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*08/19/22 07:07*	*08/22/22 15:54*	*1*
DCB Decachlorobiphenyl	*78*		*10 - 174*	*08/19/22 07:07*	*08/22/22 15:54*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 539203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-1	GW-080522-MC-23	Total/NA	Water	3510C	
240-171123-2	GW-080522-MC-24	Total/NA	Water	3510C	
MB 240-539203/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-539203/24-A	Lab Control Sample	Total/NA	Water	3510C	
240-171123-1 MS	GW-080522-MC-23	Total/NA	Water	3510C	
240-171123-1 MSD	GW-080522-MC-23	Total/NA	Water	3510C	

Analysis Batch: 539315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-1	GW-080522-MC-23	Total/NA	Water	8082A	539203
240-171123-2	GW-080522-MC-24	Total/NA	Water	8082A	539203
MB 240-539203/23-A	Method Blank	Total/NA	Water	8082A	539203
LCS 240-539203/24-A	Lab Control Sample	Total/NA	Water	8082A	539203
240-171123-1 MS	GW-080522-MC-23	Total/NA	Water	8082A	539203
240-171123-1 MSD	GW-080522-MC-23	Total/NA	Water	8082A	539203

Prep Batch: 539403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-3	GW-080522-DS-25	Total/NA	Water	3510C	
240-171123-4	GW-080522-KH-26	Total/NA	Water	3510C	
240-171123-5	GW-080522-DS-27	Total/NA	Water	3510C	
240-171123-6	GW-080522-KH-28	Total/NA	Water	3510C	
MB 240-539403/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 539465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-7	GW-080522-MC-23	Dissolved	Water	3510C	
240-171123-8	GW-080522-MC-24	Dissolved	Water	3510C	
240-171123-9	GW-080522-DS-25	Dissolved	Water	3510C	
240-171123-10	GW-080522-DS-27	Dissolved	Water	3510C	
240-171123-11	GW-080522-KH-28	Dissolved	Water	3510C	
240-171123-7 MS	GW-080522-MC-23	Dissolved	Water	3510C	
240-171123-7 MSD	GW-080522-MC-23	Dissolved	Water	3510C	

Analysis Batch: 539466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-3	GW-080522-DS-25	Total/NA	Water	8082A	539403
240-171123-4	GW-080522-KH-26	Total/NA	Water	8082A	539403
240-171123-5	GW-080522-DS-27	Total/NA	Water	8082A	539403
240-171123-6	GW-080522-KH-28	Total/NA	Water	8082A	539403
MB 240-539403/21-A	Method Blank	Total/NA	Water	8082A	539403
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	8082A	539403

Analysis Batch: 539610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-7	GW-080522-MC-23	Dissolved	Water	8082A	539465
240-171123-8	GW-080522-MC-24	Dissolved	Water	8082A	539465
240-171123-9	GW-080522-DS-25	Dissolved	Water	8082A	539465
240-171123-10	GW-080522-DS-27	Dissolved	Water	8082A	539465
240-171123-11	GW-080522-KH-28	Dissolved	Water	8082A	539465

GC Semi VOA (Continued)

Analysis Batch: 539610 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171123-7 MS	GW-080522-MC-23	Dissolved	Water	8082A	539465
240-171123-7 MSD	GW-080522-MC-23	Dissolved	Water	8082A	539465

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-539203/23-A
Matrix: Water
Analysis Batch: 539315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539203

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/17/22 09:02	08/18/22 08:49	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/17/22 09:02	08/18/22 08:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*08/17/22 09:02*	*08/18/22 08:49*	*1*
DCB Decachlorobiphenyl	*84*		*10 - 174*	*08/17/22 09:02*	*08/18/22 08:49*	*1*

Lab Sample ID: LCS 240-539203/24-A
Matrix: Water
Analysis Batch: 539315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539203

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.92		ug/L		77	28 - 140		
Aroclor-1260			2.50	1.76		ug/L		71	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*10 - 149*
DCB Decachlorobiphenyl	*80*		*10 - 174*

Lab Sample ID: 240-171123-1 MS
Matrix: Water
Analysis Batch: 539315

Client Sample ID: GW-080522-MC-23
Prep Type: Total/NA
Prep Batch: 539203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.095	U	2.38	2.07		ug/L		87	50 - 120		
Aroclor-1260	0.095	U	2.38	1.54		ug/L		65	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*85*		*10 - 149*
DCB Decachlorobiphenyl	*63*		*10 - 174*

Lab Sample ID: 240-171123-1 MSD
Matrix: Water
Analysis Batch: 539315

Client Sample ID: GW-080522-MC-23
Prep Type: Total/NA
Prep Batch: 539203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.50	1.95		ug/L		78	50 - 120	6	25
Aroclor-1260	0.095	U	2.50	1.33		ug/L		53	39 - 135	15	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*80*		*10 - 149*
DCB Decachlorobiphenyl	*51*		*10 - 174*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-539403/21-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/18/22 11:16	08/19/22 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*08/18/22 11:16*	*08/19/22 12:56*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*08/18/22 11:16*	*08/19/22 12:56*	*1*

Lab Sample ID: LCS 240-539403/22-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539403

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.95		ug/L		78	28 - 140		
Aroclor-1260			2.50	1.77		ug/L		71	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*1*	*S1-*	*10 - 149*
DCB Decachlorobiphenyl	*0*	*S1-*	*10 - 174*

Lab Sample ID: 240-171123-7 MS
Matrix: Water
Analysis Batch: 539610

Client Sample ID: GW-080522-MC-23
Prep Type: Dissolved
Prep Batch: 539465

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.095	U	2.38	1.33		ug/L		56	50 - 120		
Aroclor-1260	0.095	U	2.38	1.24		ug/L		52	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*68*		*10 - 149*
DCB Decachlorobiphenyl	*72*		*10 - 174*

Lab Sample ID: 240-171123-7 MSD
Matrix: Water
Analysis Batch: 539610

Client Sample ID: GW-080522-MC-23
Prep Type: Dissolved
Prep Batch: 539465

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.38	1.26		ug/L		53	50 - 120	5	25
Aroclor-1260	0.095	U	2.38	1.14		ug/L		48	39 - 135	8	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*63*		*10 - 149*
DCB Decachlorobiphenyl	*61*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171123-1	GW-080522-MC-23	86	56
240-171123-1 MS	GW-080522-MC-23	85	63
240-171123-1 MSD	GW-080522-MC-23	80	51
240-171123-2	GW-080522-MC-24	88	65
LCS 240-539203/24-A	Lab Control Sample	82	80
MB 240-539203/23-A	Method Blank	84	84

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171123-3	GW-080522-DS-25	43	67
240-171123-4	GW-080522-KH-26	53	54
240-171123-5	GW-080522-DS-27	56	58
240-171123-6	GW-080522-KH-28	46	64
LCS 240-539403/22-A	Lab Control Sample	1 S1-	0 S1-
MB 240-539403/21-A	Method Blank	65	73

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171123-7	GW-080522-MC-23	69	69
240-171123-7 MS	GW-080522-MC-23	68	72
240-171123-7 MSD	GW-080522-MC-23	63	61
240-171123-8	GW-080522-MC-24	58	70
240-171123-9	GW-080522-DS-25	82	81
240-171123-10	GW-080522-DS-27	67	67
240-171123-11	GW-080522-KH-28	65	78

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-171123-1

Client Sample ID: GW-080522-MC-23
Lab Sample ID: 240-171123-1
Date Collected: 08/05/22 09:30
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 12:55

Client Sample ID: GW-080522-MC-24
Lab Sample ID: 240-171123-2
Date Collected: 08/05/22 12:00
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539203	MDH	EET CAN	08/17/22 09:02
Total/NA	Analysis	8082A		1	539315	BPM	EET CAN	08/18/22 13:48

Client Sample ID: GW-080522-DS-25
Lab Sample ID: 240-171123-3
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 16:33

Client Sample ID: GW-080522-KH-26
Lab Sample ID: 240-171123-4
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 16:50

Client Sample ID: GW-080522-DS-27
Lab Sample ID: 240-171123-5
Date Collected: 08/05/22 10:30
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 17:08

Client Sample ID: GW-080522-KH-28
Lab Sample ID: 240-171123-6
Date Collected: 08/05/22 11:05
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 17:26

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080522-MC-23
Lab Sample ID: 240-171123-7
Date Collected: 08/05/22 09:30
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 14:16

Client Sample ID: GW-080522-MC-24
Lab Sample ID: 240-171123-8
Date Collected: 08/05/22 12:00
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 15:05

Client Sample ID: GW-080522-DS-25
Lab Sample ID: 240-171123-9
Date Collected: 08/05/22 10:25
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 15:21

Client Sample ID: GW-080522-DS-27
Lab Sample ID: 240-171123-10
Date Collected: 08/05/22 10:30
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 15:38

Client Sample ID: GW-080522-KH-28
Lab Sample ID: 240-171123-11
Date Collected: 08/05/22 11:05
Matrix: Water
Date Received: 08/06/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 15:54

Laboratory References:
EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-171123-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

30/30

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: Kristin Heideman PRINTED NAME: Kristin Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Dissolved PCBs	PARAMETERS: Total PCBs	REMARKS
1	8/5/22	0930	GW-080522-MC-23	Water	12	X	X	SDG E117014
2		1200	-MC-24		4	X	X	
3		1025	-DS-25		4	X	X	MS/MSD on sample 23
4		1025	-KH-26		4	X	X	
5		1030	-DS-27		4	X	X	
6		1105	-KH-28		4	X	X	Coolers 3

TOTAL NUMBER OF CONTAINERS

240-171123 Chain of Custody

RELINQUISHED BY: ① Kristin Heideman / GHD	DATE: 8/5/22 TIME: 1400	RECEIVED BY: ② M. A.	DATE: 8/6/22 TIME: 10:00
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex TRACKING No. 8172 5962 5921

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Kristin Heideman, Mike Cernicek, Danny Shawalter

RECEIVED FOR LABORATORY BY: 8761
DATE: TIME:

11034001-00(PRES001)GN-CO001

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: M. A. H.

Cooler Received on 8/6/22 Opened on 8/6/22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +**0.7** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF **0.0**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	(No)
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(N)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No (NA) pH Strip Lot# **HC286797**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) 1 DS-25 (2x 1L A; 1 dissolved, 1 total) were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-13 IR-15	3.0	3.0	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	1.2	1.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	0.7	0.7	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-171203-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014
Revision: 1

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Authorized for release by:
8/25/2022 9:18:53 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 8
Client Sample Results 9
QC Association Summary 25
QC Sample Results 26
Surrogate Summary 27
Lab Chronicle 28
Certification Summary 31
Chain of Custody 32

Case Narrative

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-171203-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171203-1

Comments
A revised report was provided on August 25, 2022. The sample IDs were corrected.

Receipt
The samples were received on 8/9/2022 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.2º C, 2.4º C, 3.0º C and 3.8º C.

GC Semi VOA
Method 8082A: The surrogate spiking solution was inadvertently omitted during the extraction process for the laboratory control sample (LCS) associated with preparation batch 240-539403; therefore, percent recoveries are unavailable. However, the aroclors 1016 and 1260 are both present. The surrogate recoveries for tetrachloro-m-xylene and decachlorobiphenyl are within range for all samples and the method blank. Therefore the results have been reported.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080822-TP-32 (240-171203-7), GW-080822-TP-33 (240-171203-9) and GW-080822-MC-35 (240-171203-13).

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080822-MC-29 (240-171203-1), GW-080822-MC-30 (240-171203-3), GW-080822-TP-32 (240-171203-7) and GW-080822-TP-33 (240-171203-9). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080822-KH-31 (240-171203-6), GW-080822-TP-32 (240-171203-8), GW-080822-TP-33 (240-171203-10), (240-171123-C-7-A), (240-171123-E-7-A MS) and (240-171123-A-7-A MSD).

Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080822-KH-36 (240-171203-15).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-539403.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171203-1	GW-08082022-MC-29	Water	08/08/22 09:45	08/09/22 09:45
240-171203-2	GW-08082022-MC-29	Water	08/08/22 09:45	08/09/22 09:45
240-171203-3	GW-08082022-MC-30	Water	08/08/22 11:20	08/09/22 09:45
240-171203-4	GW-08082022-MC-30	Water	08/08/22 11:20	08/09/22 09:45
240-171203-5	GW-08082022-KH-31	Water	08/08/22 11:35	08/09/22 09:45
240-171203-6	GW-08082022-KH-31	Water	08/08/22 11:35	08/09/22 09:45
240-171203-7	GW-08082022-TP-32	Water	08/08/22 13:31	08/09/22 09:45
240-171203-8	GW-08082022-TP-32	Water	08/08/22 13:31	08/09/22 09:45
240-171203-9	GW-08082022-TP-33	Water	08/08/22 13:44	08/09/22 09:45
240-171203-10	GW-08082022-TP-33	Water	08/08/22 13:44	08/09/22 09:45
240-171203-11	GW-08082022-MC-34	Water	08/08/22 14:15	08/09/22 09:45
240-171203-12	GW-08082022-MC-34	Water	08/08/22 14:15	08/09/22 09:45
240-171203-13	GW-08082022-MC-35	Water	08/08/22 15:40	08/09/22 09:45
240-171203-14	GW-08082022-MC-35	Water	08/08/22 15:40	08/09/22 09:45
240-171203-15	GW-08082022-KH-36	Water	08/08/22 14:35	08/09/22 09:45
240-171203-16	GW-08082022-KH-36	Water	08/08/22 14:35	08/09/22 09:45

Detection Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-08082022-MC-29 — Lab Sample ID: 240-171203-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.77		0.099	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-08082022-MC-29 — Lab Sample ID: 240-171203-2

No Detections.

Client Sample ID: GW-08082022-MC-30 — Lab Sample ID: 240-171203-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1.2		0.096	0.073	ug/L	1		8082A	Total/NA

Client Sample ID: GW-08082022-MC-30 — Lab Sample ID: 240-171203-4

No Detections.

Client Sample ID: GW-08082022-KH-31 — Lab Sample ID: 240-171203-5

No Detections.

Client Sample ID: GW-08082022-KH-31 — Lab Sample ID: 240-171203-6

No Detections.

Client Sample ID: GW-08082022-TP-32 — Lab Sample ID: 240-171203-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.22		0.097	0.074	ug/L	1		8082A	Total/NA

Client Sample ID: GW-08082022-TP-32 — Lab Sample ID: 240-171203-8

No Detections.

Client Sample ID: GW-08082022-TP-33 — Lab Sample ID: 240-171203-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.19		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-08082022-TP-33 — Lab Sample ID: 240-171203-10

No Detections.

Client Sample ID: GW-08082022-MC-34 — Lab Sample ID: 240-171203-11

No Detections.

Client Sample ID: GW-08082022-MC-34 — Lab Sample ID: 240-171203-12

No Detections.

Client Sample ID: GW-08082022-MC-35 — Lab Sample ID: 240-171203-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.49		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-08082022-MC-35 — Lab Sample ID: 240-171203-14

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-15

No Detections.

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-16

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-MC-29
Lab Sample ID: 240-171203-1
Date Collected: 08/08/22 09:45
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1242	**0.77**		0.099	0.075	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/18/22 11:16	08/19/22 17:44	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/18/22 11:16	08/19/22 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*08/18/22 11:16*	*08/19/22 17:44*	*1*
DCB Decachlorobiphenyl	*50*		*10 - 174*	*08/18/22 11:16*	*08/19/22 17:44*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-MC-30
Lab Sample ID: 240-171203-3
Date Collected: 08/08/22 11:20
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1242	**1.2**		0.096	0.073	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/18/22 11:16	08/19/22 18:01	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/18/22 11:16	08/19/22 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*08/18/22 11:16*	*08/19/22 18:01*	*1*
DCB Decachlorobiphenyl	*36*		*10 - 174*	*08/18/22 11:16*	*08/19/22 18:01*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-KH-31
Lab Sample ID: 240-171203-5
Date Collected: 08/08/22 11:35
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/19/22 18:19	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/19/22 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*41*		*10 - 149*	*08/18/22 11:16*	*08/19/22 18:19*	*1*
DCB Decachlorobiphenyl	*44*		*10 - 174*	*08/18/22 11:16*	*08/19/22 18:19*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-TP-32
Lab Sample ID: 240-171203-7
Date Collected: 08/08/22 13:31
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1242	**0.22**		0.097	0.074	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		08/18/22 11:16	08/19/22 18:36	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		08/18/22 11:16	08/19/22 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*51*		*10 - 149*	*08/18/22 11:16*	*08/19/22 18:36*	*1*
DCB Decachlorobiphenyl	*46*		*10 - 174*	*08/18/22 11:16*	*08/19/22 18:36*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-TP-33
Lab Sample ID: 240-171203-9
Date Collected: 08/08/22 13:44
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1242	**0.19**		0.10	0.076	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/18/22 11:16	08/19/22 18:54	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/18/22 11:16	08/19/22 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*10 - 149*	*08/18/22 11:16*	*08/19/22 18:54*	*1*
DCB Decachlorobiphenyl	*51*		*10 - 174*	*08/18/22 11:16*	*08/19/22 18:54*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-MC-34
Lab Sample ID: 240-171203-11
Date Collected: 08/08/22 14:15
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.0099	U	0.0099	0.0055	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1221	0.0099	U	0.0099	0.0056	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1232	0.0099	U	0.0099	0.0073	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1242	0.0099	U	0.0099	0.0075	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1248	0.0099	U	0.0099	0.0050	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1254	0.0099	U	0.0099	0.0040	ug/L		08/18/22 11:16	08/19/22 19:11	1
Aroclor-1260	0.0099	U	0.0099	0.0046	ug/L		08/18/22 11:16	08/19/22 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*08/18/22 11:16*	*08/19/22 19:11*	*1*
DCB Decachlorobiphenyl	*59*		*10 - 174*	*08/18/22 11:16*	*08/19/22 19:11*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-MC-35
Lab Sample ID: 240-171203-13
Date Collected: 08/08/22 15:40
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1242	**0.49**		0.095	0.072	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/19/22 19:29	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/19/22 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*08/18/22 11:16*	*08/19/22 19:29*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*08/18/22 11:16*	*08/19/22 19:29*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-15
Date Collected: 08/08/22 14:35
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		08/18/22 11:16	08/22/22 22:13	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		08/18/22 11:16	08/22/22 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*10 - 149*	*08/18/22 11:16*	*08/22/22 22:13*	*1*
DCB Decachlorobiphenyl	*34*		*10 - 174*	*08/18/22 11:16*	*08/22/22 22:13*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-MC-29
Lab Sample ID: 240-171203-2
Date Collected: 08/08/22 09:45
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/19/22 07:07	08/22/22 16:10	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/19/22 07:07	08/22/22 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*08/19/22 07:07*	*08/22/22 16:10*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*08/19/22 07:07*	*08/22/22 16:10*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-MC-30
Lab Sample ID: 240-171203-4
Date Collected: 08/08/22 11:20
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		08/19/22 07:07	08/22/22 16:27	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		08/19/22 07:07	08/22/22 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*08/19/22 07:07*	*08/22/22 16:27*	*1*
DCB Decachlorobiphenyl	*65*		*10 - 174*	*08/19/22 07:07*	*08/22/22 16:27*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-KH-31
Lab Sample ID: 240-171203-6
Date Collected: 08/08/22 11:35
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/19/22 07:07	08/22/22 16:43	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/19/22 07:07	08/22/22 16:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*67*		*10 - 149*	*08/19/22 07:07*	*08/22/22 16:43*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*08/19/22 07:07*	*08/22/22 16:43*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-TP-32
Lab Sample ID: 240-171203-8
Date Collected: 08/08/22 13:31
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		08/19/22 07:07	08/22/22 17:00	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		08/19/22 07:07	08/22/22 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*08/19/22 07:07*	*08/22/22 17:00*	*1*
DCB Decachlorobiphenyl	*68*		*10 - 174*	*08/19/22 07:07*	*08/22/22 17:00*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-TP-33
Lab Sample ID: 240-171203-10
Date Collected: 08/08/22 13:44
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/19/22 07:07	08/22/22 17:16	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/19/22 07:07	08/22/22 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*10 - 149*	*08/19/22 07:07*	*08/22/22 17:16*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*08/19/22 07:07*	*08/22/22 17:16*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-MC-34
Lab Sample ID: 240-171203-12
Date Collected: 08/08/22 14:15
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.0099	U	0.0099	0.0055	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1221	0.0099	U	0.0099	0.0056	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1232	0.0099	U	0.0099	0.0073	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1242	0.0099	U	0.0099	0.0075	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1248	0.0099	U	0.0099	0.0050	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1254	0.0099	U	0.0099	0.0040	ug/L		08/19/22 07:07	08/22/22 17:32	1
Aroclor-1260	0.0099	U	0.0099	0.0046	ug/L		08/19/22 07:07	08/22/22 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*08/19/22 07:07*	*08/22/22 17:32*	*1*
DCB Decachlorobiphenyl	*79*		*10 - 174*	*08/19/22 07:07*	*08/22/22 17:32*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-MC-35
Lab Sample ID: 240-171203-14
Date Collected: 08/08/22 15:40
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/19/22 07:07	08/22/22 17:49	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/19/22 07:07	08/22/22 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*08/19/22 07:07*	*08/22/22 17:49*	*1*
DCB Decachlorobiphenyl	*48*		*10 - 174*	*08/19/22 07:07*	*08/22/22 17:49*	*1*

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-16
Date Collected: 08/08/22 14:35
Matrix: Water
Date Received: 08/09/22 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		08/19/22 07:07	08/22/22 18:05	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		08/19/22 07:07	08/22/22 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*08/19/22 07:07*	*08/22/22 18:05*	*1*
DCB Decachlorobiphenyl	*63*		*10 - 174*	*08/19/22 07:07*	*08/22/22 18:05*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 539403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171203-1	GW-08082022-MC-29	Total/NA	Water	3510C	
240-171203-3	GW-08082022-MC-30	Total/NA	Water	3510C	
240-171203-5	GW-08082022-KH-31	Total/NA	Water	3510C	
240-171203-7	GW-08082022-TP-32	Total/NA	Water	3510C	
240-171203-9	GW-08082022-TP-33	Total/NA	Water	3510C	
240-171203-11	GW-08082022-MC-34	Total/NA	Water	3510C	
240-171203-13	GW-08082022-MC-35	Total/NA	Water	3510C	
240-171203-15	GW-08082022-KH-36	Total/NA	Water	3510C	
MB 240-539403/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 539465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171203-2	GW-08082022-MC-29	Dissolved	Water	3510C	
240-171203-4	GW-08082022-MC-30	Dissolved	Water	3510C	
240-171203-6	GW-08082022-KH-31	Dissolved	Water	3510C	
240-171203-8	GW-08082022-TP-32	Dissolved	Water	3510C	
240-171203-10	GW-08082022-TP-33	Dissolved	Water	3510C	
240-171203-12	GW-08082022-MC-34	Dissolved	Water	3510C	
240-171203-14	GW-08082022-MC-35	Dissolved	Water	3510C	
240-171203-16	GW-08082022-KH-36	Dissolved	Water	3510C	

Analysis Batch: 539466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171203-1	GW-08082022-MC-29	Total/NA	Water	8082A	539403
240-171203-3	GW-08082022-MC-30	Total/NA	Water	8082A	539403
240-171203-5	GW-08082022-KH-31	Total/NA	Water	8082A	539403
240-171203-7	GW-08082022-TP-32	Total/NA	Water	8082A	539403
240-171203-9	GW-08082022-TP-33	Total/NA	Water	8082A	539403
240-171203-11	GW-08082022-MC-34	Total/NA	Water	8082A	539403
240-171203-13	GW-08082022-MC-35	Total/NA	Water	8082A	539403
MB 240-539403/21-A	Method Blank	Total/NA	Water	8082A	539403
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	8082A	539403

Analysis Batch: 539610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171203-2	GW-08082022-MC-29	Dissolved	Water	8082A	539465
240-171203-4	GW-08082022-MC-30	Dissolved	Water	8082A	539465
240-171203-6	GW-08082022-KH-31	Dissolved	Water	8082A	539465
240-171203-8	GW-08082022-TP-32	Dissolved	Water	8082A	539465
240-171203-10	GW-08082022-TP-33	Dissolved	Water	8082A	539465
240-171203-12	GW-08082022-MC-34	Dissolved	Water	8082A	539465
240-171203-14	GW-08082022-MC-35	Dissolved	Water	8082A	539465
240-171203-16	GW-08082022-KH-36	Dissolved	Water	8082A	539465

Analysis Batch: 539623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171203-15	GW-08082022-KH-36	Total/NA	Water	8082A	539403

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-171203-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-539403/21-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/18/22 11:16	08/19/22 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*08/18/22 11:16*	*08/19/22 12:56*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*08/18/22 11:16*	*08/19/22 12:56*	*1*

Lab Sample ID: LCS 240-539403/22-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539403

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.95		ug/L		78	28 - 140		
Aroclor-1260			2.50	1.77		ug/L		71	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*1*	*S1-*	*10 - 149*
DCB Decachlorobiphenyl	*0*	*S1-*	*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171203-1	GW-08082022-MC-29	60	50
240-171203-3	GW-08082022-MC-30	56	36
240-171203-5	GW-08082022-KH-31	41	44
240-171203-7	GW-08082022-TP-32	51	46
240-171203-9	GW-08082022-TP-33	57	51
240-171203-11	GW-08082022-MC-34	56	59
240-171203-13	GW-08082022-MC-35	60	54
240-171203-15	GW-08082022-KH-36	53	34
LCS 240-539403/22-A	Lab Control Sample	1 S1-	0 S1-
MB 240-539403/21-A	Method Blank	65	73

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171203-2	GW-08082022-MC-29	64	69
240-171203-4	GW-08082022-MC-30	60	65
240-171203-6	GW-08082022-KH-31	67	69
240-171203-8	GW-08082022-TP-32	68	68
240-171203-10	GW-08082022-TP-33	73	75
240-171203-12	GW-08082022-MC-34	75	79
240-171203-14	GW-08082022-MC-35	66	48
240-171203-16	GW-08082022-KH-36	68	63

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-08082022-MC-29
Lab Sample ID: 240-171203-1
Date Collected: 08/08/22 09:45
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 17:44

Client Sample ID: GW-08082022-MC-29
Lab Sample ID: 240-171203-2
Date Collected: 08/08/22 09:45
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 16:10

Client Sample ID: GW-08082022-MC-30
Lab Sample ID: 240-171203-3
Date Collected: 08/08/22 11:20
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 18:01

Client Sample ID: GW-08082022-MC-30
Lab Sample ID: 240-171203-4
Date Collected: 08/08/22 11:20
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 16:27

Client Sample ID: GW-08082022-KH-31
Lab Sample ID: 240-171203-5
Date Collected: 08/08/22 11:35
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 18:19

Client Sample ID: GW-08082022-KH-31
Lab Sample ID: 240-171203-6
Date Collected: 08/08/22 11:35
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 16:43

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-08082022-TP-32
Lab Sample ID: 240-171203-7
Date Collected: 08/08/22 13:31
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 18:36

Client Sample ID: GW-08082022-TP-32
Lab Sample ID: 240-171203-8
Date Collected: 08/08/22 13:31
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 17:00

Client Sample ID: GW-08082022-TP-33
Lab Sample ID: 240-171203-9
Date Collected: 08/08/22 13:44
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 18:54

Client Sample ID: GW-08082022-TP-33
Lab Sample ID: 240-171203-10
Date Collected: 08/08/22 13:44
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 17:16

Client Sample ID: GW-08082022-MC-34
Lab Sample ID: 240-171203-11
Date Collected: 08/08/22 14:15
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 19:11

Client Sample ID: GW-08082022-MC-34
Lab Sample ID: 240-171203-12
Date Collected: 08/08/22 14:15
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 17:32

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-08082022-MC-35
Lab Sample ID: 240-171203-13
Date Collected: 08/08/22 15:40
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 19:29

Client Sample ID: GW-08082022-MC-35
Lab Sample ID: 240-171203-14
Date Collected: 08/08/22 15:40
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 17:49

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-15
Date Collected: 08/08/22 14:35
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539623	MBB	EET CAN	08/22/22 22:13

Client Sample ID: GW-08082022-KH-36
Lab Sample ID: 240-171203-16
Date Collected: 08/08/22 14:35
Matrix: Water
Date Received: 08/09/22 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 18:05

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-171203-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: Kristin Heideman **PRINTED NAME:** Kristin Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Dissolved PCBs	PARAMETERS: Total PCBs	REMARKS
1	8/8/22	0945	GW-080822-MC-29	Water	4	X	X	SSOW E117014
2		1120	-MC-30					
3		1135	-KH-31					
4		1331	-TP-32					
5		1344	-TP-33					
6		1415	-MC-34					
7		1540	-MC-35					
8		1435	-KH-36					
								4 Coolers

240-171203 Chain of Custody

TOTAL NUMBER OF CONTAINERS 32

RELINQUISHED BY: ① Kristin Heideman	DATE: 8/8/22 TIME: 1800	RECEIVED BY: ② Rachel A/aviet	DATE: 8-9-22 TIME: 9:45
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex **TRACKING No.** 8172 5962 5910

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Kristin Heideman, Mike Cernicek, Tim Pranger

RECEIVED FOR LABORATORY BY: 9726
DATE: TIME:

11034001-00(PRES001)GN-CO001

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 8-9-22 Opened on 8-9-22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A ~~Foam Box~~ Client Cooler ~~Box~~ Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were the seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? Yes No (NA)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC286797
14. Were VOAs on the COC? Yes (No)
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. Yes No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____ Yes (No)
17. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
TA Client Box Other	IR-13 IR-15	3.0	3.0	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	0.2	0.2	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	2.4	2.4	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	3.8	3.8	Wet Ice Blue Ice Dry Ice Water None
TA Client Box Other	IR-13 IR-15	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-171269-1
Client Project/Site: 017307A, GM Bedford, SSOW# E117014

For:
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Attn: Ms. Ruth Mickle

Denise D Heckler

Authorized for release by:
8/25/2022 7:02:36 AM

Denise Heckler, Project Manager II
(330)966-9477
Denise.Heckler@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Definitions/Glossary 4
Sample Summary 5
Detection Summary 6
Method Summary 7
Client Sample Results 8
QC Association Summary 10
QC Sample Results 11
Surrogate Summary 12
Lab Chronicle 13
Certification Summary 14
Chain of Custody 15

Job ID: 240-171269-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-171269-1

Comments
No additional comments.

Receipt
The samples were received on 8/10/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.5º C.

GC Semi VOA
Method 8082A: The surrogate spiking solution was inadvertently omitted during the extraction process for the laboratory control sample (LCS) associated with preparation batch 240-539403; therefore, percent recoveries are unavailable. However, the aroclors 1016 and 1260 are both present. The surrogate recoveries for tetrachloro-m-xylene and decachlorobiphenyl are within range for all samples and the method blank. Therefore the results have been reported.

Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-080922-KH-37 (240-171269-1).

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-080922-KH-37 (240-171269-1). The samples have been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-539403.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-171269-1	GW-080922-KH-37	Water	08/09/22 10:10	08/10/22 09:30
240-171269-2	GW-080922-KH-37	Water	08/09/22 10:10	08/10/22 09:30

Detection Summary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.12		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-1
Date Collected: 08/09/22 10:10
Matrix: Water
Date Received: 08/10/22 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1242	**0.12**		0.10	0.076	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/18/22 11:16	08/19/22 20:04	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/18/22 11:16	08/19/22 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*49*		*10 - 149*	*08/18/22 11:16*	*08/19/22 20:04*	*1*
DCB Decachlorobiphenyl	*51*		*10 - 174*	*08/18/22 11:16*	*08/19/22 20:04*	*1*

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-2
Date Collected: 08/09/22 10:10
Matrix: Water
Date Received: 08/10/22 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		08/19/22 07:07	08/22/22 18:22	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		08/19/22 07:07	08/22/22 18:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*10 - 149*	*08/19/22 07:07*	*08/22/22 18:22*	*1*
DCB Decachlorobiphenyl	*62*		*10 - 174*	*08/19/22 07:07*	*08/22/22 18:22*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 539403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171269-1	GW-080922-KH-37	Total/NA	Water	3510C	
MB 240-539403/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 539465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171269-2	GW-080922-KH-37	Dissolved	Water	3510C	

Analysis Batch: 539466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171269-1	GW-080922-KH-37	Total/NA	Water	8082A	539403
MB 240-539403/21-A	Method Blank	Total/NA	Water	8082A	539403
LCS 240-539403/22-A	Lab Control Sample	Total/NA	Water	8082A	539403

Analysis Batch: 539610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-171269-2	GW-080922-KH-37	Dissolved	Water	8082A	539465

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-539403/21-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 539403

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		08/18/22 11:16	08/19/22 12:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		08/18/22 11:16	08/19/22 12:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*08/18/22 11:16*	*08/19/22 12:56*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*08/18/22 11:16*	*08/19/22 12:56*	*1*

Lab Sample ID: LCS 240-539403/22-A
Matrix: Water
Analysis Batch: 539466

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 539403

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.95		ug/L		78	28 - 140		
Aroclor-1260			2.50	1.77		ug/L		71	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*1*	*S1-*	*10 - 149*
DCB Decachlorobiphenyl	*0*	*S1-*	*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171269-1	GW-080922-KH-37	49	51
LCS 240-539403/22-A	Lab Control Sample	1 S1-	0 S1-
MB 240-539403/21-A	Method Blank	65	73

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-171269-2	GW-080922-KH-37	57	62

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-1

Date Collected: 08/09/22 10:10
Matrix: Water
Date Received: 08/10/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			539403	MDH	EET CAN	08/18/22 11:16
Total/NA	Analysis	8082A		1	539466	MBB	EET CAN	08/19/22 20:04

Client Sample ID: GW-080922-KH-37
Lab Sample ID: 240-171269-2

Date Collected: 08/09/22 10:10
Matrix: Water
Date Received: 08/10/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			539465	MDH	EET CAN	08/19/22 07:07
Dissolved	Analysis	8082A		1	539610	OCR	EET CAN	08/22/22 18:22

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-171269-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

5.5/5.5

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins / Test America

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Kristin Heideman

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Dissolved PCBs	PARAMETERS: Total PCBs	REMARKS
1	8/9/22	1010	GW-080922-KH-37	Water	4	X	X	SSOW E117014
			TOTAL NUMBER OF CONTAINERS		4			

240-171269 Chain of Custody

RELINQUISHED BY: ① Kristin Heideman / GHD	DATE: 8/9/22 TIME: 1400	RECEIVED BY: ② Rachelle Hardesty	DATE: 8.10.22 TIME: 9:30
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex TRACKING No. 8172 5962 5900

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Kristin Heideman, Mike Cernicek

RECEIVED FOR LABORATORY BY: 9727

DATE: TIME:

11034001-00(PRES001)GN-CO001

8/25/2022

Eurofins - Canton Sample Receipt Form/Narrative **Login # : 171269**
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 8-10-22 Opened on 8-10-22

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A ~~Foam~~ Box Client Cooler ~~Box~~ Other _____

Packing material used: ~~Bubble Wrap~~ Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp: 5.5 °C Corrected Cooler Temp. 5.5 °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes (No)
   -Were the seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes (No)
   -Were tamper/custody seals intact and uncompromised? Yes No (NA)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC? (Yes) No
7. Did all bottles arrive in good condition (Unbroken)? (Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? (Yes) No
9. For each sample, does the COC specify preservatives (Y/(N)) # of containers (Y/(N)) and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? (Yes) No
11. Sufficient quantity received to perform indicated analyses? (Yes) No
12. Are these work share samples and all listed on the COC? Yes (No)
    If yes, Questions 13-17 have been checked at the originating laboratory.
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No (NA) pH Strip Lot# HC286797
14. Were VOAs on the COC? Yes (No)
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this. Yes No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes (No)
17. Was a LL Hg or Me Hg trip blank present? _____ Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

WI-NC-099

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 1/24/2023 9:47:37 AM

JOB DESCRIPTION

017307A, GM Bedford, SSOW# E117014

JOB NUMBER

240-179263-1

Eurofins Canton
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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1/24/2023 9:47:37 AM

Authorized for release by
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Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 30
QC Sample Results 31
Surrogate Summary 32
Lab Chronicle 33
Certification Summary 37
Chain of Custody 38

Job ID: 240-179263-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-179263-1

Comments
No additional comments.

Receipt
The samples were received on 1/17/2023 9:17 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 4.2º C, 4.2º C, 4.3º C an 4.5º C.

GC Semi VOA
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences cau by sulfur: GW-011623-AC-01 (240-179263-1), GW-011623-JL-03 (240-179263-3), GW-011623-AC-04 (240-179263-4), GW-011623-JK-06 (240-179263-6), GW-011623-AC-08 (240-179263-8), GW-011623-JK-10 (240-179263-10), GW-011623-JL-0 (240-179263-13) and GW-011623-JK-10 (240-179263-20).

Method 8082A: The %RPD between the primary and confirmation column exceeded 40% for Aroclor 1242 for the following samples: GW-011623-JL-03 (240-179263-3) and GW-011623-JK-06 (240-179263-6). The lower values have been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-559268.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-179263-1	GW-011623-AC-01	Water	01/16/23 11:45	01/17/23 09:17
240-179263-2	GW-011623-JK-02	Water	01/16/23 14:15	01/17/23 09:17
240-179263-3	GW-011623-JL-03	Water	01/16/23 14:30	01/17/23 09:17
240-179263-4	GW-011623-AC-04	Water	01/16/23 14:15	01/17/23 09:17
240-179263-5	GW-011623-SS-05	Water	01/16/23 14:40	01/17/23 09:17
240-179263-6	GW-011623-JK-06	Water	01/16/23 15:40	01/17/23 09:17
240-179263-7	GW-011623-JL-07	Water	01/16/23 15:53	01/17/23 09:17
240-179263-8	GW-011623-AC-08	Water	01/16/23 15:55	01/17/23 09:17
240-179263-9	GW-011623-SS-09	Water	01/16/23 16:10	01/17/23 09:17
240-179263-10	GW-011623-JK-10	Water	01/16/23 16:30	01/17/23 09:17
240-179263-11	GW-011623-AC-01	Water	01/16/23 11:45	01/17/23 09:17
240-179263-12	GW-011623-JK-02	Water	01/16/23 14:15	01/17/23 09:17
240-179263-13	GW-011623-JL-03	Water	01/16/23 14:30	01/17/23 09:17
240-179263-14	GW-011623-AC-04	Water	01/16/23 14:15	01/17/23 09:17
240-179263-15	GW-011623-SS-05	Water	01/16/23 14:40	01/17/23 09:17
240-179263-16	GW-011623-JK-06	Water	01/16/23 15:40	01/17/23 09:17
240-179263-17	GW-011623-JL-07	Water	01/16/23 15:53	01/17/23 09:17
240-179263-18	GW-011623-AC-08	Water	01/16/23 15:55	01/17/23 09:17
240-179263-19	GW-011623-SS-09	Water	01/16/23 16:10	01/17/23 09:17
240-179263-20	GW-011623-JK-10	Water	01/16/23 16:30	01/17/23 09:17

Detection Summary

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-AC-01 — Lab Sample ID: 240-179263-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.11		0.098	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-JK-02 — Lab Sample ID: 240-179263-2

No Detections.

Client Sample ID: GW-011623-JL-03 — Lab Sample ID: 240-179263-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.076	J p	0.096	0.073	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-AC-04 — Lab Sample ID: 240-179263-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.11		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-SS-05 — Lab Sample ID: 240-179263-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.074	J	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-JK-06 — Lab Sample ID: 240-179263-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.086	J p	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-JL-07 — Lab Sample ID: 240-179263-7

No Detections.

Client Sample ID: GW-011623-AC-08 — Lab Sample ID: 240-179263-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.10		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-SS-09 — Lab Sample ID: 240-179263-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.46		0.10	0.077	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-JK-10 — Lab Sample ID: 240-179263-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.088	J	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011623-AC-01 — Lab Sample ID: 240-179263-11

No Detections.

Client Sample ID: GW-011623-JK-02 — Lab Sample ID: 240-179263-12

No Detections.

Client Sample ID: GW-011623-JL-03 — Lab Sample ID: 240-179263-13

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: GHD Services Inc. Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-AC-04 Lab Sample ID: 240-179263-14

No Detections.

Client Sample ID: GW-011623-SS-05 Lab Sample ID: 240-179263-15

No Detections.

Client Sample ID: GW-011623-JK-06 Lab Sample ID: 240-179263-16

No Detections.

Client Sample ID: GW-011623-JL-07 Lab Sample ID: 240-179263-17

No Detections.

Client Sample ID: GW-011623-AC-08 Lab Sample ID: 240-179263-18

No Detections.

Client Sample ID: GW-011623-SS-09 Lab Sample ID: 240-179263-19

No Detections.

Client Sample ID: GW-011623-JK-10 Lab Sample ID: 240-179263-20

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-AC-01
Lab Sample ID: 240-179263-1
Date Collected: 01/16/23 11:45
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1242	**0.11**		0.098	0.075	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		01/18/23 10:20	01/20/23 12:51	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		01/18/23 10:20	01/20/23 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*10 - 149*	*01/18/23 10:20*	*01/20/23 12:51*	*1*
DCB Decachlorobiphenyl	*63*		*10 - 174*	*01/18/23 10:20*	*01/20/23 12:51*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-JK-02
Lab Sample ID: 240-179263-2
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/18/23 10:20	01/20/23 13:07	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/18/23 10:20	01/20/23 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*01/18/23 10:20*	*01/20/23 13:07*	*1*
DCB Decachlorobiphenyl	*103*		*10 - 174*	*01/18/23 10:20*	*01/20/23 13:07*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-JL-03
Lab Sample ID: 240-179263-3
Date Collected: 01/16/23 14:30
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1242	**0.076**	**J p**	0.096	0.073	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		01/18/23 10:20	01/20/23 13:24	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		01/18/23 10:20	01/20/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*01/18/23 10:20*	*01/20/23 13:24*	*1*
DCB Decachlorobiphenyl	*102*		*10 - 174*	*01/18/23 10:20*	*01/20/23 13:24*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-AC-04
Lab Sample ID: 240-179263-4
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1242	**0.11**		0.095	0.072	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 13:41	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*01/18/23 10:20*	*01/20/23 13:41*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*01/18/23 10:20*	*01/20/23 13:41*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-SS-05
Lab Sample ID: 240-179263-5
Date Collected: 01/16/23 14:40
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1242	**0.074**	**J**	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 13:57	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*10 - 149*	*01/18/23 10:20*	*01/20/23 13:57*	*1*
DCB Decachlorobiphenyl	*104*		*10 - 174*	*01/18/23 10:20*	*01/20/23 13:57*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-JK-06
Lab Sample ID: 240-179263-6
Date Collected: 01/16/23 15:40
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1242	**0.086**	**J p**	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 14:14	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*10 - 149*	*01/18/23 10:20*	*01/20/23 14:14*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 174*	*01/18/23 10:20*	*01/20/23 14:14*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-JL-07
Lab Sample ID: 240-179263-7
Date Collected: 01/16/23 15:53
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 14:31	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*01/18/23 10:20*	*01/20/23 14:31*	*1*
DCB Decachlorobiphenyl	*108*		*10 - 174*	*01/18/23 10:20*	*01/20/23 14:31*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-AC-08
Lab Sample ID: 240-179263-8
Date Collected: 01/16/23 15:55
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1242	**0.10**		0.095	0.072	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 14:47	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*10 - 149*	*01/18/23 10:20*	*01/20/23 14:47*	*1*
DCB Decachlorobiphenyl	*63*		*10 - 174*	*01/18/23 10:20*	*01/20/23 14:47*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-SS-09
Lab Sample ID: 240-179263-9
Date Collected: 01/16/23 16:10
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1242	**0.46**		0.10	0.077	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/18/23 10:20	01/20/23 15:04	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/18/23 10:20	01/20/23 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*01/18/23 10:20*	*01/20/23 15:04*	*1*
DCB Decachlorobiphenyl	*86*		*10 - 174*	*01/18/23 10:20*	*01/20/23 15:04*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011623-JK-10
Lab Sample ID: 240-179263-10
Date Collected: 01/16/23 16:30
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1242	**0.088**	**J**	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 15:20	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*10 - 149*	*01/18/23 10:20*	*01/20/23 15:20*	*1*
DCB Decachlorobiphenyl	*101*		*10 - 174*	*01/18/23 10:20*	*01/20/23 15:20*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-AC-01
Lab Sample ID: 240-179263-11
Date Collected: 01/16/23 11:45
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 15:37	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*10 - 149*	*01/18/23 10:20*	*01/20/23 15:37*	*1*
DCB Decachlorobiphenyl	*102*		*10 - 174*	*01/18/23 10:20*	*01/20/23 15:37*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-JK-02
Lab Sample ID: 240-179263-12
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 15:54	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*01/18/23 10:20*	*01/20/23 15:54*	*1*
DCB Decachlorobiphenyl	*118*		*10 - 174*	*01/18/23 10:20*	*01/20/23 15:54*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-JL-03
Lab Sample ID: 240-179263-13
Date Collected: 01/16/23 14:30
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 16:10	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*10 - 149*	*01/18/23 10:20*	*01/20/23 16:10*	*1*
DCB Decachlorobiphenyl	*92*		*10 - 174*	*01/18/23 10:20*	*01/20/23 16:10*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-AC-04
Lab Sample ID: 240-179263-14
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 16:27	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*10 - 149*	*01/18/23 10:20*	*01/20/23 16:27*	*1*
DCB Decachlorobiphenyl	*117*		*10 - 174*	*01/18/23 10:20*	*01/20/23 16:27*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-SS-05
Lab Sample ID: 240-179263-15
Date Collected: 01/16/23 14:40
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.061	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1221	0.11	U	0.11	0.062	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1242	0.11	U	0.11	0.083	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		01/18/23 10:20	01/20/23 16:44	1
Aroclor-1260	0.11	U	0.11	0.050	ug/L		01/18/23 10:20	01/20/23 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*10 - 149*	*01/18/23 10:20*	*01/20/23 16:44*	*1*
DCB Decachlorobiphenyl	*109*		*10 - 174*	*01/18/23 10:20*	*01/20/23 16:44*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-JK-06
Lab Sample ID: 240-179263-16
Date Collected: 01/16/23 15:40
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 17:50	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*10 - 149*	*01/18/23 10:20*	*01/20/23 17:50*	*1*
DCB Decachlorobiphenyl	*106*		*10 - 174*	*01/18/23 10:20*	*01/20/23 17:50*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-JL-07
Lab Sample ID: 240-179263-17
Date Collected: 01/16/23 15:53
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 18:07	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*10 - 149*	*01/18/23 10:20*	*01/20/23 18:07*	*1*
DCB Decachlorobiphenyl	*105*		*10 - 174*	*01/18/23 10:20*	*01/20/23 18:07*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-AC-08
Lab Sample ID: 240-179263-18
Date Collected: 01/16/23 15:55
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 18:23	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*01/18/23 10:20*	*01/20/23 18:23*	*1*
DCB Decachlorobiphenyl	*111*		*10 - 174*	*01/18/23 10:20*	*01/20/23 18:23*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-SS-09
Lab Sample ID: 240-179263-19
Date Collected: 01/16/23 16:10
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.062	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1221	0.11	U	0.11	0.063	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1232	0.11	U	0.11	0.082	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1242	0.11	U	0.11	0.084	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1248	0.11	U	0.11	0.056	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1254	0.11	U	0.11	0.044	ug/L		01/18/23 10:20	01/20/23 18:40	1
Aroclor-1260	0.11	U	0.11	0.051	ug/L		01/18/23 10:20	01/20/23 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*01/18/23 10:20*	*01/20/23 18:40*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 174*	*01/18/23 10:20*	*01/20/23 18:40*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011623-JK-10
Lab Sample ID: 240-179263-20
Date Collected: 01/16/23 16:30
Matrix: Water
Date Received: 01/17/23 09:17

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/18/23 10:20	01/20/23 18:56	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/18/23 10:20	01/20/23 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*01/18/23 10:20*	*01/20/23 18:56*	*1*
DCB Decachlorobiphenyl	*108*		*10 - 174*	*01/18/23 10:20*	*01/20/23 18:56*	*1*

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 559268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179263-1	GW-011623-AC-01	Total/NA	Water	3510C	
240-179263-2	GW-011623-JK-02	Total/NA	Water	3510C	
240-179263-3	GW-011623-JL-03	Total/NA	Water	3510C	
240-179263-4	GW-011623-AC-04	Total/NA	Water	3510C	
240-179263-5	GW-011623-SS-05	Total/NA	Water	3510C	
240-179263-6	GW-011623-JK-06	Total/NA	Water	3510C	
240-179263-7	GW-011623-JL-07	Total/NA	Water	3510C	
240-179263-8	GW-011623-AC-08	Total/NA	Water	3510C	
240-179263-9	GW-011623-SS-09	Total/NA	Water	3510C	
240-179263-10	GW-011623-JK-10	Total/NA	Water	3510C	
240-179263-11	GW-011623-AC-01	Dissolved	Water	3510C	
240-179263-12	GW-011623-JK-02	Dissolved	Water	3510C	
240-179263-13	GW-011623-JL-03	Dissolved	Water	3510C	
240-179263-14	GW-011623-AC-04	Dissolved	Water	3510C	
240-179263-15	GW-011623-SS-05	Dissolved	Water	3510C	
240-179263-16	GW-011623-JK-06	Dissolved	Water	3510C	
240-179263-17	GW-011623-JL-07	Dissolved	Water	3510C	
240-179263-18	GW-011623-AC-08	Dissolved	Water	3510C	
240-179263-19	GW-011623-SS-09	Dissolved	Water	3510C	
240-179263-20	GW-011623-JK-10	Dissolved	Water	3510C	
MB 240-559268/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-559268/22-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 559538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179263-1	GW-011623-AC-01	Total/NA	Water	8082A	559268
240-179263-2	GW-011623-JK-02	Total/NA	Water	8082A	559268
240-179263-3	GW-011623-JL-03	Total/NA	Water	8082A	559268
240-179263-4	GW-011623-AC-04	Total/NA	Water	8082A	559268
240-179263-5	GW-011623-SS-05	Total/NA	Water	8082A	559268
240-179263-6	GW-011623-JK-06	Total/NA	Water	8082A	559268
240-179263-7	GW-011623-JL-07	Total/NA	Water	8082A	559268
240-179263-8	GW-011623-AC-08	Total/NA	Water	8082A	559268
240-179263-9	GW-011623-SS-09	Total/NA	Water	8082A	559268
240-179263-10	GW-011623-JK-10	Total/NA	Water	8082A	559268
240-179263-11	GW-011623-AC-01	Dissolved	Water	8082A	559268
240-179263-12	GW-011623-JK-02	Dissolved	Water	8082A	559268
240-179263-13	GW-011623-JL-03	Dissolved	Water	8082A	559268
240-179263-14	GW-011623-AC-04	Dissolved	Water	8082A	559268
240-179263-15	GW-011623-SS-05	Dissolved	Water	8082A	559268
240-179263-16	GW-011623-JK-06	Dissolved	Water	8082A	559268
240-179263-17	GW-011623-JL-07	Dissolved	Water	8082A	559268
240-179263-18	GW-011623-AC-08	Dissolved	Water	8082A	559268
240-179263-19	GW-011623-SS-09	Dissolved	Water	8082A	559268
240-179263-20	GW-011623-JK-10	Dissolved	Water	8082A	559268
MB 240-559268/21-A	Method Blank	Total/NA	Water	8082A	559268
LCS 240-559268/22-A	Lab Control Sample	Total/NA	Water	8082A	559268

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-559268/21-A
Matrix: Water
Analysis Batch: 559538

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/18/23 10:20	01/20/23 12:18	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/18/23 10:20	01/20/23 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*01/18/23 10:20*	*01/20/23 12:18*	*1*
DCB Decachlorobiphenyl	*109*		*10 - 174*	*01/18/23 10:20*	*01/20/23 12:18*	*1*

Lab Sample ID: LCS 240-559268/22-A
Matrix: Water
Analysis Batch: 559538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559268

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.87		ug/L		75	28 - 140
Aroclor-1260	2.50	2.02		ug/L		81	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*10 - 149*
DCB Decachlorobiphenyl	*110*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-179263-1	GW-011623-AC-01	77	63
240-179263-2	GW-011623-JK-02	72	103
240-179263-3	GW-011623-JL-03	84	102
240-179263-4	GW-011623-AC-04	72	67
240-179263-5	GW-011623-SS-05	70	104
240-179263-6	GW-011623-JK-06	71	87
240-179263-7	GW-011623-JL-07	75	108
240-179263-8	GW-011623-AC-08	58	63
240-179263-9	GW-011623-SS-09	68	86
240-179263-10	GW-011623-JK-10	83	101
LCS 240-559268/22-A	Lab Control Sample	77	110
MB 240-559268/21-A	Method Blank	86	109

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-179263-11	GW-011623-AC-01	78	102
240-179263-12	GW-011623-JK-02	86	118
240-179263-13	GW-011623-JL-03	73	92
240-179263-14	GW-011623-AC-04	97	117
240-179263-15	GW-011623-SS-05	78	109
240-179263-16	GW-011623-JK-06	81	106
240-179263-17	GW-011623-JL-07	70	105
240-179263-18	GW-011623-AC-08	84	111
240-179263-19	GW-011623-SS-09	56	87
240-179263-20	GW-011623-JK-10	68	108

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-AC-01
Lab Sample ID: 240-179263-1
Date Collected: 01/16/23 11:45
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 12:51

Client Sample ID: GW-011623-JK-02
Lab Sample ID: 240-179263-2
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 13:07

Client Sample ID: GW-011623-JL-03
Lab Sample ID: 240-179263-3
Date Collected: 01/16/23 14:30
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 13:24

Client Sample ID: GW-011623-AC-04
Lab Sample ID: 240-179263-4
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 13:41

Client Sample ID: GW-011623-SS-05
Lab Sample ID: 240-179263-5
Date Collected: 01/16/23 14:40
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 13:57

Client Sample ID: GW-011623-JK-06
Lab Sample ID: 240-179263-6
Date Collected: 01/16/23 15:40
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 14:14

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-JL-07
Lab Sample ID: 240-179263-7
Date Collected: 01/16/23 15:53
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 14:31

Client Sample ID: GW-011623-AC-08
Lab Sample ID: 240-179263-8
Date Collected: 01/16/23 15:55
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 14:47

Client Sample ID: GW-011623-SS-09
Lab Sample ID: 240-179263-9
Date Collected: 01/16/23 16:10
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 15:04

Client Sample ID: GW-011623-JK-10
Lab Sample ID: 240-179263-10
Date Collected: 01/16/23 16:30
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Total/NA	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 15:20

Client Sample ID: GW-011623-AC-01
Lab Sample ID: 240-179263-11
Date Collected: 01/16/23 11:45
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 15:37

Client Sample ID: GW-011623-JK-02
Lab Sample ID: 240-179263-12
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 15:54

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-JL-03
Lab Sample ID: 240-179263-13
Date Collected: 01/16/23 14:30
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 16:10

Client Sample ID: GW-011623-AC-04
Lab Sample ID: 240-179263-14
Date Collected: 01/16/23 14:15
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 16:27

Client Sample ID: GW-011623-SS-05
Lab Sample ID: 240-179263-15
Date Collected: 01/16/23 14:40
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 16:44

Client Sample ID: GW-011623-JK-06
Lab Sample ID: 240-179263-16
Date Collected: 01/16/23 15:40
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 17:50

Client Sample ID: GW-011623-JL-07
Lab Sample ID: 240-179263-17
Date Collected: 01/16/23 15:53
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 18:07

Client Sample ID: GW-011623-AC-08
Lab Sample ID: 240-179263-18
Date Collected: 01/16/23 15:55
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 18:23

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011623-SS-09
Lab Sample ID: 240-179263-19

Date Collected: 01/16/23 16:10
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 18:40

Client Sample ID: GW-011623-JK-10
Lab Sample ID: 240-179263-20

Date Collected: 01/16/23 16:30
Matrix: Water
Date Received: 01/17/23 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559268	MDH	EET CAN	01/18/23 10:20
Dissolved	Analysis	8082A		1	559538	RR	EET CAN	01/20/23 18:56

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-179263-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-23
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

* 4 coolers *

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins - Barberton

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford - RFI Groundwater Sampling

SAMPLER'S SIGNATURE: Alison Cinnare **PRINTED NAME:** Alison Cinnare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCBs	PARAMETERS: Dissolved PCBs	REMARKS
1	1/16/23	11:45	GW-011623-AC-01	WG	4	X	X	SSOW number: E117014
2		14:15	GW-011623-JK-02					
3		14:30	GW-011623-JL-03					
4		14:15	GW-011623-AC-04					
5		14:40	GW-011623-SS-05					
6		15:40	GW-011623-JK-06					
7		15:53	GW-011623-JL-07					
8		15:55	GW-011623-AC-08					
9		16:10	GW-011623-SS-09					
10		16:30	GW-011623-JK-10					

240-179263 Chain of Custody

TOTAL NUMBER OF CONTAINERS 40

RELINQUISHED BY: ① Alison Cinnare Alison Cinnare	DATE: 1/16/23 TIME: 1730	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex Priority Overnight **TRACKING No.** 8172 5962 5586

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Jeff Kolodziejski, Alison Cinnare, Julie Luzwick, Scott Sholar

RECEIVED FOR LABORATORY BY: Tammy Power DATE: 1-17-23 TIME: 917

9018

11034001-00(PRES001)GN-CO001

1/24/2023

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** 179263
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: Nancy Boyer

Cooler Received on 1-17-23 Opened on 1-17-23

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-Hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN # IR-13 (CF -0.2 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-16 (CF -0.1°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-17 (CF -0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 each	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# **HC291590**
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 2/6/2023 2:28:18 PM

JOB DESCRIPTION

017307A, GM Bedford, SSOW# E117014

JOB NUMBER

240-179305-1

Eurofins Canton
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 36
QC Sample Results 39
Surrogate Summary 43
Lab Chronicle 45
Certification Summary 50
Chain of Custody 51

Case Narrative

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179305-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-179305-1

Comments
No additional comments.

Receipt
The samples were received on 1/18/2023 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 0.1º C, 2.0º C, 2.8º C, 3.1 C, 3.2º C and 3.7º C.

GC Semi VOA
Method 8082A: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample (LCS) associat with preparation batch 240-559360 and analytical batch 240-559488. Percent recoveries are based on the amount spiked.

Method 8082A: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: GW-011723-JL-14 (240-179305-4), GW-011723-SS-15 (240-179305-5), (LCS 240-559360/26-A) and (MB 240-559360/25-A). Percent recoveries are based on the amount spiked.

Method 8082A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 240-559360 and analytical batch 240-559488 were outside control limits for one or more analytes. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences cau by sulfur: GW-011723-AC-11 (240-179305-1), GW-011723-AC-12 (240-179305-2), GW-011723-SS-13 (240-179305-3), GW-011723-SS-13 (240-179305-3[MS]), GW-011723-SS-13 (240-179305-3[MSD]) and GW-011723-JL-14 (240-179305-4).

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences cau by sulfur: GW-011723-AC-16 (240-179305-6), GW-011723-JL-20 (240-179305-10), GW-011723-AC-22 (240-179305-12), GW-011723-AC-11 (240-179305-14), GW-011723-AC-12 (240-179305-15), GW-011723-SS-13 (240-179305-16), GW-011723-S (240-179305-16[MS]) and GW-011723-SS-13 (240-179305-16[MSD]).

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences cau by sulfur: GW-011723-SS-15 (240-179305-18), GW-011723-JK-17 (240-179305-20), GW-011723-SS-18 (240-179305-21), GW-011723-JL-20 (240-179305-23) and GW-011723-AC-22 (240-179305-25).

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences cau by sulfur: GW-011723-SS-15 (240-179305-5) and GW-011723-SS-15 (240-179305-18).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-559828.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-179305-1	GW-011723-AC-11	Water	01/17/23 10:00	01/18/23 09:20
240-179305-2	GW-011723-AC-12	Water	01/17/23 10:05	01/18/23 09:20
240-179305-3	GW-011723-SS-13	Water	01/17/23 09:55	01/18/23 09:20
240-179305-4	GW-011723-JL-14	Water	01/17/23 11:11	01/18/23 09:20
240-179305-5	GW-011723-SS-15	Water	01/17/23 11:50	01/18/23 09:20
240-179305-6	GW-011723-AC-16	Water	01/17/23 11:50	01/18/23 09:20
240-179305-7	GW-011723-JK-17	Water	01/17/23 14:35	01/18/23 09:20
240-179305-8	GW-011723-SS-18	Water	01/17/23 14:40	01/18/23 09:20
240-179305-9	GW-011723-AC-19	Water	01/17/23 14:40	01/18/23 09:20
240-179305-10	GW-011723-JL-20	Water	01/17/23 14:48	01/18/23 09:20
240-179305-11	GW-011723-JK-21	Water	01/17/23 15:25	01/18/23 09:20
240-179305-12	GW-011723-AC-22	Water	01/17/23 16:00	01/18/23 09:20
240-179305-13	GW-011723-JL-23	Water	01/17/23 16:11	01/18/23 09:20
240-179305-14	GW-011723-AC-11	Water	01/17/23 10:00	01/18/23 09:20
240-179305-15	GW-011723-AC-12	Water	01/17/23 10:05	01/18/23 09:20
240-179305-16	GW-011723-SS-13	Water	01/17/23 09:55	01/18/23 09:20
240-179305-17	GW-011723-JL-14	Water	01/17/23 11:11	01/18/23 09:20
240-179305-18	GW-011723-SS-15	Water	01/17/23 11:50	01/18/23 09:20
240-179305-19	GW-011723-AC-16	Water	01/17/23 11:50	01/18/23 09:20
240-179305-20	GW-011723-JK-17	Water	01/17/23 14:35	01/18/23 09:20
240-179305-21	GW-011723-SS-18	Water	01/17/23 14:40	01/18/23 09:20
240-179305-22	GW-011723-AC-19	Water	01/17/23 14:40	01/18/23 09:20
240-179305-23	GW-011723-JL-20	Water	01/17/23 14:48	01/18/23 09:20
240-179305-24	GW-011723-JK-21	Water	01/17/23 15:25	01/18/23 09:20
240-179305-25	GW-011723-AC-22	Water	01/17/23 16:00	01/18/23 09:20
240-179305-26	GW-011723-JL-23	Water	01/17/23 16:11	01/18/23 09:20

Detection Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179305-1

Client Sample ID: GW-011723-AC-11 — Lab Sample ID: 240-179305-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.087	J	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011723-AC-12 — Lab Sample ID: 240-179305-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.088	J	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011723-SS-13 — Lab Sample ID: 240-179305-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.17		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011723-JL-14 — Lab Sample ID: 240-179305-4

No Detections.

Client Sample ID: GW-011723-SS-15 — Lab Sample ID: 240-179305-5

No Detections.

Client Sample ID: GW-011723-AC-16 — Lab Sample ID: 240-179305-6

No Detections.

Client Sample ID: GW-011723-JK-17 — Lab Sample ID: 240-179305-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.20		0.098	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011723-SS-18 — Lab Sample ID: 240-179305-8

No Detections.

Client Sample ID: GW-011723-AC-19 — Lab Sample ID: 240-179305-9

No Detections.

Client Sample ID: GW-011723-JL-20 — Lab Sample ID: 240-179305-10

No Detections.

Client Sample ID: GW-011723-JK-21 — Lab Sample ID: 240-179305-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.15		0.096	0.073	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011723-AC-22 — Lab Sample ID: 240-179305-12

No Detections.

Client Sample ID: GW-011723-JL-23 — Lab Sample ID: 240-179305-13

No Detections.

Client Sample ID: GW-011723-AC-11 — Lab Sample ID: 240-179305-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-AC-12 **Lab Sample ID: 240-179305-15**

No Detections.

Client Sample ID: GW-011723-SS-13 **Lab Sample ID: 240-179305-16**

No Detections.

Client Sample ID: GW-011723-JL-14 **Lab Sample ID: 240-179305-17**

No Detections.

Client Sample ID: GW-011723-SS-15 **Lab Sample ID: 240-179305-18**

No Detections.

Client Sample ID: GW-011723-AC-16 **Lab Sample ID: 240-179305-19**

No Detections.

Client Sample ID: GW-011723-JK-17 **Lab Sample ID: 240-179305-20**

No Detections.

Client Sample ID: GW-011723-SS-18 **Lab Sample ID: 240-179305-21**

No Detections.

Client Sample ID: GW-011723-AC-19 **Lab Sample ID: 240-179305-22**

No Detections.

Client Sample ID: GW-011723-JL-20 **Lab Sample ID: 240-179305-23**

No Detections.

Client Sample ID: GW-011723-JK-21 **Lab Sample ID: 240-179305-24**

No Detections.

Client Sample ID: GW-011723-AC-22 **Lab Sample ID: 240-179305-25**

No Detections.

Client Sample ID: GW-011723-JL-23 **Lab Sample ID: 240-179305-26**

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-AC-11
Lab Sample ID: 240-179305-1
Date Collected: 01/17/23 10:00
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1242	**0.087**	**J**	0.095	0.072	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/19/23 08:58	01/20/23 17:03	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/19/23 08:58	01/20/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*51*		*10 - 149*	*01/19/23 08:58*	*01/20/23 17:03*	*1*
DCB Decachlorobiphenyl	*46*		*10 - 174*	*01/19/23 08:58*	*01/20/23 17:03*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-AC-12
Lab Sample ID: 240-179305-2
Date Collected: 01/17/23 10:05
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1242	**0.088**	**J**	0.095	0.072	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/19/23 08:58	01/20/23 17:20	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/19/23 08:58	01/20/23 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*48*		*10 - 149*	*01/19/23 08:58*	*01/20/23 17:20*	*1*
DCB Decachlorobiphenyl	*57*		*10 - 174*	*01/19/23 08:58*	*01/20/23 17:20*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-SS-13
Lab Sample ID: 240-179305-3
Date Collected: 01/17/23 09:55
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U F1 F2	0.095	0.053	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1242	**0.17**		0.095	0.072	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/19/23 08:58	01/20/23 17:37	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/19/23 08:58	01/20/23 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*10 - 149*	*01/19/23 08:58*	*01/20/23 17:37*	*1*
DCB Decachlorobiphenyl	*59*		*10 - 174*	*01/19/23 08:58*	*01/20/23 17:37*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-JL-14
Lab Sample ID: 240-179305-4
Date Collected: 01/17/23 11:11
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		01/19/23 08:58	01/20/23 18:29	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		01/19/23 08:58	01/20/23 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*10 - 149*	*01/19/23 08:58*	*01/20/23 18:29*	*1*
DCB Decachlorobiphenyl	*15*		*10 - 174*	*01/19/23 08:58*	*01/20/23 18:29*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-AC-16
Lab Sample ID: 240-179305-6
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 11:27	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*01/20/23 11:50*	*01/24/23 11:27*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*01/20/23 11:50*	*01/24/23 11:27*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-JK-17
Lab Sample ID: 240-179305-7
Date Collected: 01/17/23 14:35
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1242	**0.20**		0.098	0.075	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		01/20/23 11:50	01/24/23 11:44	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		01/20/23 11:50	01/24/23 11:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*01/20/23 11:50*	*01/24/23 11:44*	*1*
DCB Decachlorobiphenyl	*66*		*10 - 174*	*01/20/23 11:50*	*01/24/23 11:44*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-SS-18
Date Collected: 01/17/23 14:40
Date Received: 01/18/23 09:20

Lab Sample ID: 240-179305-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.12	U	0.12	0.065	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1221	0.12	U	0.12	0.066	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1232	0.12	U	0.12	0.086	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1242	0.12	U	0.12	0.088	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1248	0.12	U	0.12	0.058	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1254	0.12	U	0.12	0.047	ug/L		01/20/23 11:50	01/24/23 12:00	1
Aroclor-1260	0.12	U	0.12	0.053	ug/L		01/20/23 11:50	01/24/23 12:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*01/20/23 11:50*	*01/24/23 12:00*	*1*
DCB Decachlorobiphenyl	*74*		*10 - 174*	*01/20/23 11:50*	*01/24/23 12:00*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-AC-19
Lab Sample ID: 240-179305-9
Date Collected: 01/17/23 14:40
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 12:17	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 12:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*01/20/23 11:50*	*01/24/23 12:17*	*1*
DCB Decachlorobiphenyl	*99*		*10 - 174*	*01/20/23 11:50*	*01/24/23 12:17*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-JL-20
Lab Sample ID: 240-179305-10
Date Collected: 01/17/23 14:48
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		01/20/23 11:50	01/24/23 12:34	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		01/20/23 11:50	01/24/23 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*01/20/23 11:50*	*01/24/23 12:34*	*1*
DCB Decachlorobiphenyl	*50*		*10 - 174*	*01/20/23 11:50*	*01/24/23 12:34*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-JK-21
Date Collected: 01/17/23 15:25
Date Received: 01/18/23 09:20

Lab Sample ID: 240-179305-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1242	**0.15**		0.096	0.073	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		01/20/23 11:50	01/24/23 12:51	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		01/20/23 11:50	01/24/23 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*01/20/23 11:50*	*01/24/23 12:51*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 174*	*01/20/23 11:50*	*01/24/23 12:51*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-AC-22
Lab Sample ID: 240-179305-12
Date Collected: 01/17/23 16:00
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 13:08	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 13:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*10 - 149*	*01/20/23 11:50*	*01/24/23 13:08*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 174*	*01/20/23 11:50*	*01/24/23 13:08*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011723-JL-23
Lab Sample ID: 240-179305-13
Date Collected: 01/17/23 16:11
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 13:24	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*01/20/23 11:50*	*01/24/23 13:24*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*01/20/23 11:50*	*01/24/23 13:24*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - RE

Client Sample ID: GW-011723-SS-15
Lab Sample ID: 240-179305-5
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		02/02/23 08:27	02/03/23 15:10	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		02/02/23 08:27	02/03/23 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*10 - 149*	*02/02/23 08:27*	*02/03/23 15:10*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 174*	*02/02/23 08:27*	*02/03/23 15:10*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-AC-11
Lab Sample ID: 240-179305-14
Date Collected: 01/17/23 10:00
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 13:41	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 13:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*01/20/23 11:50*	*01/24/23 13:41*	*1*
DCB Decachlorobiphenyl	*78*		*10 - 174*	*01/20/23 11:50*	*01/24/23 13:41*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-AC-12
Lab Sample ID: 240-179305-15
Date Collected: 01/17/23 10:05
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/20/23 11:50	01/24/23 13:58	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/20/23 11:50	01/24/23 13:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*01/20/23 11:50*	*01/24/23 13:58*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 174*	*01/20/23 11:50*	*01/24/23 13:58*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-SS-13
Date Collected: 01/17/23 09:55
Date Received: 01/18/23 09:20

Lab Sample ID: 240-179305-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		01/20/23 11:50	01/24/23 15:05	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		01/20/23 11:50	01/24/23 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*01/20/23 11:50*	*01/24/23 15:05*	*1*
DCB Decachlorobiphenyl	*71*		*10 - 174*	*01/20/23 11:50*	*01/24/23 15:05*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-JL-14
Lab Sample ID: 240-179305-17
Date Collected: 01/17/23 11:11
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/20/23 11:50	01/24/23 15:56	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/20/23 11:50	01/24/23 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*10 - 149*	*01/20/23 11:50*	*01/24/23 15:56*	*1*
DCB Decachlorobiphenyl	*83*		*10 - 174*	*01/20/23 11:50*	*01/24/23 15:56*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-AC-16
Lab Sample ID: 240-179305-19
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/24/23 09:12	01/25/23 17:19	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/24/23 09:12	01/25/23 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*100*		*10 - 149*	*01/24/23 09:12*	*01/25/23 17:19*	*1*
DCB Decachlorobiphenyl	*102*		*10 - 174*	*01/24/23 09:12*	*01/25/23 17:19*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-JK-17
Lab Sample ID: 240-179305-20
Date Collected: 01/17/23 14:35
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/24/23 09:12	01/25/23 17:35	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/24/23 09:12	01/25/23 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*10 - 149*	*01/24/23 09:12*	*01/25/23 17:35*	*1*
DCB Decachlorobiphenyl	*90*		*10 - 174*	*01/24/23 09:12*	*01/25/23 17:35*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-SS-18
Date Collected: 01/17/23 14:40
Date Received: 01/18/23 09:20

Lab Sample ID: 240-179305-21
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.12	U	0.12	0.065	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1221	0.12	U	0.12	0.066	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1232	0.12	U	0.12	0.086	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1242	0.12	U	0.12	0.088	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1248	0.12	U	0.12	0.058	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1254	0.12	U	0.12	0.047	ug/L		01/24/23 09:12	01/25/23 17:52	1
Aroclor-1260	0.12	U	0.12	0.053	ug/L		01/24/23 09:12	01/25/23 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*10 - 149*	*01/24/23 09:12*	*01/25/23 17:52*	*1*
DCB Decachlorobiphenyl	*76*		*10 - 174*	*01/24/23 09:12*	*01/25/23 17:52*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-AC-19
Lab Sample ID: 240-179305-22
Date Collected: 01/17/23 14:40
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/24/23 09:12	01/25/23 18:09	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/24/23 09:12	01/25/23 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*01/24/23 09:12*	*01/25/23 18:09*	*1*
DCB Decachlorobiphenyl	*83*		*10 - 174*	*01/24/23 09:12*	*01/25/23 18:09*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-JL-20
Lab Sample ID: 240-179305-23
Date Collected: 01/17/23 14:48
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.062	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1221	0.11	U	0.11	0.063	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1232	0.11	U	0.11	0.081	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1242	0.11	U	0.11	0.084	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1248	0.11	U	0.11	0.055	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1254	0.11	U	0.11	0.044	ug/L		01/24/23 09:12	01/25/23 18:26	1
Aroclor-1260	0.11	U	0.11	0.051	ug/L		01/24/23 09:12	01/25/23 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*10 - 149*	*01/24/23 09:12*	*01/25/23 18:26*	*1*
DCB Decachlorobiphenyl	*88*		*10 - 174*	*01/24/23 09:12*	*01/25/23 18:26*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-JK-21
Lab Sample ID: 240-179305-24
Date Collected: 01/17/23 15:25
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		01/24/23 09:12	01/25/23 18:43	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		01/24/23 09:12	01/25/23 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*10 - 149*	*01/24/23 09:12*	*01/25/23 18:43*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 174*	*01/24/23 09:12*	*01/25/23 18:43*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-AC-22
Lab Sample ID: 240-179305-25
Date Collected: 01/17/23 16:00
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/24/23 09:12	01/25/23 19:00	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/24/23 09:12	01/25/23 19:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*94*		*10 - 149*	*01/24/23 09:12*	*01/25/23 19:00*	*1*
DCB Decachlorobiphenyl	*109*		*10 - 174*	*01/24/23 09:12*	*01/25/23 19:00*	*1*

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011723-JL-23
Lab Sample ID: 240-179305-26
Date Collected: 01/17/23 16:11
Matrix: Water
Date Received: 01/18/23 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		01/30/23 07:52	01/31/23 12:34	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		01/30/23 07:52	01/31/23 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*82*		*10 - 149*	*01/30/23 07:52*	*01/31/23 12:34*	*1*
DCB Decachlorobiphenyl	*116*		*10 - 174*	*01/30/23 07:52*	*01/31/23 12:34*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved - RE

Client Sample ID: GW-011723-SS-15
Date Collected: 01/17/23 11:50
Date Received: 01/18/23 09:20

Lab Sample ID: 240-179305-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.062	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1221	0.11	U	0.11	0.063	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1232	0.11	U	0.11	0.081	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1242	0.11	U	0.11	0.084	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1248	0.11	U	0.11	0.055	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1254	0.11	U	0.11	0.044	ug/L		02/02/23 08:27	02/03/23 15:28	1
Aroclor-1260	0.11	U	0.11	0.051	ug/L		02/02/23 08:27	02/03/23 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*10 - 149*	*02/02/23 08:27*	*02/03/23 15:28*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*02/02/23 08:27*	*02/03/23 15:28*	*1*

GC Semi VOA

Prep Batch: 559360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-1	GW-011723-AC-11	Total/NA	Water	3510C	
240-179305-2	GW-011723-AC-12	Total/NA	Water	3510C	
240-179305-3	GW-011723-SS-13	Total/NA	Water	3510C	
240-179305-4	GW-011723-JL-14	Total/NA	Water	3510C	
MB 240-559360/25-A	Method Blank	Total/NA	Water	3510C	
LCS 240-559360/26-A	Lab Control Sample	Total/NA	Water	3510C	
240-179305-3 MS	GW-011723-SS-13	Total/NA	Water	3510C	
240-179305-3 MSD	GW-011723-SS-13	Total/NA	Water	3510C	

Analysis Batch: 559488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-1	GW-011723-AC-11	Total/NA	Water	8082A	559360
240-179305-2	GW-011723-AC-12	Total/NA	Water	8082A	559360
240-179305-3	GW-011723-SS-13	Total/NA	Water	8082A	559360
240-179305-4	GW-011723-JL-14	Total/NA	Water	8082A	559360
MB 240-559360/25-A	Method Blank	Total/NA	Water	8082A	559360
LCS 240-559360/26-A	Lab Control Sample	Total/NA	Water	8082A	559360
240-179305-3 MS	GW-011723-SS-13	Total/NA	Water	8082A	559360
240-179305-3 MSD	GW-011723-SS-13	Total/NA	Water	8082A	559360

Prep Batch: 559569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-6	GW-011723-AC-16	Total/NA	Water	3510C	
240-179305-7	GW-011723-JK-17	Total/NA	Water	3510C	
240-179305-8	GW-011723-SS-18	Total/NA	Water	3510C	
240-179305-9	GW-011723-AC-19	Total/NA	Water	3510C	
240-179305-10	GW-011723-JL-20	Total/NA	Water	3510C	
240-179305-11	GW-011723-JK-21	Total/NA	Water	3510C	
240-179305-12	GW-011723-AC-22	Total/NA	Water	3510C	
240-179305-13	GW-011723-JL-23	Total/NA	Water	3510C	
240-179305-14	GW-011723-AC-11	Dissolved	Water	3510C	
240-179305-15	GW-011723-AC-12	Dissolved	Water	3510C	
240-179305-16	GW-011723-SS-13	Dissolved	Water	3510C	
240-179305-17	GW-011723-JL-14	Dissolved	Water	3510C	
MB 240-559569/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-559569/24-A	Lab Control Sample	Total/NA	Water	3510C	
240-179305-16 MS	GW-011723-SS-13	Dissolved	Water	3510C	
240-179305-16 MSD	GW-011723-SS-13	Dissolved	Water	3510C	

Analysis Batch: 559778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-6	GW-011723-AC-16	Total/NA	Water	8082A	559569
240-179305-7	GW-011723-JK-17	Total/NA	Water	8082A	559569
240-179305-8	GW-011723-SS-18	Total/NA	Water	8082A	559569
240-179305-9	GW-011723-AC-19	Total/NA	Water	8082A	559569
240-179305-10	GW-011723-JL-20	Total/NA	Water	8082A	559569
240-179305-11	GW-011723-JK-21	Total/NA	Water	8082A	559569
240-179305-12	GW-011723-AC-22	Total/NA	Water	8082A	559569
240-179305-13	GW-011723-JL-23	Total/NA	Water	8082A	559569
240-179305-14	GW-011723-AC-11	Dissolved	Water	8082A	559569
240-179305-15	GW-011723-AC-12	Dissolved	Water	8082A	559569

GC Semi VOA (Continued)

Analysis Batch: 559778 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-16	GW-011723-SS-13	Dissolved	Water	8082A	559569
240-179305-17	GW-011723-JL-14	Dissolved	Water	8082A	559569
MB 240-559569/23-A	Method Blank	Total/NA	Water	8082A	559569
LCS 240-559569/24-A	Lab Control Sample	Total/NA	Water	8082A	559569
240-179305-16 MS	GW-011723-SS-13	Dissolved	Water	8082A	559569
240-179305-16 MSD	GW-011723-SS-13	Dissolved	Water	8082A	559569

Prep Batch: 559828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-19	GW-011723-AC-16	Dissolved	Water	3510C	
240-179305-20	GW-011723-JK-17	Dissolved	Water	3510C	
240-179305-21	GW-011723-SS-18	Dissolved	Water	3510C	
240-179305-22	GW-011723-AC-19	Dissolved	Water	3510C	
240-179305-23	GW-011723-JL-20	Dissolved	Water	3510C	
240-179305-24	GW-011723-JK-21	Dissolved	Water	3510C	
240-179305-25	GW-011723-AC-22	Dissolved	Water	3510C	
MB 240-559828/20-A	Method Blank	Total/NA	Water	3510C	
LCS 240-559828/21-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 559988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-19	GW-011723-AC-16	Dissolved	Water	8082A	559828
240-179305-20	GW-011723-JK-17	Dissolved	Water	8082A	559828
240-179305-21	GW-011723-SS-18	Dissolved	Water	8082A	559828
240-179305-22	GW-011723-AC-19	Dissolved	Water	8082A	559828
240-179305-23	GW-011723-JL-20	Dissolved	Water	8082A	559828
240-179305-24	GW-011723-JK-21	Dissolved	Water	8082A	559828
240-179305-25	GW-011723-AC-22	Dissolved	Water	8082A	559828
MB 240-559828/20-A	Method Blank	Total/NA	Water	8082A	559828
LCS 240-559828/21-A	Lab Control Sample	Total/NA	Water	8082A	559828

Prep Batch: 560398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-26	GW-011723-JL-23	Dissolved	Water	3510C	
MB 240-560398/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-560398/24-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 560565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-26	GW-011723-JL-23	Dissolved	Water	8082A	560398
MB 240-560398/23-A	Method Blank	Total/NA	Water	8082A	560398
LCS 240-560398/24-A	Lab Control Sample	Total/NA	Water	8082A	560398

Prep Batch: 560781

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-5 - RE	GW-011723-SS-15	Total/NA	Water	3510C	
240-179305-18 - RE	GW-011723-SS-15	Dissolved	Water	3510C	
MB 240-560781/22-A	Method Blank	Total/NA	Water	3510C	
LCS 240-560781/23-A	Lab Control Sample	Total/NA	Water	3510C	

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Analysis Batch: 560870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179305-5 - RE	GW-011723-SS-15	Total/NA	Water	8082A	560781
240-179305-18 - RE	GW-011723-SS-15	Dissolved	Water	8082A	560781
MB 240-560781/22-A	Method Blank	Total/NA	Water	8082A	560781
LCS 240-560781/23-A	Lab Control Sample	Total/NA	Water	8082A	560781

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-559360/25-A
Matrix: Water
Analysis Batch: 559488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/19/23 08:58	01/20/23 10:19	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/19/23 08:58	01/20/23 10:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*10 - 149*	*01/19/23 08:58*	*01/20/23 10:19*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*01/19/23 08:58*	*01/20/23 10:19*	*1*

Lab Sample ID: LCS 240-559360/26-A
Matrix: Water
Analysis Batch: 559488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559360

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			5.00	3.15		ug/L		63	28 - 140		
Aroclor-1260			5.00	3.15		ug/L		63	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*10 - 149*
DCB Decachlorobiphenyl	*60*		*10 - 174*

Lab Sample ID: 240-179305-3 MS
Matrix: Water
Analysis Batch: 559488

Client Sample ID: GW-011723-SS-13
Prep Type: Total/NA
Prep Batch: 559360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.095	U F1 F2	2.43	1.19	F1	ug/L		49	50 - 120		
Aroclor-1260	0.095	U	2.43	1.11		ug/L		46	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*56*		*10 - 149*
DCB Decachlorobiphenyl	*56*		*10 - 174*

Lab Sample ID: 240-179305-3 MSD
Matrix: Water
Analysis Batch: 559488

Client Sample ID: GW-011723-SS-13
Prep Type: Total/NA
Prep Batch: 559360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U F1 F2	2.55	0.902	F1 F2	ug/L		35	50 - 120	27	25
Aroclor-1260	0.095	U	2.55	0.998		ug/L		39	39 - 135	11	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*37*		*10 - 149*
DCB Decachlorobiphenyl	*47*		*10 - 174*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-559569/23-A
Matrix: Water
Analysis Batch: 559778

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559569

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/20/23 11:50	01/24/23 09:29	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/20/23 11:50	01/24/23 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*88*		*10 - 149*	*01/20/23 11:50*	*01/24/23 09:29*	*1*
DCB Decachlorobiphenyl	*88*		*10 - 174*	*01/20/23 11:50*	*01/24/23 09:29*	*1*

Lab Sample ID: LCS 240-559569/24-A
Matrix: Water
Analysis Batch: 559778

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.62		ug/L		65	28 - 140
Aroclor-1260	2.50	1.77		ug/L		71	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*68*		*10 - 149*
DCB Decachlorobiphenyl	*75*		*10 - 174*

Lab Sample ID: MB 240-559828/20-A
Matrix: Water
Analysis Batch: 559988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 559828

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/24/23 09:12	01/25/23 11:40	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/24/23 09:12	01/25/23 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*		*10 - 149*	*01/24/23 09:12*	*01/25/23 11:40*	*1*
DCB Decachlorobiphenyl	*74*		*10 - 174*	*01/24/23 09:12*	*01/25/23 11:40*	*1*

Lab Sample ID: LCS 240-559828/21-A
Matrix: Water
Analysis Batch: 559988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 559828

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.12		ug/L		45	28 - 140
Aroclor-1260	2.50	1.09		ug/L		44	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	55		10 - 149
DCB Decachlorobiphenyl	63		10 - 174

Lab Sample ID: MB 240-560398/23-A
Matrix: Water
Analysis Batch: 560565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 560398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/30/23 07:52	01/31/23 12:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		10 - 149	01/30/23 07:52	01/31/23 12:18	1
DCB Decachlorobiphenyl	106		10 - 174	01/30/23 07:52	01/31/23 12:18	1

Lab Sample ID: LCS 240-560398/24-A
Matrix: Water
Analysis Batch: 560565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 560398

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	2.09		ug/L		83	28 - 140
Aroclor-1260	2.50	2.51		ug/L		100	39 - 153

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	82		10 - 149
DCB Decachlorobiphenyl	107		10 - 174

Lab Sample ID: MB 240-560781/22-A
Matrix: Water
Analysis Batch: 560870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 560781

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		02/02/23 08:27	02/03/23 11:25	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		02/02/23 08:27	02/03/23 11:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		10 - 149	02/02/23 08:27	02/03/23 11:25	1
DCB Decachlorobiphenyl	78		10 - 174	02/02/23 08:27	02/03/23 11:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-560781/23-A
Matrix: Water
Analysis Batch: 560870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 560781

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.68		ug/L		67	28 - 140		
Aroclor-1260			2.50	1.41		ug/L		56	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*10 - 149*
DCB Decachlorobiphenyl	*59*		*10 - 174*

Lab Sample ID: 240-179305-16 MS
Matrix: Water
Analysis Batch: 559778

Client Sample ID: GW-011723-SS-13
Prep Type: Dissolved
Prep Batch: 559569

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.097	U	2.60	1.47		ug/L		57	50 - 120		
Aroclor-1260	0.097	U	2.60	1.54		ug/L		59	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*65*		*10 - 149*
DCB Decachlorobiphenyl	*76*		*10 - 174*

Lab Sample ID: 240-179305-16 MSD
Matrix: Water
Analysis Batch: 559778

Client Sample ID: GW-011723-SS-13
Prep Type: Dissolved
Prep Batch: 559569

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.097	U	2.60	1.39		ug/L		53	50 - 120	6	25
Aroclor-1260	0.097	U	2.60	1.25		ug/L		48	39 - 135	21	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*57*		*10 - 149*
DCB Decachlorobiphenyl	*64*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179305-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-149)	(10-174)	(10-174)
240-179305-1	GW-011723-AC-11	51		46	
240-179305-2	GW-011723-AC-12	48		57	
240-179305-3	GW-011723-SS-13	55		59	
240-179305-3 MS	GW-011723-SS-13	56		56	
240-179305-3 MSD	GW-011723-SS-13	37		47	
240-179305-4	GW-011723-JL-14	97		15	
240-179305-5 - RE	GW-011723-SS-15	88		82	
240-179305-6	GW-011723-AC-16	66	66	63	73
240-179305-7	GW-011723-JK-17		66		66
240-179305-8	GW-011723-SS-18		75		74
240-179305-9	GW-011723-AC-19		84		99
240-179305-10	GW-011723-JL-20		68		50
240-179305-11	GW-011723-JK-21		75		72
240-179305-12	GW-011723-AC-22		54		56
240-179305-13	GW-011723-JL-23		69		75
LCS 240-559360/26-A	Lab Control Sample	69		60	
LCS 240-559569/24-A	Lab Control Sample		68		75
LCS 240-559828/21-A	Lab Control Sample	55		63	
LCS 240-560398/24-A	Lab Control Sample	82		107	
LCS 240-560781/23-A	Lab Control Sample	77		59	
MB 240-559360/25-A	Method Blank	52		69	
MB 240-559569/23-A	Method Blank		88		88
MB 240-559828/20-A	Method Blank	69		74	
MB 240-560398/23-A	Method Blank	83		106	
MB 240-560781/22-A	Method Blank	82		78	

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-179305-14	GW-011723-AC-11	66	78
240-179305-15	GW-011723-AC-12	61	72
240-179305-16	GW-011723-SS-13	65	71
240-179305-16 MS	GW-011723-SS-13	65	76
240-179305-16 MSD	GW-011723-SS-13	57	64
240-179305-17	GW-011723-JL-14	77	83

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Surrogate Summary

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX1	DCBP1								
Lab Sample ID	Client Sample ID	(10-149)	(10-174)								
240-179305-18 - RE	GW-011723-SS-15	72	73								
240-179305-19	GW-011723-AC-16	100	102								
240-179305-20	GW-011723-JK-17	89	90								
240-179305-21	GW-011723-SS-18	73	76								
240-179305-22	GW-011723-AC-19	84	83								
240-179305-23	GW-011723-JL-20	89	88								
240-179305-24	GW-011723-JK-21	88	81								
240-179305-25	GW-011723-AC-22	94	109								
240-179305-26	GW-011723-JL-23	82	116								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-AC-11
Lab Sample ID: 240-179305-1
Date Collected: 01/17/23 10:00
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559360	MDH	EET CAN	01/19/23 08:58
Total/NA	Analysis	8082A		1	559488	MBB	EET CAN	01/20/23 17:03

Client Sample ID: GW-011723-AC-12
Lab Sample ID: 240-179305-2
Date Collected: 01/17/23 10:05
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559360	MDH	EET CAN	01/19/23 08:58
Total/NA	Analysis	8082A		1	559488	MBB	EET CAN	01/20/23 17:20

Client Sample ID: GW-011723-SS-13
Lab Sample ID: 240-179305-3
Date Collected: 01/17/23 09:55
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559360	MDH	EET CAN	01/19/23 08:58
Total/NA	Analysis	8082A		1	559488	MBB	EET CAN	01/20/23 17:37

Client Sample ID: GW-011723-JL-14
Lab Sample ID: 240-179305-4
Date Collected: 01/17/23 11:11
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559360	MDH	EET CAN	01/19/23 08:58
Total/NA	Analysis	8082A		1	559488	MBB	EET CAN	01/20/23 18:29

Client Sample ID: GW-011723-SS-15
Lab Sample ID: 240-179305-5
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C	RE		560781	MDH	EET CAN	02/02/23 08:27
Total/NA	Analysis	8082A	RE	1	560870	MBB	EET CAN	02/03/23 15:10

Client Sample ID: GW-011723-AC-16
Lab Sample ID: 240-179305-6
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 11:27

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-JK-17 Lab Sample ID: 240-179305-7

Date Collected: 01/17/23 14:35 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 11:44

Client Sample ID: GW-011723-SS-18 Lab Sample ID: 240-179305-8

Date Collected: 01/17/23 14:40 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 12:00

Client Sample ID: GW-011723-AC-19 Lab Sample ID: 240-179305-9

Date Collected: 01/17/23 14:40 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 12:17

Client Sample ID: GW-011723-JL-20 Lab Sample ID: 240-179305-10

Date Collected: 01/17/23 14:48 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 12:34

Client Sample ID: GW-011723-JK-21 Lab Sample ID: 240-179305-11

Date Collected: 01/17/23 15:25 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 12:51

Client Sample ID: GW-011723-AC-22 Lab Sample ID: 240-179305-12

Date Collected: 01/17/23 16:00 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 13:08

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-JL-23 — Lab Sample ID: 240-179305-13

Date Collected: 01/17/23 16:11 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Total/NA	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 13:24

Client Sample ID: GW-011723-AC-11 — Lab Sample ID: 240-179305-14

Date Collected: 01/17/23 10:00 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Dissolved	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 13:41

Client Sample ID: GW-011723-AC-12 — Lab Sample ID: 240-179305-15

Date Collected: 01/17/23 10:05 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Dissolved	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 13:58

Client Sample ID: GW-011723-SS-13 — Lab Sample ID: 240-179305-16

Date Collected: 01/17/23 09:55 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Dissolved	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 15:05

Client Sample ID: GW-011723-JL-14 — Lab Sample ID: 240-179305-17

Date Collected: 01/17/23 11:11 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559569	MDH	EET CAN	01/20/23 11:50
Dissolved	Analysis	8082A		1	559778	LSH	EET CAN	01/24/23 15:56

Client Sample ID: GW-011723-SS-15 — Lab Sample ID: 240-179305-18

Date Collected: 01/17/23 11:50 **Matrix: Water**
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C	RE		560781	MDH	EET CAN	02/02/23 08:27
Dissolved	Analysis	8082A	RE	1	560870	MBB	EET CAN	02/03/23 15:28

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-AC-16
Lab Sample ID: 240-179305-19
Date Collected: 01/17/23 11:50
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 17:19

Client Sample ID: GW-011723-JK-17
Lab Sample ID: 240-179305-20
Date Collected: 01/17/23 14:35
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 17:35

Client Sample ID: GW-011723-SS-18
Lab Sample ID: 240-179305-21
Date Collected: 01/17/23 14:40
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 17:52

Client Sample ID: GW-011723-AC-19
Lab Sample ID: 240-179305-22
Date Collected: 01/17/23 14:40
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 18:09

Client Sample ID: GW-011723-JL-20
Lab Sample ID: 240-179305-23
Date Collected: 01/17/23 14:48
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 18:26

Client Sample ID: GW-011723-JK-21
Lab Sample ID: 240-179305-24
Date Collected: 01/17/23 15:25
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 18:43

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011723-AC-22
Lab Sample ID: 240-179305-25
Date Collected: 01/17/23 16:00
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			559828	MDH	EET CAN	01/24/23 09:12
Dissolved	Analysis	8082A		1	559988	MBB	EET CAN	01/25/23 19:00

Client Sample ID: GW-011723-JL-23
Lab Sample ID: 240-179305-26
Date Collected: 01/17/23 16:11
Matrix: Water
Date Received: 01/18/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Dissolved	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 12:34

Laboratory References:
EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-179305-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-23
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

6 coolers

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins - Barberton

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford - RFI Groundwater Samaling

SAMPLER'S SIGNATURE: Alison Civiare **PRINTED NAME:** Alison Civiare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCB	PARAMETERS: Dissolved PCB	REMARKS
1	1/17/23	10:00	GW-011723-AC-11	WG	4	X	X	SSOW number: E117014
2		10:05	GW-011723-AC-12		4			ms/msd
3		9:55	GW-011723-SS-13		12			
4		11:11	GW-011723-JL-14		4			
5		11:50	GW-011723-SS-15		4			
6		11:50	GW-011723-AC-16		4			
7		14:35	GW-011723-JK-17		4			
8		14:40	GW-011723-SS-18		4			
9		14:40	GW-011723-AC-19		4			
10		14:48	GW-011723-JL-20		4			
11		15:25	GW-011723-JK-21		4			
12		16:00	GW-011723-AC-22		4			
13	↓	10:11	GW-011723-JL-23	↓	4	↓	↓	
TOTAL NUMBER OF CONTAINERS					60			

240-179305 Chain of Custody

RELINQUISHED BY: ① Alison Civiare Alison Civiare	DATE: 1/17/23 TIME: 1730	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex Priority Overnight **TRACKING No.** 8172 5962 5597

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Jeff Kolodziejski, Alison Civiare, Julie Luzwick, Scott Sholar

RECEIVED FOR LABORATORY BY: DATE: 1-18-23 TIME: 9:20

9013

11034001-00(PRES001)GN-CO001

2/6/2023

Eurofins - Canton Sample Receipt Form/Narrative Login # : 179305
Barberton Facility

Client GHD Site Name

Cooler Received on 1-18-23 Opened on 1-18-23

Cooler unpacked by: Charise K

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 62 Foam Box Client Cooler Box Other

Packing material used: ~~Bubble Wrap~~ Foam ~~Plastic Bag~~ None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt (X) See Multiple Cooler Form
   IR GUN # IR-13 (CF -0.2 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-16 (CF -0.1°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-17 (CF -0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No (NA) pH Strip Lot# **HC291590**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	(No) NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR-13 (IR-16) IR-17	2.1	2.0	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	3.8	3.7	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	3.1	3.0	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	0.2	0.1	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	3.3	3.2	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	2.9	2.8	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17			Wet Ice

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 2/9/2023 7:21:28 AM

JOB DESCRIPTION

017307A, GM Bedford, SSOW# E117014

JOB NUMBER

240-179375-1

Eurofins Canton
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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2/9/2023 7:21:28 AM

Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 32
QC Sample Results 34
Surrogate Summary 37
Lab Chronicle 39
Certification Summary 43
Chain of Custody 44

Case Narrative

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179375-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-179375-1

Comments
No additional comments.

Receipt
The samples were received on 1/19/2023 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.9º C, 2.2º C, 2.4º C, 3. C and 3.3º C.

GC Semi VOA
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-011823-JK-24 (240-179375-1), GW-011823-AC-26 (240-179375-3), GW-011823-JL-27 (240-179375-4), GW-011823-JK-28 (240-179375-5), GW-011823-JL-29 (240-179375-6), GW-011823-AC-30 (240-179375-7), GW-011823-JL-31 (240-179375-8) and GW-011823-AC-32 (240-179375-9).

Method 8082A: The following sample was diluted due to the abundance of target analytes: GW-011823-JK-28 (240-179375-5). As such, surrogate recoveries are below the calibration range and elevated reporting limits (RLs) are provided.

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to the contributions of patterns from multiple Aroclors present, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-011823-AC-30 (240-179375-7). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-011823-JK-33 (240-179375-10), GW-011823-AC-26 (240-179375-14), GW-011823-JL-27 (240-179375-15), GW-011823-JL-31 (240-179375-19), GW-011823-AC-32 (240-179375-20) and GW-011823-JK-33 (240-179375-21).

Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-011823-JK-28 (240-179375-16).

Method 8082A: The following samples appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-011823-JK-28 (240-179375-16). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-011823-JL-29 (240-179375-6). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Methods 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-561037.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-179375-1	GW-011823-JK-24	Water	01/18/23 10:15	01/19/23 09:35
240-179375-2	GW-011823-JK-25	Water	01/18/23 10:25	01/19/23 09:35
240-179375-3	GW-011823-AC-26	Water	01/18/23 10:00	01/19/23 09:35
240-179375-4	GW-011823-JL-27	Water	01/18/23 10:45	01/19/23 09:35
240-179375-5	GW-011823-JK-28	Water	01/18/23 11:15	01/19/23 09:35
240-179375-6	GW-011823-JL-29	Water	01/18/23 11:25	01/19/23 09:35
240-179375-7	GW-011823-AC-30	Water	01/18/23 10:05	01/19/23 09:35
240-179375-8	GW-011823-JL-31	Water	01/18/23 14:25	01/19/23 09:35
240-179375-9	GW-011823-AC-32	Water	01/18/23 14:35	01/19/23 09:35
240-179375-10	GW-011823-JK-33	Water	01/18/23 14:45	01/19/23 09:35
240-179375-11	GW-011823-JL-34	Water	01/18/23 15:35	01/19/23 09:35
240-179375-12	GW-011823-JK-24	Water	01/18/23 10:15	01/19/23 09:35
240-179375-13	GW-011823-JK-25	Water	01/18/23 10:25	01/19/23 09:35
240-179375-14	GW-011823-AC-26	Water	01/18/23 10:00	01/19/23 09:35
240-179375-15	GW-011823-JL-27	Water	01/18/23 10:45	01/19/23 09:35
240-179375-16	GW-011823-JK-28	Water	01/18/23 11:15	01/19/23 09:35
240-179375-17	GW-011823-JL-29	Water	01/18/23 11:25	01/19/23 09:35
240-179375-18	GW-011823-AC-30	Water	01/18/23 10:05	01/19/23 09:35
240-179375-19	GW-011823-JL-31	Water	01/18/23 14:25	01/19/23 09:35
240-179375-20	GW-011823-AC-32	Water	01/18/23 14:35	01/19/23 09:35
240-179375-21	GW-011823-JK-33	Water	01/18/23 14:45	01/19/23 09:35
240-179375-22	GW-011823-JL-34	Water	01/18/23 15:35	01/19/23 09:35

Detection Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-JK-24 — Lab Sample ID: 240-179375-1

No Detections.

Client Sample ID: GW-011823-JK-25 — Lab Sample ID: 240-179375-2

No Detections.

Client Sample ID: GW-011823-AC-26 — Lab Sample ID: 240-179375-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.34		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011823-JL-27 — Lab Sample ID: 240-179375-4

No Detections.

Client Sample ID: GW-011823-JK-28 — Lab Sample ID: 240-179375-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	13		1.0	0.76	ug/L	10		8082A	Total/NA

Client Sample ID: GW-011823-JL-29 — Lab Sample ID: 240-179375-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.16		0.10	0.051	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011823-AC-30 — Lab Sample ID: 240-179375-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.74		0.099	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011823-JL-31 — Lab Sample ID: 240-179375-8

No Detections.

Client Sample ID: GW-011823-AC-32 — Lab Sample ID: 240-179375-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.33		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011823-JK-33 — Lab Sample ID: 240-179375-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	3.8		0.48	0.37	ug/L	5		8082A	Total/NA

Client Sample ID: GW-011823-JL-34 — Lab Sample ID: 240-179375-11

No Detections.

Client Sample ID: GW-011823-JK-24 — Lab Sample ID: 240-179375-12

No Detections.

Client Sample ID: GW-011823-JK-25 — Lab Sample ID: 240-179375-13

No Detections.

Client Sample ID: GW-011823-AC-26 — Lab Sample ID: 240-179375-14

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-JL-27 — Lab Sample ID: 240-179375-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.20		0.11	0.081	ug/L	1		8082A	Dissolved

Client Sample ID: GW-011823-JK-28 — Lab Sample ID: 240-179375-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1221 - RE	0.68		0.099	0.056	ug/L	1		8082A	Dissolved

Client Sample ID: GW-011823-JL-29 — Lab Sample ID: 240-179375-17

No Detections.

Client Sample ID: GW-011823-AC-30 — Lab Sample ID: 240-179375-18

No Detections.

Client Sample ID: GW-011823-JL-31 — Lab Sample ID: 240-179375-19

No Detections.

Client Sample ID: GW-011823-AC-32 — Lab Sample ID: 240-179375-20

No Detections.

Client Sample ID: GW-011823-JK-33 — Lab Sample ID: 240-179375-21

No Detections.

Client Sample ID: GW-011823-JL-34 — Lab Sample ID: 240-179375-22

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JK-24
Lab Sample ID: 240-179375-1
Date Collected: 01/18/23 10:15
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.061	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1221	0.11	U	0.11	0.062	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1242	0.11	U	0.11	0.083	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		01/30/23 07:52	01/31/23 17:03	1
Aroclor-1260	0.11	U	0.11	0.050	ug/L		01/30/23 07:52	01/31/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*01/30/23 07:52*	*01/31/23 17:03*	*1*
DCB Decachlorobiphenyl	*28*		*10 - 174*	*01/30/23 07:52*	*01/31/23 17:03*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JK-25
Lab Sample ID: 240-179375-2
Date Collected: 01/18/23 10:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		01/30/23 07:52	01/31/23 17:19	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		01/30/23 07:52	01/31/23 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*65*		*10 - 149*	*01/30/23 07:52*	*01/31/23 17:19*	*1*
DCB Decachlorobiphenyl	*24*		*10 - 174*	*01/30/23 07:52*	*01/31/23 17:19*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-AC-26
Lab Sample ID: 240-179375-3
Date Collected: 01/18/23 10:00
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1242	**0.34**		0.095	0.072	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/30/23 07:52	01/31/23 17:35	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/30/23 07:52	01/31/23 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*01/30/23 07:52*	*01/31/23 17:35*	*1*
DCB Decachlorobiphenyl	*62*		*10 - 174*	*01/30/23 07:52*	*01/31/23 17:35*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JL-27
Lab Sample ID: 240-179375-4
Date Collected: 01/18/23 10:45
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		01/30/23 07:52	01/31/23 18:06	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		01/30/23 07:52	01/31/23 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*01/30/23 07:52*	*01/31/23 18:06*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*01/30/23 07:52*	*01/31/23 18:06*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JK-28
Lab Sample ID: 240-179375-5
Date Collected: 01/18/23 11:15
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1.0	U	1.0	0.56	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1221	1.0	U	1.0	0.57	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1232	1.0	U	1.0	0.74	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1242	**13**		1.0	0.76	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1248	1.0	U	1.0	0.50	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1254	1.0	U	1.0	0.40	ug/L		01/30/23 07:52	01/31/23 18:22	10
Aroclor-1260	1.0	U	1.0	0.46	ug/L		01/30/23 07:52	01/31/23 18:22	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*255*	*S1+*	*10 - 149*	*01/30/23 07:52*	*01/31/23 18:22*	*10*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*01/30/23 07:52*	*01/31/23 18:22*	*10*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JL-29
Lab Sample ID: 240-179375-6
Date Collected: 01/18/23 11:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1248	**0.16**		0.10	0.051	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		01/30/23 07:52	01/31/23 16:15	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		01/30/23 07:52	01/31/23 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*01/30/23 07:52*	*01/31/23 16:15*	*1*
DCB Decachlorobiphenyl	*59*		*10 - 174*	*01/30/23 07:52*	*01/31/23 16:15*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-AC-30
Lab Sample ID: 240-179375-7
Date Collected: 01/18/23 10:05
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1242	**0.74**		0.099	0.075	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		01/30/23 07:52	01/31/23 18:38	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		01/30/23 07:52	01/31/23 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*10 - 149*	*01/30/23 07:52*	*01/31/23 18:38*	*1*
DCB Decachlorobiphenyl	*74*		*10 - 174*	*01/30/23 07:52*	*01/31/23 18:38*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JL-31
Lab Sample ID: 240-179375-8
Date Collected: 01/18/23 14:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/30/23 07:52	01/31/23 18:54	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/30/23 07:52	01/31/23 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*10 - 149*	*01/30/23 07:52*	*01/31/23 18:54*	*1*
DCB Decachlorobiphenyl	*77*		*10 - 174*	*01/30/23 07:52*	*01/31/23 18:54*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-AC-32
Lab Sample ID: 240-179375-9
Date Collected: 01/18/23 14:35
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1242	**0.33**		0.095	0.072	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/30/23 07:52	01/31/23 19:09	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/30/23 07:52	01/31/23 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*01/30/23 07:52*	*01/31/23 19:09*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*01/30/23 07:52*	*01/31/23 19:09*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JK-33
Date Collected: 01/18/23 14:45
Date Received: 01/19/23 09:35

Lab Sample ID: 240-179375-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.48	U	0.48	0.27	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1221	0.48	U	0.48	0.27	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1232	0.48	U	0.48	0.36	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1242	**3.8**		0.48	0.37	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1248	0.48	U	0.48	0.24	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1254	0.48	U	0.48	0.19	ug/L		01/31/23 08:33	02/01/23 18:09	5
Aroclor-1260	0.48	U	0.48	0.22	ug/L		01/31/23 08:33	02/01/23 18:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*10 - 149*	*01/31/23 08:33*	*02/01/23 18:09*	*5*
DCB Decachlorobiphenyl	*83*		*10 - 174*	*01/31/23 08:33*	*02/01/23 18:09*	*5*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011823-JL-34
Lab Sample ID: 240-179375-11
Date Collected: 01/18/23 15:35
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1242	0.11	U	0.11	0.081	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		01/31/23 08:33	02/01/23 13:47	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		01/31/23 08:33	02/01/23 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*01/31/23 08:33*	*02/01/23 13:47*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*01/31/23 08:33*	*02/01/23 13:47*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JK-24
Lab Sample ID: 240-179375-12
Date Collected: 01/18/23 10:15
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		01/31/23 08:33	02/01/23 14:03	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		01/31/23 08:33	02/01/23 14:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*10 - 149*	*01/31/23 08:33*	*02/01/23 14:03*	*1*
DCB Decachlorobiphenyl	*34*		*10 - 174*	*01/31/23 08:33*	*02/01/23 14:03*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JK-25
Lab Sample ID: 240-179375-13
Date Collected: 01/18/23 10:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/31/23 08:33	02/01/23 14:20	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/31/23 08:33	02/01/23 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*76*		*10 - 149*	*01/31/23 08:33*	*02/01/23 14:20*	*1*
DCB Decachlorobiphenyl	*28*		*10 - 174*	*01/31/23 08:33*	*02/01/23 14:20*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-AC-26
Lab Sample ID: 240-179375-14
Date Collected: 01/18/23 10:00
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/31/23 08:33	02/01/23 14:36	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/31/23 08:33	02/01/23 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*01/31/23 08:33*	*02/01/23 14:36*	*1*
DCB Decachlorobiphenyl	*91*		*10 - 174*	*01/31/23 08:33*	*02/01/23 14:36*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JL-27
Lab Sample ID: 240-179375-15
Date Collected: 01/18/23 10:45
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1242	**0.20**		0.11	0.081	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		01/31/23 08:33	02/01/23 14:52	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		01/31/23 08:33	02/01/23 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*01/31/23 08:33*	*02/01/23 14:52*	*1*
DCB Decachlorobiphenyl	*76*		*10 - 174*	*01/31/23 08:33*	*02/01/23 14:52*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JL-29
Lab Sample ID: 240-179375-17
Date Collected: 01/18/23 11:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		01/31/23 08:33	02/01/23 15:25	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		01/31/23 08:33	02/01/23 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*10 - 149*	*01/31/23 08:33*	*02/01/23 15:25*	*1*
DCB Decachlorobiphenyl	*90*		*10 - 174*	*01/31/23 08:33*	*02/01/23 15:25*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-AC-30
Lab Sample ID: 240-179375-18
Date Collected: 01/18/23 10:05
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/31/23 08:33	02/01/23 16:14	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/31/23 08:33	02/01/23 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*10 - 149*	*01/31/23 08:33*	*02/01/23 16:14*	*1*
DCB Decachlorobiphenyl	*92*		*10 - 174*	*01/31/23 08:33*	*02/01/23 16:14*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JL-31
Lab Sample ID: 240-179375-19
Date Collected: 01/18/23 14:25
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/31/23 08:33	02/01/23 16:31	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/31/23 08:33	02/01/23 16:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*62*		*10 - 149*	*01/31/23 08:33*	*02/01/23 16:31*	*1*
DCB Decachlorobiphenyl	*95*		*10 - 174*	*01/31/23 08:33*	*02/01/23 16:31*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-AC-32
Date Collected: 01/18/23 14:35
Date Received: 01/19/23 09:35

Lab Sample ID: 240-179375-20
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		01/31/23 08:33	02/01/23 16:47	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		01/31/23 08:33	02/01/23 16:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*10 - 149*	*01/31/23 08:33*	*02/01/23 16:47*	*1*
DCB Decachlorobiphenyl	*91*		*10 - 174*	*01/31/23 08:33*	*02/01/23 16:47*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JK-33
Lab Sample ID: 240-179375-21
Date Collected: 01/18/23 14:45
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		01/31/23 08:33	02/01/23 17:03	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		01/31/23 08:33	02/01/23 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*01/31/23 08:33*	*02/01/23 17:03*	*1*
DCB Decachlorobiphenyl	*83*		*10 - 174*	*01/31/23 08:33*	*02/01/23 17:03*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011823-JL-34
Lab Sample ID: 240-179375-22
Date Collected: 01/18/23 15:35
Matrix: Water
Date Received: 01/19/23 09:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1242	0.11	U	0.11	0.081	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		01/31/23 08:33	02/01/23 17:20	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		01/31/23 08:33	02/01/23 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*10 - 149*	*01/31/23 08:33*	*02/01/23 17:20*	*1*
DCB Decachlorobiphenyl	*110*		*10 - 174*	*01/31/23 08:33*	*02/01/23 17:20*	*1*

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved - RE

Client Sample ID: GW-011823-JK-28
Date Collected: 01/18/23 11:15
Date Received: 01/19/23 09:35

Lab Sample ID: 240-179375-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1221	**0.68**		0.099	0.056	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		02/06/23 08:51	02/07/23 15:46	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		02/06/23 08:51	02/07/23 15:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*77*		*10 - 149*	*02/06/23 08:51*	*02/07/23 15:46*	*1*
DCB Decachlorobiphenyl	*66*		*10 - 174*	*02/06/23 08:51*	*02/07/23 15:46*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 560398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-1	GW-011823-JK-24	Total/NA	Water	3510C	
240-179375-2	GW-011823-JK-25	Total/NA	Water	3510C	
240-179375-3	GW-011823-AC-26	Total/NA	Water	3510C	
240-179375-4	GW-011823-JL-27	Total/NA	Water	3510C	
240-179375-5	GW-011823-JK-28	Total/NA	Water	3510C	
240-179375-6	GW-011823-JL-29	Total/NA	Water	3510C	
240-179375-7	GW-011823-AC-30	Total/NA	Water	3510C	
240-179375-8	GW-011823-JL-31	Total/NA	Water	3510C	
240-179375-9	GW-011823-AC-32	Total/NA	Water	3510C	
MB 240-560398/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-560398/24-A	Lab Control Sample	Total/NA	Water	3510C	
240-179375-6 MS	GW-011823-JL-29	Total/NA	Water	3510C	
240-179375-6 MSD	GW-011823-JL-29	Total/NA	Water	3510C	

Prep Batch: 560560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-10	GW-011823-JK-33	Total/NA	Water	3510C	
240-179375-11	GW-011823-JL-34	Total/NA	Water	3510C	
240-179375-12	GW-011823-JK-24	Dissolved	Water	3510C	
240-179375-13	GW-011823-JK-25	Dissolved	Water	3510C	
240-179375-14	GW-011823-AC-26	Dissolved	Water	3510C	
240-179375-15	GW-011823-JL-27	Dissolved	Water	3510C	
240-179375-17	GW-011823-JL-29	Dissolved	Water	3510C	
240-179375-18	GW-011823-AC-30	Dissolved	Water	3510C	
240-179375-19	GW-011823-JL-31	Dissolved	Water	3510C	
240-179375-20	GW-011823-AC-32	Dissolved	Water	3510C	
240-179375-21	GW-011823-JK-33	Dissolved	Water	3510C	
240-179375-22	GW-011823-JL-34	Dissolved	Water	3510C	
MB 240-560560/22-A	Method Blank	Total/NA	Water	3510C	
LCS 240-560560/23-A	Lab Control Sample	Total/NA	Water	3510C	
240-179375-17 MS	GW-011823-JL-29	Dissolved	Water	3510C	
240-179375-17 MSD	GW-011823-JL-29	Dissolved	Water	3510C	

Analysis Batch: 560565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-1	GW-011823-JK-24	Total/NA	Water	8082A	560398
240-179375-2	GW-011823-JK-25	Total/NA	Water	8082A	560398
240-179375-3	GW-011823-AC-26	Total/NA	Water	8082A	560398
240-179375-4	GW-011823-JL-27	Total/NA	Water	8082A	560398
240-179375-5	GW-011823-JK-28	Total/NA	Water	8082A	560398
240-179375-6	GW-011823-JL-29	Total/NA	Water	8082A	560398
240-179375-7	GW-011823-AC-30	Total/NA	Water	8082A	560398
240-179375-8	GW-011823-JL-31	Total/NA	Water	8082A	560398
240-179375-9	GW-011823-AC-32	Total/NA	Water	8082A	560398
MB 240-560398/23-A	Method Blank	Total/NA	Water	8082A	560398
LCS 240-560398/24-A	Lab Control Sample	Total/NA	Water	8082A	560398
240-179375-6 MS	GW-011823-JL-29	Total/NA	Water	8082A	560398
240-179375-6 MSD	GW-011823-JL-29	Total/NA	Water	8082A	560398

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Analysis Batch: 560652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-10	GW-011823-JK-33	Total/NA	Water	8082A	560560
240-179375-11	GW-011823-JL-34	Total/NA	Water	8082A	560560
240-179375-12	GW-011823-JK-24	Dissolved	Water	8082A	560560
240-179375-13	GW-011823-JK-25	Dissolved	Water	8082A	560560
240-179375-14	GW-011823-AC-26	Dissolved	Water	8082A	560560
240-179375-15	GW-011823-JL-27	Dissolved	Water	8082A	560560
240-179375-17	GW-011823-JL-29	Dissolved	Water	8082A	560560
240-179375-18	GW-011823-AC-30	Dissolved	Water	8082A	560560
240-179375-19	GW-011823-JL-31	Dissolved	Water	8082A	560560
240-179375-20	GW-011823-AC-32	Dissolved	Water	8082A	560560
240-179375-21	GW-011823-JK-33	Dissolved	Water	8082A	560560
240-179375-22	GW-011823-JL-34	Dissolved	Water	8082A	560560
MB 240-560560/22-A	Method Blank	Total/NA	Water	8082A	560560
LCS 240-560560/23-A	Lab Control Sample	Total/NA	Water	8082A	560560
240-179375-17 MS	GW-011823-JL-29	Dissolved	Water	8082A	560560
240-179375-17 MSD	GW-011823-JL-29	Dissolved	Water	8082A	560560

Prep Batch: 561037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-16 - RE	GW-011823-JK-28	Dissolved	Water	3510C	
MB 240-561037/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-561037/22-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 561133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179375-16 - RE	GW-011823-JK-28	Dissolved	Water	8082A	561037
MB 240-561037/21-A	Method Blank	Total/NA	Water	8082A	561037
LCS 240-561037/22-A	Lab Control Sample	Total/NA	Water	8082A	561037

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-560398/23-A
Matrix: Water
Analysis Batch: 560565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 560398

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/30/23 07:52	01/31/23 12:18	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/30/23 07:52	01/31/23 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*10 - 149*	*01/30/23 07:52*	*01/31/23 12:18*	*1*
DCB Decachlorobiphenyl	*106*		*10 - 174*	*01/30/23 07:52*	*01/31/23 12:18*	*1*

Lab Sample ID: LCS 240-560398/24-A
Matrix: Water
Analysis Batch: 560565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 560398

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	2.09		ug/L		83	28 - 140		
Aroclor-1260			2.50	2.51		ug/L		100	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*10 - 149*
DCB Decachlorobiphenyl	*107*		*10 - 174*

Lab Sample ID: 240-179375-6 MS
Matrix: Water
Analysis Batch: 560565

Client Sample ID: GW-011823-JL-29
Prep Type: Total/NA
Prep Batch: 560398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.10	U	2.38	1.42		ug/L		60	50 - 120		
Aroclor-1260	0.10	U	2.38	1.57		ug/L		66	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*59*		*10 - 149*
DCB Decachlorobiphenyl	*65*		*10 - 174*

Lab Sample ID: 240-179375-6 MSD
Matrix: Water
Analysis Batch: 560565

Client Sample ID: GW-011823-JL-29
Prep Type: Total/NA
Prep Batch: 560398

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.10	U	2.38	1.34		ug/L		56	50 - 120	6	25
Aroclor-1260	0.10	U	2.38	1.47		ug/L		62	39 - 135	6	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*56*		*10 - 149*
DCB Decachlorobiphenyl	*66*		*10 - 174*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-560560/22-A
Matrix: Water
Analysis Batch: 560652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 560560

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		01/31/23 08:33	02/01/23 12:42	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		01/31/23 08:33	02/01/23 12:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*10 - 149*	*01/31/23 08:33*	*02/01/23 12:42*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 174*	*01/31/23 08:33*	*02/01/23 12:42*	*1*

Lab Sample ID: LCS 240-560560/23-A
Matrix: Water
Analysis Batch: 560652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 560560

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.77		ug/L		71	28 - 140
Aroclor-1260	2.50	1.85		ug/L		74	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*79*		*10 - 149*
DCB Decachlorobiphenyl	*82*		*10 - 174*

Lab Sample ID: MB 240-561037/21-A
Matrix: Water
Analysis Batch: 561133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 561037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		02/06/23 08:51	02/07/23 15:30	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		02/06/23 08:51	02/07/23 15:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*10 - 149*	*02/06/23 08:51*	*02/07/23 15:30*	*1*
DCB Decachlorobiphenyl	*123*		*10 - 174*	*02/06/23 08:51*	*02/07/23 15:30*	*1*

Lab Sample ID: LCS 240-561037/22-A
Matrix: Water
Analysis Batch: 561133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 561037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	2.07		ug/L		83	28 - 140
Aroclor-1260	2.50	2.23		ug/L		89	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	89		10 - 149
DCB Decachlorobiphenyl	102		10 - 174

Lab Sample ID: 240-179375-17 MS
Matrix: Water
Analysis Batch: 560652

Client Sample ID: GW-011823-JL-29
Prep Type: Dissolved
Prep Batch: 560560

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.096	U	2.72	2.35		ug/L		86	50 - 120		
Aroclor-1260	0.096	U	2.72	2.29		ug/L		84	39 - 135		

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	92		10 - 149
DCB Decachlorobiphenyl	97		10 - 174

Lab Sample ID: 240-179375-17 MSD
Matrix: Water
Analysis Batch: 560652

Client Sample ID: GW-011823-JL-29
Prep Type: Dissolved
Prep Batch: 560560

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.096	U	2.45	1.91		ug/L		78	50 - 120	21	25
Aroclor-1260	0.096	U	2.45	2.22		ug/L		90	39 - 135	3	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	86		10 - 149
DCB Decachlorobiphenyl	106		10 - 174

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179375-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (10-149)	DCBP1 (10-174)
240-179375-1	GW-011823-JK-24	66	28
240-179375-2	GW-011823-JK-25	65	24
240-179375-3	GW-011823-AC-26	64	62
240-179375-4	GW-011823-JL-27	68	67
240-179375-5	GW-011823-JK-28	255 S1+	38
240-179375-6	GW-011823-JL-29	59	59
240-179375-6 MS	GW-011823-JL-29	59	65
240-179375-6 MSD	GW-011823-JL-29	56	66
240-179375-7	GW-011823-AC-30	84	74
240-179375-8	GW-011823-JL-31	68	77
240-179375-9	GW-011823-AC-32	64	67
LCS 240-560398/24-A	Lab Control Sample	82	107
MB 240-560398/23-A	Method Blank	83	106

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (10-149)	DCBP2 (10-174)
240-179375-10	GW-011823-JK-33	85	83
240-179375-11	GW-011823-JL-34	64	69
LCS 240-560560/23-A	Lab Control Sample	79	82
LCS 240-561037/22-A	Lab Control Sample	89	102
MB 240-560560/22-A	Method Blank	57	82
MB 240-561037/21-A	Method Blank	102	123

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (10-149)	DCBP2 (10-174)
240-179375-12	GW-011823-JK-24	71	34
240-179375-13	GW-011823-JK-25	76	28
240-179375-14	GW-011823-AC-26	86	91
240-179375-15	GW-011823-JL-27	59	76
240-179375-16 - RE	GW-011823-JK-28	77	66
240-179375-17	GW-011823-JL-29	83	90
240-179375-17 MS	GW-011823-JL-29	92	97
240-179375-17 MSD	GW-011823-JL-29	86	106
240-179375-18	GW-011823-AC-30	79	92
240-179375-19	GW-011823-JL-31	62	95

Surrogate Summary

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TCX2 (10-149)	DCBP2 (10-174)								
240-179375-20	GW-011823-AC-32	79	91								
240-179375-21	GW-011823-JK-33	75	83								
240-179375-22	GW-011823-JL-34	97	110								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-JK-24
Lab Sample ID: 240-179375-1
Date Collected: 01/18/23 10:15
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 17:03

Client Sample ID: GW-011823-JK-25
Lab Sample ID: 240-179375-2
Date Collected: 01/18/23 10:25
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 17:19

Client Sample ID: GW-011823-AC-26
Lab Sample ID: 240-179375-3
Date Collected: 01/18/23 10:00
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 17:35

Client Sample ID: GW-011823-JL-27
Lab Sample ID: 240-179375-4
Date Collected: 01/18/23 10:45
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 18:06

Client Sample ID: GW-011823-JK-28
Lab Sample ID: 240-179375-5
Date Collected: 01/18/23 11:15
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		10	560565	RR	EET CAN	01/31/23 18:22

Client Sample ID: GW-011823-JL-29
Lab Sample ID: 240-179375-6
Date Collected: 01/18/23 11:25
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 16:15

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-AC-30 Lab Sample ID: 240-179375-7
Date Collected: 01/18/23 10:05 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 18:38

Client Sample ID: GW-011823-JL-31 Lab Sample ID: 240-179375-8
Date Collected: 01/18/23 14:25 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 18:54

Client Sample ID: GW-011823-AC-32 Lab Sample ID: 240-179375-9
Date Collected: 01/18/23 14:35 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560398	SDE	EET CAN	01/30/23 07:52
Total/NA	Analysis	8082A		1	560565	RR	EET CAN	01/31/23 19:09

Client Sample ID: GW-011823-JK-33 Lab Sample ID: 240-179375-10
Date Collected: 01/18/23 14:45 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Total/NA	Analysis	8082A		5	560652	MBB	EET CAN	02/01/23 18:09

Client Sample ID: GW-011823-JL-34 Lab Sample ID: 240-179375-11
Date Collected: 01/18/23 15:35 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Total/NA	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 13:47

Client Sample ID: GW-011823-JK-24 Lab Sample ID: 240-179375-12
Date Collected: 01/18/23 10:15 **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 14:03

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-JK-25 — Lab Sample ID: 240-179375-13
Date Collected: 01/18/23 10:25 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 14:20

Client Sample ID: GW-011823-AC-26 — Lab Sample ID: 240-179375-14
Date Collected: 01/18/23 10:00 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 14:36

Client Sample ID: GW-011823-JL-27 — Lab Sample ID: 240-179375-15
Date Collected: 01/18/23 10:45 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 14:52

Client Sample ID: GW-011823-JK-28 — Lab Sample ID: 240-179375-16
Date Collected: 01/18/23 11:15 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C	RE		561037	MDH	EET CAN	02/06/23 08:51
Dissolved	Analysis	8082A	RE	1	561133	MBB	EET CAN	02/07/23 15:46

Client Sample ID: GW-011823-JL-29 — Lab Sample ID: 240-179375-17
Date Collected: 01/18/23 11:25 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 15:25

Client Sample ID: GW-011823-AC-30 — Lab Sample ID: 240-179375-18
Date Collected: 01/18/23 10:05 — **Matrix: Water**
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 16:14

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011823-JL-31
Lab Sample ID: 240-179375-19
Date Collected: 01/18/23 14:25
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 16:31

Client Sample ID: GW-011823-AC-32
Lab Sample ID: 240-179375-20
Date Collected: 01/18/23 14:35
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 16:47

Client Sample ID: GW-011823-JK-33
Lab Sample ID: 240-179375-21
Date Collected: 01/18/23 14:45
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 17:03

Client Sample ID: GW-011823-JL-34
Lab Sample ID: 240-179375-22
Date Collected: 01/18/23 15:35
Matrix: Water
Date Received: 01/19/23 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560560	MDH	EET CAN	01/31/23 08:33
Dissolved	Analysis	8082A		1	560652	MBB	EET CAN	02/01/23 17:20

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-179375-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-23
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

* 5 coolers *

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins - Barberton

REFERENCE NUMBER: 11228036

PROJECT NAME: GM-Bedford-RFI Groundwater sampling

SAMPLER'S SIGNATURE: Alison Criviare **PRINTED NAME:** Alison Criviare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCB	PARAMETERS: Dissolved PCB	REMARKS
1	1/18/23	10:15	GW-011823-JK-24	WG	4	x	x	SSOW number:
2		10:25	GW-011823-JK-25		4			E117014
3		10:00	GW-011823-AC-26		4			
4		10:45	GW-011823-JL-27		2			
5		11:15	GW-011823-JK-28		4			
6		11:25	GW-011823-JL-29		12			ms/msd
7		10:05	GW-011823-AC-30		4			
8		14:25	GW-011823-JL-31		4			
9		14:35	GW-011823-AC-32		4			
10		14:45	GW-011823-JK-33		4			
11		15:35	GW-011823-JL-34		4			

240-179375 Chain of Custody

TOTAL NUMBER OF CONTAINERS 50

RELINQUISHED BY: ① Alison Criviare Alison Criviare	DATE: 1/18/23 TIME: 17:00	RECEIVED BY: ② T. A. D.	DATE: 1/19/23 TIME: 9:35
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex Priority Overnight **TRACKING No.** 8172 5962 5601

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: Jeff Kolodziejski, Scott Sholar, Alison Criviare, Julie Lutzwick

RECEIVED FOR LABORATORY BY: 8937

DATE: TIME:

11034001-00(PRES001)GN-CO001

2/9/2023

Eurofins - Canton Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: M A A

Cooler Received on 1/19/23 Opened on 1/19/23

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form
   IR GUN # IR-13 (CF **-0.2** °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-16 (CF **-0.1**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-17 (CF **-0.3**°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)
-Were tamper/custody seals intact and uncompromised?	(Yes) No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes) No
4. Did custody papers accompany the sample(s)?	(Yes) No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes) No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No
9. For each sample, does the COC specify preservatives (Y(N), # of containers(Y)N), and sample type of grab/comp(Y(N)?	
10. Were correct bottle(s) used for the test(s) indicated?	(Yes) No
11. Sufficient quantity received to perform indicated analyses?	(Yes) No
12. Are these work share samples and all listed on the COC?	Yes (No)
If yes, Questions 13-17 have been checked at the originating laboratory.	
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA) pH Strip Lot# **HC286797**
14. Were VOAs on the COC?	Yes (No)
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes (No)
17. Was a LL Hg or Me Hg trip blank present? _____	Yes (No)

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____
_____
_____
_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	**IR Gun # (Circle)**	**Observed Temp °C**	**Corrected Temp °C**	**Coolant (Circle)**
EC Client Box Other	IR-13 IR-16 IR-17	2.3	2.2	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17	2.5	2.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17	3.4	3.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17	3.4	3.3	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17	2.0	1.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17	

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

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JOB DESCRIPTION

017307A, GM Bedford, SSOW# E117014

JOB NUMBER

240-179433-1

Eurofins Canton
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Denise Heckler, Project Manager II
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(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 8
Client Sample Results 9
QC Association Summary 15
QC Sample Results 16
Surrogate Summary 17
Lab Chronicle 18
Certification Summary 19
Chain of Custody 20

Client: GHD Services Inc.
Project/Site: 017307A, GM Bedford, SSOW# E117014

Job ID: 240-179433-1

Job ID: 240-179433-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-179433-1

Comments
No additional comments.

Receipt
The samples were received on 1/20/2023 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.5º C and 3.3º C.

GC Semi VOA
Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caus by sulfur: GW-011923-JL-36 (240-179433-5).

Method 8082A: The %RPD between the primary and confirmation column exceeded 40% for Aroclor 1242 for the following samp GW-011923-JK-37 (240-179433-3). The lower value has been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-560665.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-179433-1	GW-011923-JK-35	Water	01/19/23 09:30	01/20/23 09:15
240-179433-2	GW-011923-JL-36	Water	01/19/23 09:55	01/20/23 09:15
240-179433-3	GW-011923-JK-37	Water	01/19/23 10:15	01/20/23 09:15
240-179433-4	GW-011923-JK-35	Water	01/19/23 09:30	01/20/23 09:15
240-179433-5	GW-011923-JL-36	Water	01/19/23 09:55	01/20/23 09:15
240-179433-6	GW-011923-JK-37	Water	01/19/23 10:15	01/20/23 09:15

Detection Summary

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011923-JK-35 — Lab Sample ID: 240-179433-1

No Detections.

Client Sample ID: GW-011923-JL-36 — Lab Sample ID: 240-179433-2

No Detections.

Client Sample ID: GW-011923-JK-37 — Lab Sample ID: 240-179433-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.22	p	0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-011923-JK-35 — Lab Sample ID: 240-179433-4

No Detections.

Client Sample ID: GW-011923-JL-36 — Lab Sample ID: 240-179433-5

No Detections.

Client Sample ID: GW-011923-JK-37 — Lab Sample ID: 240-179433-6

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CAN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011923-JK-35
Lab Sample ID: 240-179433-1
Date Collected: 01/19/23 09:30
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		02/01/23 08:25	02/03/23 13:45	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		02/01/23 08:25	02/03/23 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*114*		*10 - 149*	*02/01/23 08:25*	*02/03/23 13:45*	*1*
DCB Decachlorobiphenyl	*109*		*10 - 174*	*02/01/23 08:25*	*02/03/23 13:45*	*1*

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011923-JL-36
Lab Sample ID: 240-179433-2
Date Collected: 01/19/23 09:55
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		02/01/23 08:25	02/03/23 14:01	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		02/01/23 08:25	02/03/23 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*96*		*10 - 149*	*02/01/23 08:25*	*02/03/23 14:01*	*1*
DCB Decachlorobiphenyl	*122*		*10 - 174*	*02/01/23 08:25*	*02/03/23 14:01*	*1*

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-011923-JK-37
Lab Sample ID: 240-179433-3
Date Collected: 01/19/23 10:15
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1242	**0.22**	**p**	0.095	0.072	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		02/01/23 08:25	02/03/23 14:18	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		02/01/23 08:25	02/03/23 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*10 - 149*	*02/01/23 08:25*	*02/03/23 14:18*	*1*
DCB Decachlorobiphenyl	*93*		*10 - 174*	*02/01/23 08:25*	*02/03/23 14:18*	*1*

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011923-JK-35
Lab Sample ID: 240-179433-4
Date Collected: 01/19/23 09:30
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		02/01/23 08:25	02/03/23 14:34	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		02/01/23 08:25	02/03/23 14:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*105*		*10 - 149*	*02/01/23 08:25*	*02/03/23 14:34*	*1*
DCB Decachlorobiphenyl	*115*		*10 - 174*	*02/01/23 08:25*	*02/03/23 14:34*	*1*

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011923-JL-36
Lab Sample ID: 240-179433-5
Date Collected: 01/19/23 09:55
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		02/01/23 08:25	02/03/23 14:51	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		02/01/23 08:25	02/03/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*02/01/23 08:25*	*02/03/23 14:51*	*1*
DCB Decachlorobiphenyl	*84*		*10 - 174*	*02/01/23 08:25*	*02/03/23 14:51*	*1*

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-011923-JK-37
Lab Sample ID: 240-179433-6
Date Collected: 01/19/23 10:15
Matrix: Water
Date Received: 01/20/23 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		02/01/23 08:25	02/03/23 15:07	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		02/01/23 08:25	02/03/23 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*10 - 149*	*02/01/23 08:25*	*02/03/23 15:07*	*1*
DCB Decachlorobiphenyl	*103*		*10 - 174*	*02/01/23 08:25*	*02/03/23 15:07*	*1*

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

GC Semi VOA

Prep Batch: 560665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179433-1	GW-011923-JK-35	Total/NA	Water	3510C	
240-179433-2	GW-011923-JL-36	Total/NA	Water	3510C	
240-179433-3	GW-011923-JK-37	Total/NA	Water	3510C	
240-179433-4	GW-011923-JK-35	Dissolved	Water	3510C	
240-179433-5	GW-011923-JL-36	Dissolved	Water	3510C	
240-179433-6	GW-011923-JK-37	Dissolved	Water	3510C	
MB 240-560665/21-A	Method Blank	Total/NA	Water	3510C	
LCS 240-560665/22-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 560917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-179433-1	GW-011923-JK-35	Total/NA	Water	8082A	560665
240-179433-2	GW-011923-JL-36	Total/NA	Water	8082A	560665
240-179433-3	GW-011923-JK-37	Total/NA	Water	8082A	560665
240-179433-4	GW-011923-JK-35	Dissolved	Water	8082A	560665
240-179433-5	GW-011923-JL-36	Dissolved	Water	8082A	560665
240-179433-6	GW-011923-JK-37	Dissolved	Water	8082A	560665
MB 240-560665/21-A	Method Blank	Total/NA	Water	8082A	560665
LCS 240-560665/22-A	Lab Control Sample	Total/NA	Water	8082A	560665

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-560665/21-A
Matrix: Water
Analysis Batch: 560917

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 560665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		02/01/23 08:25	02/03/23 13:28	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		02/01/23 08:25	02/03/23 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*10 - 149*	*02/01/23 08:25*	*02/03/23 13:28*	*1*
DCB Decachlorobiphenyl	*97*		*10 - 174*	*02/01/23 08:25*	*02/03/23 13:28*	*1*

Lab Sample ID: LCS 240-560665/22-A
Matrix: Water
Analysis Batch: 560917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 560665

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	2.33		ug/L		93	28 - 140		
Aroclor-1260			2.50	2.05		ug/L		82	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*101*		*10 - 149*
DCB Decachlorobiphenyl	*100*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-179433-1	GW-011923-JK-35	114	109
240-179433-2	GW-011923-JL-36	96	122
240-179433-3	GW-011923-JK-37	85	93
LCS 240-560665/22-A	Lab Control Sample	101	100
MB 240-560665/21-A	Method Blank	89	97

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-179433-4	GW-011923-JK-35	105	115
240-179433-5	GW-011923-JL-36	61	84
240-179433-6	GW-011923-JK-37	86	103

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Client Sample ID: GW-011923-JK-35
Lab Sample ID: 240-179433-1
Date Collected: 01/19/23 09:30
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Total/NA	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 13:45

Client Sample ID: GW-011923-JL-36
Lab Sample ID: 240-179433-2
Date Collected: 01/19/23 09:55
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Total/NA	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 14:01

Client Sample ID: GW-011923-JK-37
Lab Sample ID: 240-179433-3
Date Collected: 01/19/23 10:15
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Total/NA	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 14:18

Client Sample ID: GW-011923-JK-35
Lab Sample ID: 240-179433-4
Date Collected: 01/19/23 09:30
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Dissolved	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 14:34

Client Sample ID: GW-011923-JL-36
Lab Sample ID: 240-179433-5
Date Collected: 01/19/23 09:55
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Dissolved	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 14:51

Client Sample ID: GW-011923-JK-37
Lab Sample ID: 240-179433-6
Date Collected: 01/19/23 10:15
Matrix: Water
Date Received: 01/20/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			560665	MDH	EET CAN	02/01/23 08:25
Dissolved	Analysis	8082A		1	560917	RR	EET CAN	02/03/23 15:07

Laboratory References:
EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-179433-1
Project/Site: 017307A, GM Bedford, SSOW# E117014

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-23
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

2.6/2.5 3.4/3.3 *2 coolers*

GHD
6400 Shafer Court - Suite 400
Rosemont, Illinois, 60018
773 380 9933 phone
WWW.GHD.COM

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Eurofins - Barberton

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford - RFI Groundwater Sampling

SAMPLER'S SIGNATURE: Alison Crivare PRINTED NAME: Alison Crivare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCB	PARAMETERS: Dissolved PCB	REMARKS
1	1/19/23	9:30	GW-011923-JK-35	WG	4	X	X	SSOW number:
2	↓	9:55	GW-011923-JL-36	↓	4	X	X	E117014
3	↓	10:15	GW-011923-JK-37	↓	4	X	X	

Eurofins - Canton Sample Receipt Form/Narrative Login # : 179433
Barberton Facility

Client GHD Site Name Cooler unpacked by: Rachelle Haidet

Cooler Received on 1-20-23 Opened on 1-20-23

FedEx: 1st Grd (Exp) UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # EC ~~Foam Box~~ Client Cooler ~~Box~~ Other

Packing material used: ~~Bubble Wrap~~ Foam (Plastic Bag) None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water ~~None~~

1. Cooler temperature upon receipt ☑ See Multiple Cooler Form
   IR GUN # IR-13 (CF -0.2 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-16 (CF -0.1°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   IR GUN # IR-17 (CF -0.3°C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes (No)	**Tests that are not checked for pH by Receiving:**
-Were the seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	**VOAs**
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	**Oil and Grease**
-Were tamper/custody seals intact and uncompromised?	Yes No (NA)	**TOC**
3. Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11. Sufficient quantity received to perform indicated analyses?	(Yes) No	
12. Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA)	pH Strip Lot# **HC203864**
14. Were VOAs on the COC?	Yes (No)	
15. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes No (NA)	
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes (No)	
17. Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by: CK

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR-13 (IR-16) IR-17	2.6	2.5	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR-13 (IR-16) IR-17	3.4	3.3	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR-13 IR-16 IR-17			Wet Ice

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 4/8/2024 10:04:24 AM

JOB DESCRIPTION

12616852, GM Bedford, E117014

JOB NUMBER

240-201791-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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4/8/2024 10:04:24 AM

Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 32
QC Sample Results 34
Surrogate Summary 36
Lab Chronicle 37
Certification Summary 41
Chain of Custody 42

Job ID: 240-201791-1 Eurofins Cleveland

Job Narrative
240-201791-1

Receipt
The samples were received on 3/27/2024 9:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.3°C, 1.6°C, 3.4°C and 4.2°C.

PCBs
Method 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-607829.

Method 8082A - Dissolved: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-607829.

Method 8082A - Dissolved: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-607988.

Method 8082A - Dissolved: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: (LCS 240-607988/2-A) and (MB 240-607988/1-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-201791-1	GW-032524-AC-01	Water	03/25/24 14:40	03/27/24 09:45
240-201791-2	GW-032524-AC-02	Water	03/25/24 15:50	03/27/24 09:45
240-201791-3	GW-032524-AC-03	Water	03/25/24 16:35	03/27/24 09:45
240-201791-4	GW-032624-AC-04	Water	03/26/24 11:05	03/27/24 09:45
240-201791-5	GW-032624-AC-05	Water	03/26/24 09:25	03/27/24 09:45
240-201791-6	GW-032624-AC-06	Water	03/26/24 10:10	03/27/24 09:45
240-201791-7	GW-032624-AC-07	Water	03/26/24 11:55	03/27/24 09:45
240-201791-8	GW-032624-AC-08	Water	03/26/24 12:45	03/27/24 09:45
240-201791-9	GW-032624-SS-09	Water	03/26/24 12:45	03/27/24 09:45
240-201791-10	GW-032624-SS-10	Water	03/26/24 13:35	03/27/24 09:45
240-201791-11	GW-032624-AC-11	Water	03/26/24 14:25	03/27/24 09:45
240-201797-1	GW-032524-AC-01	Water	03/25/24 14:40	03/27/24 09:45
240-201797-2	GW-032524-AC-02	Water	03/25/24 15:50	03/27/24 09:45
240-201797-3	GW-032524-AC-03	Water	03/25/24 16:35	03/27/24 09:45
240-201797-4	GW-032624-AC-04	Water	03/26/24 11:05	03/27/24 09:45
240-201797-5	GW-032624-AC-05	Water	03/26/24 09:25	03/27/24 09:45
240-201797-6	GW-032624-AC-06	Water	03/26/24 10:10	03/27/24 09:45
240-201797-7	GW-032624-AC-07	Water	03/26/24 11:55	03/27/24 09:45
240-201797-8	GW-032624-AC-08	Water	03/26/24 12:45	03/27/24 09:45
240-201797-9	GW-032624-SS-09	Water	03/26/24 12:45	03/27/24 09:45
240-201797-10	GW-032624-SS-10	Water	03/26/24 13:35	03/27/24 09:45
240-201797-11	GW-032624-AC-11	Water	03/26/24 14:25	03/27/24 09:45

Detection Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-201791-1

Client Sample ID: GW-032524-AC-01 — Lab Sample ID: 240-201791-1

No Detections.

Client Sample ID: GW-032524-AC-02 — Lab Sample ID: 240-201791-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.16		0.10	0.077	ug/L	1		8082A	Total/NA

Client Sample ID: GW-032524-AC-03 — Lab Sample ID: 240-201791-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.23		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-032624-AC-04 — Lab Sample ID: 240-201791-4

No Detections.

Client Sample ID: GW-032624-AC-05 — Lab Sample ID: 240-201791-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.15		0.098	0.075	ug/L	1		8082A	Total/NA

Client Sample ID: GW-032624-AC-06 — Lab Sample ID: 240-201791-6

No Detections.

Client Sample ID: GW-032624-AC-07 — Lab Sample ID: 240-201791-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.15		0.095	0.072	ug/L	1		8082A	Total/NA

Client Sample ID: GW-032624-AC-08 — Lab Sample ID: 240-201791-8

No Detections.

Client Sample ID: GW-032624-SS-09 — Lab Sample ID: 240-201791-9

No Detections.

Client Sample ID: GW-032624-SS-10 — Lab Sample ID: 240-201791-10

No Detections.

Client Sample ID: GW-032624-AC-11 — Lab Sample ID: 240-201791-11

No Detections.

Client Sample ID: GW-032524-AC-01 — Lab Sample ID: 240-201797-1

No Detections.

Client Sample ID: GW-032524-AC-02 — Lab Sample ID: 240-201797-2

No Detections.

Client Sample ID: GW-032524-AC-03 — Lab Sample ID: 240-201797-3

No Detections.

Client Sample ID: GW-032624-AC-04 — Lab Sample ID: 240-201797-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-032624-AC-05 — Lab Sample ID: 240-201797-5

No Detections.

Client Sample ID: GW-032624-AC-06 — Lab Sample ID: 240-201797-6

No Detections.

Client Sample ID: GW-032624-AC-07 — Lab Sample ID: 240-201797-7

No Detections.

Client Sample ID: GW-032624-AC-08 — Lab Sample ID: 240-201797-8

No Detections.

Client Sample ID: GW-032624-SS-09 — Lab Sample ID: 240-201797-9

No Detections.

Client Sample ID: GW-032624-SS-10 — Lab Sample ID: 240-201797-10

No Detections.

Client Sample ID: GW-032624-AC-11 — Lab Sample ID: 240-201797-11

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-201791-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032524-AC-01
Lab Sample ID: 240-201791-1
Date Collected: 03/25/24 14:40
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1242	0.11	U	0.11	0.081	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		03/29/24 09:15	04/01/24 10:17	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		03/29/24 09:15	04/01/24 10:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*35*		*10 - 149*	*03/29/24 09:15*	*04/01/24 10:17*	*1*
DCB Decachlorobiphenyl	*39*		*10 - 174*	*03/29/24 09:15*	*04/01/24 10:17*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032524-AC-02
Lab Sample ID: 240-201791-2
Date Collected: 03/25/24 15:50
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1242	**0.16**		0.10	0.077	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		03/29/24 09:15	04/01/24 10:33	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		03/29/24 09:15	04/01/24 10:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*03/29/24 09:15*	*04/01/24 10:33*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*03/29/24 09:15*	*04/01/24 10:33*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032524-AC-03
Lab Sample ID: 240-201791-3
Date Collected: 03/25/24 16:35
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1242	**0.23**		0.095	0.072	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 10:50	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 10:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*34*		*10 - 149*	*03/29/24 09:15*	*04/01/24 10:50*	*1*
DCB Decachlorobiphenyl	*36*		*10 - 174*	*03/29/24 09:15*	*04/01/24 10:50*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-04
Lab Sample ID: 240-201791-4
Date Collected: 03/26/24 11:05
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		03/29/24 09:15	04/01/24 11:07	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		03/29/24 09:15	04/01/24 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*34*		*10 - 149*	*03/29/24 09:15*	*04/01/24 11:07*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*03/29/24 09:15*	*04/01/24 11:07*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-05
Lab Sample ID: 240-201791-5
Date Collected: 03/26/24 09:25
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1242	**0.15**		0.098	0.075	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		03/29/24 09:15	04/01/24 11:24	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		03/29/24 09:15	04/01/24 11:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*03/29/24 09:15*	*04/01/24 11:24*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*03/29/24 09:15*	*04/01/24 11:24*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-06
Lab Sample ID: 240-201791-6
Date Collected: 03/26/24 10:10
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 11:41	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*35*		*10 - 149*	*03/29/24 09:15*	*04/01/24 11:41*	*1*
DCB Decachlorobiphenyl	*39*		*10 - 174*	*03/29/24 09:15*	*04/01/24 11:41*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-07
Lab Sample ID: 240-201791-7
Date Collected: 03/26/24 11:55
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1242	**0.15**		0.095	0.072	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 11:57	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*03/29/24 09:15*	*04/01/24 11:57*	*1*
DCB Decachlorobiphenyl	*41*		*10 - 174*	*03/29/24 09:15*	*04/01/24 11:57*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-08
Lab Sample ID: 240-201791-8
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 12:14	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 12:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*36*		*10 - 149*	*03/29/24 09:15*	*04/01/24 12:14*	*1*
DCB Decachlorobiphenyl	*43*		*10 - 174*	*03/29/24 09:15*	*04/01/24 12:14*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-SS-09
Lab Sample ID: 240-201791-9
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		03/29/24 09:15	04/01/24 12:31	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		03/29/24 09:15	04/01/24 12:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*31*		*10 - 149*	*03/29/24 09:15*	*04/01/24 12:31*	*1*
DCB Decachlorobiphenyl	*27*		*10 - 174*	*03/29/24 09:15*	*04/01/24 12:31*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-SS-10
Date Collected: 03/26/24 13:35
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201791-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 12:48	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*03/29/24 09:15*	*04/01/24 12:48*	*1*
DCB Decachlorobiphenyl	*37*		*10 - 174*	*03/29/24 09:15*	*04/01/24 12:48*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-032624-AC-11
Lab Sample ID: 240-201791-11
Date Collected: 03/26/24 14:25
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.061	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1221	0.11	U	0.11	0.062	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1242	0.11	U	0.11	0.083	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		03/29/24 09:15	04/01/24 13:05	1
Aroclor-1260	0.11	U	0.11	0.050	ug/L		03/29/24 09:15	04/01/24 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*30*		*10 - 149*	*03/29/24 09:15*	*04/01/24 13:05*	*1*
DCB Decachlorobiphenyl	*33*		*10 - 174*	*03/29/24 09:15*	*04/01/24 13:05*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032524-AC-01
Lab Sample ID: 240-201797-1
Date Collected: 03/25/24 14:40
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 13:22	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*32*		*10 - 149*	*03/29/24 09:15*	*04/01/24 13:22*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*03/29/24 09:15*	*04/01/24 13:22*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032524-AC-02
Date Collected: 03/25/24 15:50
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		03/29/24 09:15	04/01/24 13:38	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		03/29/24 09:15	04/01/24 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*36*		*10 - 149*	*03/29/24 09:15*	*04/01/24 13:38*	*1*
DCB Decachlorobiphenyl	*40*		*10 - 174*	*03/29/24 09:15*	*04/01/24 13:38*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032524-AC-03
Lab Sample ID: 240-201797-3
Date Collected: 03/25/24 16:35
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		03/29/24 09:15	04/01/24 13:55	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		03/29/24 09:15	04/01/24 13:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*28*		*10 - 149*	*03/29/24 09:15*	*04/01/24 13:55*	*1*
DCB Decachlorobiphenyl	*35*		*10 - 174*	*03/29/24 09:15*	*04/01/24 13:55*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-04
Date Collected: 03/26/24 11:05
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 14:12	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*25*		*10 - 149*	*03/29/24 09:15*	*04/01/24 14:12*	*1*
DCB Decachlorobiphenyl	*38*		*10 - 174*	*03/29/24 09:15*	*04/01/24 14:12*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-05
Date Collected: 03/26/24 09:25
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		03/29/24 09:15	04/01/24 14:29	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		03/29/24 09:15	04/01/24 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*32*		*10 - 149*	*03/29/24 09:15*	*04/01/24 14:29*	*1*
DCB Decachlorobiphenyl	*40*		*10 - 174*	*03/29/24 09:15*	*04/01/24 14:29*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-06
Date Collected: 03/26/24 10:10
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 15:36	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*30*		*10 - 149*	*03/29/24 09:15*	*04/01/24 15:36*	*1*
DCB Decachlorobiphenyl	*39*		*10 - 174*	*03/29/24 09:15*	*04/01/24 15:36*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-07
Lab Sample ID: 240-201797-7
Date Collected: 03/26/24 11:55
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		03/29/24 09:15	04/01/24 15:52	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		03/29/24 09:15	04/01/24 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*35*		*10 - 149*	*03/29/24 09:15*	*04/01/24 15:52*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 174*	*03/29/24 09:15*	*04/01/24 15:52*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-08
Lab Sample ID: 240-201797-8
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		03/29/24 09:15	04/01/24 16:09	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		03/29/24 09:15	04/01/24 16:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*26*		*10 - 149*	*03/29/24 09:15*	*04/01/24 16:09*	*1*
DCB Decachlorobiphenyl	*37*		*10 - 174*	*03/29/24 09:15*	*04/01/24 16:09*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-SS-09
Date Collected: 03/26/24 12:45
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		03/29/24 09:15	04/01/24 16:26	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		03/29/24 09:15	04/01/24 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*29*		*10 - 149*	*03/29/24 09:15*	*04/01/24 16:26*	*1*
DCB Decachlorobiphenyl	*40*		*10 - 174*	*03/29/24 09:15*	*04/01/24 16:26*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-SS-10
Date Collected: 03/26/24 13:35
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		04/01/24 08:37	04/02/24 13:40	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		04/01/24 08:37	04/02/24 13:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*29*		*10 - 149*	*04/01/24 08:37*	*04/02/24 13:40*	*1*
DCB Decachlorobiphenyl	*35*		*10 - 174*	*04/01/24 08:37*	*04/02/24 13:40*	*1*

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-032624-AC-11
Date Collected: 03/26/24 14:25
Date Received: 03/27/24 09:45

Lab Sample ID: 240-201797-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1242	0.11	U	0.11	0.081	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		04/01/24 08:37	04/02/24 13:56	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		04/01/24 08:37	04/02/24 13:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*42*		*10 - 149*	*04/01/24 08:37*	*04/02/24 13:56*	*1*
DCB Decachlorobiphenyl	*37*		*10 - 174*	*04/01/24 08:37*	*04/02/24 13:56*	*1*

GC Semi VOA

Prep Batch: 607829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-201791-1	GW-032524-AC-01	Total/NA	Water	3510C	
240-201791-2	GW-032524-AC-02	Total/NA	Water	3510C	
240-201791-3	GW-032524-AC-03	Total/NA	Water	3510C	
240-201791-4	GW-032624-AC-04	Total/NA	Water	3510C	
240-201791-5	GW-032624-AC-05	Total/NA	Water	3510C	
240-201791-6	GW-032624-AC-06	Total/NA	Water	3510C	
240-201791-7	GW-032624-AC-07	Total/NA	Water	3510C	
240-201791-8	GW-032624-AC-08	Total/NA	Water	3510C	
240-201791-9	GW-032624-SS-09	Total/NA	Water	3510C	
240-201791-10	GW-032624-SS-10	Total/NA	Water	3510C	
240-201791-11	GW-032624-AC-11	Total/NA	Water	3510C	
240-201797-1	GW-032524-AC-01	Dissolved	Water	3510C	
240-201797-2	GW-032524-AC-02	Dissolved	Water	3510C	
240-201797-3	GW-032524-AC-03	Dissolved	Water	3510C	
240-201797-4	GW-032624-AC-04	Dissolved	Water	3510C	
240-201797-5	GW-032624-AC-05	Dissolved	Water	3510C	
240-201797-6	GW-032624-AC-06	Dissolved	Water	3510C	
240-201797-7	GW-032624-AC-07	Dissolved	Water	3510C	
240-201797-8	GW-032624-AC-08	Dissolved	Water	3510C	
240-201797-9	GW-032624-SS-09	Dissolved	Water	3510C	
MB 240-607829/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-607829/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 607962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-201791-1	GW-032524-AC-01	Total/NA	Water	8082A	607829
240-201791-2	GW-032524-AC-02	Total/NA	Water	8082A	607829
240-201791-3	GW-032524-AC-03	Total/NA	Water	8082A	607829
240-201791-4	GW-032624-AC-04	Total/NA	Water	8082A	607829
240-201791-5	GW-032624-AC-05	Total/NA	Water	8082A	607829
240-201791-6	GW-032624-AC-06	Total/NA	Water	8082A	607829
240-201791-7	GW-032624-AC-07	Total/NA	Water	8082A	607829
240-201791-8	GW-032624-AC-08	Total/NA	Water	8082A	607829
240-201791-9	GW-032624-SS-09	Total/NA	Water	8082A	607829
240-201791-10	GW-032624-SS-10	Total/NA	Water	8082A	607829
240-201791-11	GW-032624-AC-11	Total/NA	Water	8082A	607829
240-201797-1	GW-032524-AC-01	Dissolved	Water	8082A	607829
240-201797-2	GW-032524-AC-02	Dissolved	Water	8082A	607829
240-201797-3	GW-032524-AC-03	Dissolved	Water	8082A	607829
240-201797-4	GW-032624-AC-04	Dissolved	Water	8082A	607829
240-201797-5	GW-032624-AC-05	Dissolved	Water	8082A	607829
240-201797-6	GW-032624-AC-06	Dissolved	Water	8082A	607829
240-201797-7	GW-032624-AC-07	Dissolved	Water	8082A	607829
240-201797-8	GW-032624-AC-08	Dissolved	Water	8082A	607829
240-201797-9	GW-032624-SS-09	Dissolved	Water	8082A	607829
MB 240-607829/1-A	Method Blank	Total/NA	Water	8082A	607829
LCS 240-607829/2-A	Lab Control Sample	Total/NA	Water	8082A	607829

Prep Batch: 607988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-201797-10	GW-032624-SS-10	Dissolved	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 607988 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-201797-11	GW-032624-AC-11	Dissolved	Water	3510C	
MB 240-607988/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-607988/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 608161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-201797-10	GW-032624-SS-10	Dissolved	Water	8082A	607988
240-201797-11	GW-032624-AC-11	Dissolved	Water	8082A	607988
MB 240-607988/1-A	Method Blank	Total/NA	Water	8082A	607988
LCS 240-607988/2-A	Lab Control Sample	Total/NA	Water	8082A	607988

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-607829/1-A
Matrix: Water
Analysis Batch: 607962

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		03/29/24 09:15	04/01/24 14:45	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		03/29/24 09:15	04/01/24 14:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*03/29/24 09:15*	*04/01/24 14:45*	*1*
DCB Decachlorobiphenyl	*37*		*10 - 174*	*03/29/24 09:15*	*04/01/24 14:45*	*1*

Lab Sample ID: LCS 240-607829/2-A
Matrix: Water
Analysis Batch: 607962

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.74		ug/L		69	28 - 140
Aroclor-1260	2.50	1.77		ug/L		71	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*33*		*10 - 149*
DCB Decachlorobiphenyl	*36*		*10 - 174*

Lab Sample ID: MB 240-607988/1-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 607988

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		04/01/24 08:37	04/02/24 17:04	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		04/01/24 08:37	04/02/24 17:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*35*		*10 - 149*	*04/01/24 08:37*	*04/02/24 17:04*	*1*
DCB Decachlorobiphenyl	*36*		*10 - 174*	*04/01/24 08:37*	*04/02/24 17:04*	*1*

Lab Sample ID: LCS 240-607988/2-A
Matrix: Water
Analysis Batch: 608161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 607988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.57		ug/L		63	28 - 140
Aroclor-1260	2.50	1.47		ug/L		59	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	34		10 - 149
DCB Decachlorobiphenyl	30		10 - 174

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-201791-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX1	TCX2	DCBP1	DCBP2						
Lab Sample ID	Client Sample ID	(10-149)	(10-149)	(10-174)	(10-174)						
240-201791-1	GW-032524-AC-01	35		39							
240-201791-2	GW-032524-AC-02	33		38							
240-201791-3	GW-032524-AC-03	34		36							
240-201791-4	GW-032624-AC-04	34		38							
240-201791-5	GW-032624-AC-05	33		38							
240-201791-6	GW-032624-AC-06	35		39							
240-201791-7	GW-032624-AC-07	33		41							
240-201791-8	GW-032624-AC-08	36	30	43	37						
240-201791-9	GW-032624-SS-09	31		27							
240-201791-10	GW-032624-SS-10	33		37							
240-201791-11	GW-032624-AC-11	30		33							
LCS 240-607829/2-A	Lab Control Sample	33		36							
LCS 240-607988/2-A	Lab Control Sample	34		30							
MB 240-607829/1-A	Method Blank	33		37							
MB 240-607988/1-A	Method Blank	35		36							

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX1	DCBP1								
Lab Sample ID	Client Sample ID	(10-149)	(10-174)								
240-201797-1	GW-032524-AC-01	32	38								
240-201797-2	GW-032524-AC-02	36	40								
240-201797-3	GW-032524-AC-03	28	35								
240-201797-4	GW-032624-AC-04	25	38								
240-201797-5	GW-032624-AC-05	32	40								
240-201797-6	GW-032624-AC-06	30	39								
240-201797-7	GW-032624-AC-07	35	45								
240-201797-8	GW-032624-AC-08	26	37								
240-201797-9	GW-032624-SS-09	29	40								
240-201797-10	GW-032624-SS-10	29	35								
240-201797-11	GW-032624-AC-11	42	37								

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-201791-1

Client Sample ID: GW-032524-AC-01
Lab Sample ID: 240-201791-1
Date Collected: 03/25/24 14:40
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 10:17

Client Sample ID: GW-032524-AC-02
Lab Sample ID: 240-201791-2
Date Collected: 03/25/24 15:50
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 10:33

Client Sample ID: GW-032524-AC-03
Lab Sample ID: 240-201791-3
Date Collected: 03/25/24 16:35
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 10:50

Client Sample ID: GW-032624-AC-04
Lab Sample ID: 240-201791-4
Date Collected: 03/26/24 11:05
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 11:07

Client Sample ID: GW-032624-AC-05
Lab Sample ID: 240-201791-5
Date Collected: 03/26/24 09:25
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 11:24

Client Sample ID: GW-032624-AC-06
Lab Sample ID: 240-201791-6
Date Collected: 03/26/24 10:10
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 11:41

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-201791-1

Client Sample ID: GW-032624-AC-07
Lab Sample ID: 240-201791-7
Date Collected: 03/26/24 11:55
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 11:57

Client Sample ID: GW-032624-AC-08
Lab Sample ID: 240-201791-8
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 12:14

Client Sample ID: GW-032624-SS-09
Lab Sample ID: 240-201791-9
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 12:31

Client Sample ID: GW-032624-SS-10
Lab Sample ID: 240-201791-10
Date Collected: 03/26/24 13:35
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 12:48

Client Sample ID: GW-032624-AC-11
Lab Sample ID: 240-201791-11
Date Collected: 03/26/24 14:25
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Total/NA	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 13:05

Client Sample ID: GW-032524-AC-01
Lab Sample ID: 240-201797-1
Date Collected: 03/25/24 14:40
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 13:22

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-032524-AC-02
Lab Sample ID: 240-201797-2
Date Collected: 03/25/24 15:50
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 13:38

Client Sample ID: GW-032524-AC-03
Lab Sample ID: 240-201797-3
Date Collected: 03/25/24 16:35
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 13:55

Client Sample ID: GW-032624-AC-04
Lab Sample ID: 240-201797-4
Date Collected: 03/26/24 11:05
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 14:12

Client Sample ID: GW-032624-AC-05
Lab Sample ID: 240-201797-5
Date Collected: 03/26/24 09:25
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 14:29

Client Sample ID: GW-032624-AC-06
Lab Sample ID: 240-201797-6
Date Collected: 03/26/24 10:10
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 15:36

Client Sample ID: GW-032624-AC-07
Lab Sample ID: 240-201797-7
Date Collected: 03/26/24 11:55
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 15:52

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-032624-AC-08
Lab Sample ID: 240-201797-8
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 16:09

Client Sample ID: GW-032624-SS-09
Lab Sample ID: 240-201797-9
Date Collected: 03/26/24 12:45
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607829	GBS	EET CLE	03/29/24 09:15
Dissolved	Analysis	8082A		1	607962	MBB	EET CLE	04/01/24 16:26

Client Sample ID: GW-032624-SS-10
Lab Sample ID: 240-201797-10
Date Collected: 03/26/24 13:35
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607988	LK2	EET CLE	04/01/24 08:37
Dissolved	Analysis	8082A		1	608161	EPF	EET CLE	04/02/24 13:40

Client Sample ID: GW-032624-AC-11
Lab Sample ID: 240-201797-11
Date Collected: 03/26/24 14:25
Matrix: Water
Date Received: 03/27/24 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			607988	LK2	EET CLE	04/01/24 08:37
Dissolved	Analysis	8082A		1	608161	EPF	EET CLE	04/02/24 13:56

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc.
Job ID: 240-201791-1
Project/Site: 12616852, GM Bedford, E117014

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

4 Coolers

GHD
6300 N. River Road - Suite 302
Rosemont, Illinois 60018
(773) 380-9933 phone
WWW.GHD.COM

SHIPPED TO (Laboratory Name): Eurofins - Barberton

CHAIN-OF-CUSTODY RECORD

REFERENCE NUMBER: 11228036

PROJECT NAME: GM Bedford

SAMPLER'S SIGNATURE: Alison Criviare **PRINTED NAME:** Alison Criviare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCB	PARAMETERS: dissolved PCB	REMARKS
1	3/25/24	1440	GW-032524-AC-01	WG	4	X	X	SSOW number: E117014
2	3/25/24	1550	GW-032524-AC-02		4	X	X	
3	3/25/24	1635	GW-032524-AC-03		4	X	X	
4	3/26/24	1105	GW-032624-AC-04		4	X	X	
5	3/26/24	0925	GW-032624-AC-05		4	X	X	
6	3/26/24	1010	GW-032624-AC-06		4	X	X	
7	3/26/24	1155	GW-032624-AC-07		4	X	X	
8	3/26/24	1245	GW-032624-AC-08		4	X	X	
9	3/26/24	1245	GW-032624-SS-09		4	X	X	
10	3/26/24	1335	GW-032624-SS-10		4	X	X	
11	3/26/24	1425	GW-032624-AC-11		2	X	X	
			TOTAL NUMBER OF CONTAINERS		42			

240-201791 Chain of Custody

RELINQUISHED BY: ① Alison Criviare	DATE: 3/26/24 TIME: 1700	RECEIVED BY: ②	DATE: 3-27-24 TIME: 945
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex Priority Overnight **TRACKING No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: A.Criviare, S.Sholar

RECEIVED FOR LABORATORY BY: 9354

DATE: TIME:

11930203(PRES001)GN-CO001

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by: MMM

Cooler Received on 3-27-24 Opened on 3-27-24

FedEx· 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used Bubble Wrap Foam Plastic Bag None Other _____

COOLANT· (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 17 (CF 0.0 °C) Observed Cooler Temp _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 4	(Yes) No	**Tests that are not checked for pH by Receiving** **VOAs** **Oil and Grease** **TOC**
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	(Yes) No NA	
3 Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4 Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12. Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13 17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA)	pH Strip Lot# HC329089
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes (No) NA	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by

_____

_____

_____

_____

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	**IR Gun # (Circle)**	**Observed Temp °C**	**Corrected Temp °C**	**Coolant (Circle)**
(EC) Client Box Other	IR GUN #: 17	4.2	4.2	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.6	1.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.9	3.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	10	10	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	

3/27/2024

Login Container Summary Report

240-201791

4/8/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-032524-AC-01	240-201791-A-1	Amber Glass 1 liter - unpreserved				
GW-032524-AC-01	240-201791-B-1	Amber Glass 1 liter - unpreserved				
GW-032524-AC-02	240-201791-A-2	Amber Glass 1 liter - unpreserved				
GW-032524-AC-02	240-201791-B-2	Amber Glass 1 liter - unpreserved				
GW-032524-AC-03	240-201791-A-3	Amber Glass 1 liter - unpreserved				
GW-032524-AC-03	240-201791-B-3	Amber Glass 1 liter - unpreserved				
GW-032624-AC-04	240-201791-A-4	Amber Glass 1 liter - unpreserved				
GW-032624-AC-04	240-201791-B-4	Amber Glass 1 liter - unpreserved				
GW-032624-AC-05	240-201791-A-5	Amber Glass 1 liter - unpreserved				
GW-032624-AC-05	240-201791-B-5	Amber Glass 1 liter - unpreserved				
GW-032624 AC-06	240-201791-A-6	Amber Glass 1 liter - unpreserved				
GW-032624-AC-06	240-201791-B-6	Amber Glass 1 liter - unpreserved				
GW-032624-AC-07	240-201791-A-7	Amber Glass 1 liter - unpreserved				
GW-032624-AC-07	240-201791-B-7	Amber Glass 1 liter - unpreserved				
GW-032624-AC-08	240-201791-A-8	Amber Glass 1 liter - unpreserved				
GW-032624-AC-08	240-201791-B-8	Amber Glass 1 liter - unpreserved				
GW-032624-SS-09	240-201791-A-9	Amber Glass 1 liter unpreserved				
GW-032624-SS-09	240-201791-B-9	Amber Glass 1 liter - unpreserved				
GW-032624-SS-10	240-201791 A-10	Amber Glass 1 liter - unpreserved				
GW-032624-SS-10	240-201791-B-10	Amber Glass 1 liter - unpreserved				
GW-032624-AC-11	240-201791-A-11	Amber Glass 1 liter - unpreserved				

4 coolers

GHD
6300 N. River Road - Suite 302
Rosemont, Illinois 60018
(773) 380-9933 phone
WWW.GHD.COM

SHIPPED TO (Laboratory Name): Eurofins - Barberton

REFERENCE NUMBER: 11228036

PROJECT NAME: Gm Bedford

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: Alison Criviare PRINTED NAME: Alison Criviare

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Total PCB	PARAMETERS: dissolved PCB	REMARKS
1	3/25/24	1440	GW-032524-AC-01	WG	4	X	X	SSOW number: E117014
2	3/25/24	1550	GW-032524-AC-02		4	X	X	
3	3/25/24	1635	GW-032524-AC-03		4	X	X	
4	3/26/24	1105	GW-032624-AC-04		4	X	X	
5	3/26/24	0925	GW-032624-AC-05		4	X	X	
6	3/26/24	1010	GW-032624-AC-06		4	X	X	
7	3/26/24	1155	GW-032624-AC-07		4	X	X	
8	3/26/24	1245	GW-032624-AC-08		4	X	X	
9	3/26/24	1245	GW-032624-SS-09		4	X	X	
10	3/26/24	1335	GW-032624-SS-10		4	X	X	
11	3/26/24	1425	GW-032624-AC-11		2	X	X	
			TOTAL NUMBER OF CONTAINERS		42			

240-201797 Chain of Custody

RELINQUISHED BY: ① Alison Criviare	DATE: 3/26/24 TIME: 1700	RECEIVED BY: ②	DATE: 3-27-24 TIME: 945
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fedex Priority Overnight TRACKING No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: A.Criviare, S.Sholar

RECEIVED FOR LABORATORY BY: 9354

DATE: TIME:

11930203(PRES001)GN-CO001

4/8/2024

Eurofins – Cleveland Sample Receipt Form/Narrative Login # .
Barberton Facility

Client GHD Site Name

Cooler unpacked by:

Cooler Received on 3-27-24 Opened on 3-27-24

FedEx: 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 17 (CF 0.0 °C) Observed Cooler Temp °C Corrected Cooler Temp °C

2	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 4	(Yes) No
	-Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
	-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)
	-Were tamper/custody seals intact and uncompromised?	(Yes) No NA
3	Shippers' packing slip attached to the cooler(s)?	(Yes) No
4.	Did custody papers accompany the sample(s)?	(Yes) No
5	Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6	Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No
7	Did all bottles arrive in good condition (Unbroken)?	(Yes) No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	(Yes) No
11	Sufficient quantity received to perform indicated analyses?	(Yes) No
12	Are these work share samples and all listed on the COC?	Yes (No)
	If yes, Questions 13 17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA) pH Strip Lot# HC329089
14.	Were VOAs on the COC?	Yes (No)
15	Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes (No) NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes (No)
17	Was a LL Hg or Me Hg trip blank present?	Yes (No)

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container
Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory
Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	4.2	4.2	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.6	1.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.9	3.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.0	1.0	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	

3/27/2024

Login Container Summary Report

240-201797

4/8/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-032524-AC-01	240-201797-A-1	Amber Glass 1 liter - unpreserved - Dis.				
GW-032524 AC-01	240-201797-B-1	Amber Glass 1 liter - unpreserved - Dis.				
GW-032524-AC-02	240-201797 A-2	Amber Glass 1 liter - unpreserved - Dis				
GW-032524-AC-02	240-201797-B-2	Amber Glass 1 liter - unpreserved - Dis				
GW-032524-AC-03	240-201797-A-3	Amber Glass 1 liter - unpreserved - Dis				
GW-032524 AC-03	240-201797-B-3	Amber Glass 1 liter - unpreserved - Dis				
GW-032624 AC-04	240-201797-A-4	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-04	240-201797 B-4	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-05	240 201797-A-5	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-05	240-201797 B-5	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-06	240 201797-A-6	Amber Glass 1 liter - unpreserved - Dis				
GW-032624 AC-06	240-201797-B-6	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-07	240 201797-A-7	Amber Glass 1 liter - unpreserved - Dis				
GW-032624 AC-07	240-201797-B-7	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-AC-08	240-201797 A-8	Amber Glass 1 liter - unpreserved - Dis				
GW-032624 AC-08	240-201797-B-8	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-SS-09	240 201797 A-9	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-SS-09	240-201797-B-9	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-SS-10	240-201797 A 10	Amber Glass 1 liter - unpreserved - Dis				
GW-032624-SS-10	240-201797-B-10	Amber Glass 1 liter - unpreserved Dis.				
GW-032624-AC-11	240-201797-A 11	Amber Glass 1 liter unpreserved - Dis.				

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 6/5/2024 3:56:46 PM

JOB DESCRIPTION

12616852, GM Bedford, E117014

JOB NUMBER

240-204855-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 8
Client Sample Results 9
QC Association Summary 17
QC Sample Results 18
Surrogate Summary 20
Lab Chronicle 21
Certification Summary 23
Chain of Custody 24

Job ID: 240-204855-1 Eurofins Cleveland

Job Narrative
240-204855-1

Receipt
The samples were received on 5/21/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.9º C and 3.9º C.

GC Semi VOA
Method 8082A: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-052024-AC-03 (240-204855-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 614104.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-614304.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-615366.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-204855-1	GW-052024-AC-01	Water	05/20/24 14:20	05/21/24 09:00
240-204855-2	GW-052024-AC-01	Water	05/20/24 14:20	05/21/24 09:00
240-204855-3	GW-052024-DS-02	Water	05/20/24 14:55	05/21/24 09:00
240-204855-4	GW-052024-DS-02	Water	05/20/24 14:55	05/21/24 09:00
240-204855-5	GW-052024-AC-03	Water	05/20/24 15:20	05/21/24 09:00
240-204855-6	GW-052024-AC-03	Water	05/20/24 15:20	05/21/24 09:00
240-204855-7	GW-052024-DS-04	Water	05/20/24 16:15	05/21/24 09:00
240-204855-8	GW-052024-DS-04	Water	05/20/24 16:15	05/21/24 09:00

Detection Summary

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052024-AC-01 — Lab Sample ID: 240-204855-1

No Detections.

Client Sample ID: GW-052024-AC-01 — Lab Sample ID: 240-204855-2

No Detections.

Client Sample ID: GW-052024-DS-02 — Lab Sample ID: 240-204855-3

No Detections.

Client Sample ID: GW-052024-DS-02 — Lab Sample ID: 240-204855-4

No Detections.

Client Sample ID: GW-052024-AC-03 — Lab Sample ID: 240-204855-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.13		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052024-AC-03 — Lab Sample ID: 240-204855-6

No Detections.

Client Sample ID: GW-052024-DS-04 — Lab Sample ID: 240-204855-7

No Detections.

Client Sample ID: GW-052024-DS-04 — Lab Sample ID: 240-204855-8

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204855-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052024-AC-01
Lab Sample ID: 240-204855-1
Date Collected: 05/20/24 14:20
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/23/24 08:30	05/24/24 02:42	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/23/24 08:30	05/24/24 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*05/23/24 08:30*	*05/24/24 02:42*	*1*
DCB Decachlorobiphenyl	*64*		*10 - 174*	*05/23/24 08:30*	*05/24/24 02:42*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052024-DS-02
Lab Sample ID: 240-204855-3
Date Collected: 05/20/24 14:55
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.055	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1221	0.098	U	0.098	0.056	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1232	0.098	U	0.098	0.073	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1242	0.098	U	0.098	0.075	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1248	0.098	U	0.098	0.049	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1254	0.098	U	0.098	0.039	ug/L		05/24/24 09:05	05/28/24 12:34	1
Aroclor-1260	0.098	U	0.098	0.045	ug/L		05/24/24 09:05	05/28/24 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*57*		*10 - 149*	*05/24/24 09:05*	*05/28/24 12:34*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 174*	*05/24/24 09:05*	*05/28/24 12:34*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052024-AC-03
Lab Sample ID: 240-204855-5
Date Collected: 05/20/24 15:20
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1242	**0.13**		0.10	0.076	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/24/24 09:05	05/28/24 13:04	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/24/24 09:05	05/28/24 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*05/24/24 09:05*	*05/28/24 13:04*	*1*
DCB Decachlorobiphenyl	*92*		*10 - 174*	*05/24/24 09:05*	*05/28/24 13:04*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052024-DS-04
Lab Sample ID: 240-204855-7
Date Collected: 05/20/24 16:15
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		05/24/24 09:05	05/28/24 13:34	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		05/24/24 09:05	05/28/24 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*05/24/24 09:05*	*05/28/24 13:34*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 174*	*05/24/24 09:05*	*05/28/24 13:34*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052024-AC-01
Lab Sample ID: 240-204855-2
Date Collected: 05/20/24 14:20
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		05/24/24 09:05	05/28/24 12:19	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		05/24/24 09:05	05/28/24 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*05/24/24 09:05*	*05/28/24 12:19*	*1*
DCB Decachlorobiphenyl	*92*		*10 - 174*	*05/24/24 09:05*	*05/28/24 12:19*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052024-DS-02
Lab Sample ID: 240-204855-4
Date Collected: 05/20/24 14:55
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/24/24 09:05	05/28/24 12:49	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/24/24 09:05	05/28/24 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*49*		*10 - 149*	*05/24/24 09:05*	*05/28/24 12:49*	*1*
DCB Decachlorobiphenyl	*85*		*10 - 174*	*05/24/24 09:05*	*05/28/24 12:49*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052024-AC-03
Lab Sample ID: 240-204855-6
Date Collected: 05/20/24 15:20
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		06/04/24 08:25	06/05/24 10:21	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		06/04/24 08:25	06/05/24 10:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*06/04/24 08:25*	*06/05/24 10:21*	*1*
DCB Decachlorobiphenyl	*72*		*10 - 174*	*06/04/24 08:25*	*06/05/24 10:21*	*1*

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052024-DS-04
Lab Sample ID: 240-204855-8
Date Collected: 05/20/24 16:15
Matrix: Water
Date Received: 05/21/24 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.12	U	0.12	0.067	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1221	0.12	U	0.12	0.068	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1232	0.12	U	0.12	0.088	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1242	0.12	U	0.12	0.090	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1248	0.12	U	0.12	0.060	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1254	0.12	U	0.12	0.048	ug/L		05/24/24 09:05	05/28/24 13:50	1
Aroclor-1260	0.12	U	0.12	0.055	ug/L		05/24/24 09:05	05/28/24 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*05/24/24 09:05*	*05/28/24 13:50*	*1*
DCB Decachlorobiphenyl	*89*		*10 - 174*	*05/24/24 09:05*	*05/28/24 13:50*	*1*

GC Semi VOA

Prep Batch: 614104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-1	GW-052024-AC-01	Total/NA	Water	3510C	
MB 240-614104/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-614104/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 614238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-1	GW-052024-AC-01	Total/NA	Water	8082A	614104
MB 240-614104/1-A	Method Blank	Total/NA	Water	8082A	614104
LCS 240-614104/2-A	Lab Control Sample	Total/NA	Water	8082A	614104

Prep Batch: 614304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-2	GW-052024-AC-01	Dissolved	Water	3510C	
240-204855-3	GW-052024-DS-02	Total/NA	Water	3510C	
240-204855-4	GW-052024-DS-02	Dissolved	Water	3510C	
240-204855-5	GW-052024-AC-03	Total/NA	Water	3510C	
240-204855-7	GW-052024-DS-04	Total/NA	Water	3510C	
240-204855-8	GW-052024-DS-04	Dissolved	Water	3510C	
MB 240-614304/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-614304/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 614477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-2	GW-052024-AC-01	Dissolved	Water	8082A	614304
240-204855-3	GW-052024-DS-02	Total/NA	Water	8082A	614304
240-204855-4	GW-052024-DS-02	Dissolved	Water	8082A	614304
240-204855-5	GW-052024-AC-03	Total/NA	Water	8082A	614304
240-204855-7	GW-052024-DS-04	Total/NA	Water	8082A	614304
240-204855-8	GW-052024-DS-04	Dissolved	Water	8082A	614304
MB 240-614304/1-A	Method Blank	Total/NA	Water	8082A	614304
LCS 240-614304/2-A	Lab Control Sample	Total/NA	Water	8082A	614304

Prep Batch: 615366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-6	GW-052024-AC-03	Dissolved	Water	3510C	
MB 240-615366/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-615366/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 615502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204855-6	GW-052024-AC-03	Dissolved	Water	8082A	615366
MB 240-615366/1-A	Method Blank	Total/NA	Water	8082A	615366
LCS 240-615366/2-A	Lab Control Sample	Total/NA	Water	8082A	615366

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-614104/1-A
Matrix: Water
Analysis Batch: 614238

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614104

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/23/24 08:30	05/23/24 21:00	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/23/24 08:30	05/23/24 21:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*10 - 149*	*05/23/24 08:30*	*05/23/24 21:00*	*1*
DCB Decachlorobiphenyl	*82*		*10 - 174*	*05/23/24 08:30*	*05/23/24 21:00*	*1*

Lab Sample ID: LCS 240-614104/2-A
Matrix: Water
Analysis Batch: 614238

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614104

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.69		ug/L		68	28 - 140
Aroclor-1260	2.50	1.90		ug/L		76	39 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*53*		*10 - 149*
DCB Decachlorobiphenyl	*73*		*10 - 174*

Lab Sample ID: MB 240-614304/1-A
Matrix: Water
Analysis Batch: 614477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/24/24 09:05	05/28/24 16:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*46*		*10 - 149*	*05/24/24 09:05*	*05/28/24 16:06*	*1*
DCB Decachlorobiphenyl	*78*		*10 - 174*	*05/24/24 09:05*	*05/28/24 16:06*	*1*

Lab Sample ID: LCS 240-614304/2-A
Matrix: Water
Analysis Batch: 614477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614304

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.95		ug/L		78	28 - 140
Aroclor-1260	2.50	2.29		ug/L		91	39 - 153

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	61		10 - 149
DCB Decachlorobiphenyl	90		10 - 174

Lab Sample ID: MB 240-615366/1-A
Matrix: Water
Analysis Batch: 615502

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615366

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/04/24 08:25	06/05/24 09:50	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/04/24 08:25	06/05/24 09:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		10 - 149	06/04/24 08:25	06/05/24 09:50	1
DCB Decachlorobiphenyl	94		10 - 174	06/04/24 08:25	06/05/24 09:50	1

Lab Sample ID: LCS 240-615366/2-A
Matrix: Water
Analysis Batch: 615502

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615366

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	2.50	1.78		ug/L		71	28 - 140
Aroclor-1260	2.50	1.73		ug/L		69	39 - 153

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	58		10 - 149
DCB Decachlorobiphenyl	58		10 - 174

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204855-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204855-1	GW-052024-AC-01	60	64
LCS 240-614104/2-A	Lab Control Sample	53	73
LCS 240-615366/2-A	Lab Control Sample	58	58
MB 240-614104/1-A	Method Blank	63	82
MB 240-615366/1-A	Method Blank	84	94

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204855-3	GW-052024-DS-02	57	81
240-204855-5	GW-052024-AC-03	64	92
240-204855-7	GW-052024-DS-04	60	82
LCS 240-614304/2-A	Lab Control Sample	61	90
MB 240-614304/1-A	Method Blank	46	78

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204855-2	GW-052024-AC-01	66	92
240-204855-4	GW-052024-DS-02	49	85
240-204855-8	GW-052024-DS-04	56	89

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204855-6	GW-052024-AC-03	59	72

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204855-1

Client Sample ID: GW-052024-AC-01
Lab Sample ID: 240-204855-1
Date Collected: 05/20/24 14:20
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614104	BV1	EET CLE	05/23/24 08:30
Total/NA	Analysis	8082A		1	614238	MBB	EET CLE	05/24/24 02:42

Client Sample ID: GW-052024-AC-01
Lab Sample ID: 240-204855-2
Date Collected: 05/20/24 14:20
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 12:19

Client Sample ID: GW-052024-DS-02
Lab Sample ID: 240-204855-3
Date Collected: 05/20/24 14:55
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 12:34

Client Sample ID: GW-052024-DS-02
Lab Sample ID: 240-204855-4
Date Collected: 05/20/24 14:55
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 12:49

Client Sample ID: GW-052024-AC-03
Lab Sample ID: 240-204855-5
Date Collected: 05/20/24 15:20
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 13:04

Client Sample ID: GW-052024-AC-03
Lab Sample ID: 240-204855-6
Date Collected: 05/20/24 15:20
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615366	LK2	EET CLE	06/04/24 08:25
Dissolved	Analysis	8082A		1	615502	LSH	EET CLE	06/05/24 10:21

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052024-DS-04
Lab Sample ID: 240-204855-7
Date Collected: 05/20/24 16:15
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 13:34

Client Sample ID: GW-052024-DS-04
Lab Sample ID: 240-204855-8
Date Collected: 05/20/24 16:15
Matrix: Water
Date Received: 05/21/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 13:50

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-204855-1
Project/Site: 12616852, GM Bedford, E117014

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

CHAIN OF CUSTODY RECORD

COC Number: GHD-20240520172116

ADDRESS: 10300 N. River Road - Suite 302 Rosemont, IL 60018
PHONE: (773) 380-9933 FAX:

Project No/Phase/Task Code: 11228036	Laboratory Name: Eurofins TestAmerica, Canton	Lab Location: 180 South Van Buren Avenue Barberton, OH 44203	SSOW ID: E117014
Project Name: GM Bedford	Lab Contact: 330-497-9396		Cooler No: 2 coolers
Project Location: 105 GM Drive, Bedford, IN. 47421, Bedford, IN			Carrier: Fedex Priority Overnight
GHD Chemistry Contact:			Airbill No: 8181 5130 8728
Sampler(s): AC, DS			Total # of Containers: 14

Item	Sample Identification (containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code	Grab (G) /Comp (C)	Filtered (Y/N)	Analysis Requested: PCB (dissolved)	PCB (total)	VOCs	SVOCs	Chloride	Vinyl Chloride	Chlorinated Organics	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
1	GW-052024-AC-01	05/20/24	14:20	WG	G	Y	x	x						4		
2	GW-052024-DS-02	05/20/24	14:55	WG	G	Y	x	x						4		
3	GW-052024-AC-03	05/20/24	15:20	WG	G	Y	x	x						4		
4	GW-052024-DS-04	05/20/24	16:15	WG	G	Y	x	x						2		
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																



TAT Required in business days (use separate COCs fro different TATs)
(Standards include 1 day, 2 days, 3 days, 1 week, 2 weeks)

Notes/Special Requirements:

	Relinquished By:	Company	Date	Time	Received By:	Company	Date	Time
1	[signature]	GHD	5/29/24	1830	1 [signature]	EETNC	5-31-24	9:00
2					2			
3					3			

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name _____ Cooler unpacked by RACHELLE HATDET

Cooler Received on 5-21-24 Opened on 5-21-24

FedEx. 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC ~~Foam Box~~ Client Cooler ~~Box~~ Other _____

Packing material used: (Bubble Wrap) Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 17 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No	**Tests that are not checked for pH by Receiving.**
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	**VOAs**
-Were tamper/custody seals intact and uncompromised?	(Yes) No NA	**Oil and Grease**
3 Shippers' packing slip attached to the cooler(s)?	(Yes) No	**TOC**
4 Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	Yes (No)	
If yes, Questions 13 17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes No (NA) pH Strip Lot# HC439975	
14 Were VOAs on the COC?	Yes (No)	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes No (NA)	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes (No)	
17 Was a LL Hg or Me Hg trip blank present? _____	Yes (No)	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by

_____

_____

_____

_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation Date/Time VOAs Frozen _____

Login # . _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	3.7	3.9	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	1.7	1.9	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	

5/21/2024

Login Container Summary Report

240-204855

6/5/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-052024-AC-01	240-204855-A-1	Amber Glass 1 liter - unpreserved				
GW-052024-AC-01	240-204855-B-1	Amber Glass 1 liter - unpreserved				
GW-052024-AC-01	240-204855-A-2	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-AC-01	240-204855-B-2	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-DS-02	240-204855-A-3	Amber Glass 1 liter - unpreserved				
GW-052024-DS-02	240-204855-B-3	Amber Glass 1 liter - unpreserved				
GW-052024-DS-02	240-204855-A-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-DS-02	240-204855-B-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-AC-03	240-204855-A-5	Amber Glass 1 liter - unpreserved				
GW-052024-AC-03	240-204855-B-5	Amber Glass 1 liter - unpreserved				
GW-052024-AC-03	240-204855-A-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-AC-03	240-204855-B-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052024-DS-04	240-204855-A-7	Amber Glass 1 liter - unpreserved				
GW-052024-DS-04	240-204855-A-8	Amber Glass 1 liter - unpreserved - Dis				

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 6/5/2024 12:04:04 PM

JOB DESCRIPTION

12616852, GM Bedford, E117014

JOB NUMBER

240-204972-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 31
QC Sample Results 33
Surrogate Summary 50
Lab Chronicle 52
Certification Summary 55
Chain of Custody 56

Job ID: 240-204972-1 Eurofins Cleveland

Job Narrative
240-204972-1

Receipt
The samples were received on 5/22/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 4.5º C, 4.7º C and 4.9º C. The missing cooler that is noted on the CRF did arrive a day later than the others. There were no issues with the missing cooler.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-614939 was outside the method criteria for the following analyte: Methyl tert-butyl ether. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method 8260D: The continuing calibration verification (CCV) associated with batch 240-614939 recovered above the upper control limit for Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270E: The continuing calibration verification (CCV) associated with batch 240-614989 recovered outside acceptance criteria, low biased, for Phenol. A reporting limit (RL) standard was analyzed, and Phenol was detected. Since the associated samples were non-detect for the analyte, the data are reported. Sample GW-052124-DS-06 (240-204972-5) were impacted.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-052124-AC-11 (240-204972-10), GW-052124-AC-13 (240-204972-14) and GW-052124-DS-10 (240-204972-15).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-614304.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-204972-1	GW-052124-AC-05	Water	05/21/24 09:45	05/22/24 10:00
240-204972-2	GW-052124-AC-05	Water	05/21/24 09:45	05/22/24 10:00
240-204972-3	GW-052124-AC-07	Water	05/21/24 09:50	05/22/24 10:00
240-204972-4	GW-052124-AC-07	Water	05/21/24 09:50	05/22/24 10:00
240-204972-5	GW-052124-DS-06	Water	05/21/24 10:05	05/22/24 10:00
240-204972-6	GW-052124-DS-06	Water	05/21/24 10:05	05/22/24 10:00
240-204972-7	GW-052124-AC-09	Water	05/21/24 11:00	05/22/24 10:00
240-204972-8	GW-052124-AC-09	Water	05/21/24 11:00	05/22/24 10:00
240-204972-9	GW-052124-AC-11	Water	05/21/24 14:30	05/22/24 10:00
240-204972-10	GW-052124-AC-11	Water	05/21/24 14:30	05/22/24 10:00
240-204972-11	GW-052124-DS-08	Water	05/21/24 15:05	05/22/24 10:00
240-204972-12	GW-052124-DS-08	Water	05/21/24 15:05	05/22/24 10:00
240-204972-13	GW-052124-AC-13	Water	05/21/24 15:55	05/22/24 10:00
240-204972-14	GW-052124-AC-13	Water	05/21/24 15:55	05/22/24 10:00
240-204972-15	GW-052124-DS-10	Water	05/21/24 16:50	05/22/24 10:00
240-204972-17	TB-052124-DS-01	Water	05/21/24 17:30	05/22/24 10:00

Detection Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204972-1

Client Sample ID: GW-052124-AC-05 — Lab Sample ID: 240-204972-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.086	J	0.11	0.081	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052124-AC-05 — Lab Sample ID: 240-204972-2

No Detections.

Client Sample ID: GW-052124-AC-07 — Lab Sample ID: 240-204972-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.091	J	0.11	0.082	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052124-AC-07 — Lab Sample ID: 240-204972-4

No Detections.

Client Sample ID: GW-052124-DS-06 — Lab Sample ID: 240-204972-5

No Detections.

Client Sample ID: GW-052124-DS-06 — Lab Sample ID: 240-204972-6

No Detections.

Client Sample ID: GW-052124-AC-09 — Lab Sample ID: 240-204972-7

No Detections.

Client Sample ID: GW-052124-AC-09 — Lab Sample ID: 240-204972-8

No Detections.

Client Sample ID: GW-052124-AC-11 — Lab Sample ID: 240-204972-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	19		2.1	1.6	ug/L	20		8082A	Total/NA

Client Sample ID: GW-052124-AC-11 — Lab Sample ID: 240-204972-10

No Detections.

Client Sample ID: GW-052124-DS-08 — Lab Sample ID: 240-204972-11

No Detections.

Client Sample ID: GW-052124-DS-08 — Lab Sample ID: 240-204972-12

No Detections.

Client Sample ID: GW-052124-AC-13 — Lab Sample ID: 240-204972-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	240		19	15	ug/L	200		8082A	Total/NA

Client Sample ID: GW-052124-AC-13 — Lab Sample ID: 240-204972-14

No Detections.

Client Sample ID: GW-052124-DS-10 — Lab Sample ID: 240-204972-15

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: TB-052124-DS-01
Lab Sample ID: 240-204972-17

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Method Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204972-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CLE
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CLE
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: GW-052124-DS-06
Date Collected: 05/21/24 10:05
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 20:21	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			05/30/24 20:21	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/30/24 20:21	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 20:21	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			05/30/24 20:21	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/30/24 20:21	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.77	ug/L			05/30/24 20:21	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			05/30/24 20:21	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			05/30/24 20:21	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			05/30/24 20:21	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			05/30/24 20:21	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			05/30/24 20:21	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			05/30/24 20:21	1
2-Hexanone	10	U	10	1.1	ug/L			05/30/24 20:21	1
Acetone	10	U	10	5.4	ug/L			05/30/24 20:21	1
Benzene	1.0	U	1.0	0.42	ug/L			05/30/24 20:21	1
Bromoform	1.0	U	1.0	0.76	ug/L			05/30/24 20:21	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/30/24 20:21	1
Carbon disulfide	1.0	U	1.0	0.59	ug/L			05/30/24 20:21	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			05/30/24 20:21	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			05/30/24 20:21	1
Chloroethane	1.0	U	1.0	0.83	ug/L			05/30/24 20:21	1
Chloroform	1.0	U	1.0	0.47	ug/L			05/30/24 20:21	1
Chloromethane	1.0	U	1.0	0.63	ug/L			05/30/24 20:21	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/24 20:21	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			05/30/24 20:21	1
Cyclohexane	1.0	U	1.0	0.48	ug/L			05/30/24 20:21	1
Dichlorobromomethane	1.0	U	1.0	0.38	ug/L			05/30/24 20:21	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			05/30/24 20:21	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			05/30/24 20:21	1
Ethylene Dibromide	1.0	U	1.0	0.41	ug/L			05/30/24 20:21	1
Isopropylbenzene	1.0	U	1.0	0.49	ug/L			05/30/24 20:21	1
Methyl acetate	10	U	10	1.7	ug/L			05/30/24 20:21	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			05/30/24 20:21	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.99	ug/L			05/30/24 20:21	1
Methyl tert-butyl ether	1.0	U	1.0	0.47	ug/L			05/30/24 20:21	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			05/30/24 20:21	1
Styrene	1.0	U	1.0	0.45	ug/L			05/30/24 20:21	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 20:21	1
Toluene	1.0	U	1.0	0.44	ug/L			05/30/24 20:21	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/24 20:21	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			05/30/24 20:21	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 20:21	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			05/30/24 20:21	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/24 20:21	1
Xylenes, Total	2.0	U	2.0	0.42	ug/L			05/30/24 20:21	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			05/30/24 20:21	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			05/30/24 20:21	1

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		05/30/24 20:21	1
4-Bromofluorobenzene (Surr)	90		56 - 136		05/30/24 20:21	1
Toluene-d8 (Surr)	94		78 - 122		05/30/24 20:21	1
Dibromofluoromethane (Surr)	97		73 - 120		05/30/24 20:21	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: TB-052124-DS-01
Date Collected: 05/21/24 17:30
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 08:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			05/30/24 08:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/30/24 08:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 08:08	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			05/30/24 08:08	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/30/24 08:08	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.77	ug/L			05/30/24 08:08	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			05/30/24 08:08	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			05/30/24 08:08	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			05/30/24 08:08	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			05/30/24 08:08	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			05/30/24 08:08	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			05/30/24 08:08	1
2-Hexanone	10	U	10	1.1	ug/L			05/30/24 08:08	1
Acetone	10	U	10	5.4	ug/L			05/30/24 08:08	1
Benzene	1.0	U	1.0	0.42	ug/L			05/30/24 08:08	1
Bromoform	1.0	U	1.0	0.76	ug/L			05/30/24 08:08	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/30/24 08:08	1
Carbon disulfide	1.0	U	1.0	0.59	ug/L			05/30/24 08:08	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			05/30/24 08:08	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			05/30/24 08:08	1
Chloroethane	1.0	U	1.0	0.83	ug/L			05/30/24 08:08	1
Chloroform	1.0	U	1.0	0.47	ug/L			05/30/24 08:08	1
Chloromethane	1.0	U	1.0	0.63	ug/L			05/30/24 08:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/24 08:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			05/30/24 08:08	1
Cyclohexane	1.0	U	1.0	0.48	ug/L			05/30/24 08:08	1
Dichlorobromomethane	1.0	U	1.0	0.38	ug/L			05/30/24 08:08	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			05/30/24 08:08	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			05/30/24 08:08	1
Ethylene Dibromide	1.0	U	1.0	0.41	ug/L			05/30/24 08:08	1
Isopropylbenzene	1.0	U	1.0	0.49	ug/L			05/30/24 08:08	1
Methyl acetate	10	U	10	1.7	ug/L			05/30/24 08:08	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			05/30/24 08:08	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.99	ug/L			05/30/24 08:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.47	ug/L			05/30/24 08:08	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			05/30/24 08:08	1
Styrene	1.0	U	1.0	0.45	ug/L			05/30/24 08:08	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 08:08	1
Toluene	1.0	U	1.0	0.44	ug/L			05/30/24 08:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/24 08:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			05/30/24 08:08	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 08:08	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			05/30/24 08:08	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/24 08:08	1
Xylenes, Total	2.0	U	2.0	0.42	ug/L			05/30/24 08:08	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			05/30/24 08:08	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			05/30/24 08:08	1

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		62 - 137		05/30/24 08:08	1
4-Bromofluorobenzene (Surr)	90		56 - 136		05/30/24 08:08	1
Toluene-d8 (Surr)	93		78 - 122		05/30/24 08:08	1
Dibromofluoromethane (Surr)	103		73 - 120		05/30/24 08:08	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-052124-DS-06
Lab Sample ID: 240-204972-5
Date Collected: 05/21/24 10:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	9.6	U	9.6	0.17	ug/L		05/28/24 08:35	05/31/24 18:06	1
Acenaphthylene	9.6	U	9.6	0.12	ug/L		05/28/24 08:35	05/31/24 18:06	1
Acetophenone	9.6	U	9.6	0.35	ug/L		05/28/24 08:35	05/31/24 18:06	1
Anthracene	9.6	U	9.6	0.13	ug/L		05/28/24 08:35	05/31/24 18:06	1
Atrazine	9.6	U F1	9.6	0.92	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzaldehyde	9.6	U	9.6	0.73	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzo[a]anthracene	9.6	U	9.6	0.065	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzo[b]fluoranthene	9.6	U	9.6	0.15	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzo[k]fluoranthene	9.6	U	9.6	0.13	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzo[g,h,i]perylene	9.6	U	9.6	0.17	ug/L		05/28/24 08:35	05/31/24 18:06	1
Benzo[a]pyrene	9.6	U	9.6	0.17	ug/L		05/28/24 08:35	05/31/24 18:06	1
Butyl benzyl phthalate	9.6	U	9.6	0.64	ug/L		05/28/24 08:35	05/31/24 18:06	1
1,1'-Biphenyl	9.6	U	9.6	0.47	ug/L		05/28/24 08:35	05/31/24 18:06	1
Bis(2-chloroethoxy)methane	9.6	U	9.6	0.21	ug/L		05/28/24 08:35	05/31/24 18:06	1
Bis(2-chloroethyl)ether	9.6	U	9.6	0.39	ug/L		05/28/24 08:35	05/31/24 18:06	1
Bis(2-ethylhexyl) phthalate	9.6	U	9.6	2.1	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Bromophenyl phenyl ether	9.6	U	9.6	0.48	ug/L		05/28/24 08:35	05/31/24 18:06	1
Caprolactam	9.6	U	9.6	3.7	ug/L		05/28/24 08:35	05/31/24 18:06	1
Carbazole	9.6	U	9.6	0.47	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Chloroaniline	9.6	U	9.6	0.30	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Chloro-3-methylphenol	9.6	U	9.6	0.28	ug/L		05/28/24 08:35	05/31/24 18:06	1
2-Chloronaphthalene	9.6	U	9.6	0.22	ug/L		05/28/24 08:35	05/31/24 18:06	1
2-Chlorophenol	9.6	U	9.6	0.26	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Chlorophenyl phenyl ether	9.6	U	9.6	0.53	ug/L		05/28/24 08:35	05/31/24 18:06	1
Chrysene	9.6	U	9.6	0.063	ug/L		05/28/24 08:35	05/31/24 18:06	1
2-Methylnaphthalene	9.6	U	9.6	0.11	ug/L		05/28/24 08:35	05/31/24 18:06	1
3 & 4 Methylphenol	9.6	U	9.6	0.18	ug/L		05/28/24 08:35	05/31/24 18:06	1
Dibenz(a,h)anthracene	9.6	U	9.6	0.15	ug/L		05/28/24 08:35	05/31/24 18:06	1
Dibenzofuran	9.6	U	9.6	0.26	ug/L		05/28/24 08:35	05/31/24 18:06	1
3,3'-Dichlorobenzidine	48	U	48	1.1	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4-Dichlorophenol	9.6	U	9.6	0.25	ug/L		05/28/24 08:35	05/31/24 18:06	1
Diethyl phthalate	9.6	U	9.6	0.39	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4-Dimethylphenol	9.6	U	9.6	0.24	ug/L		05/28/24 08:35	05/31/24 18:06	1
Dimethyl phthalate	9.6	U	9.6	0.50	ug/L		05/28/24 08:35	05/31/24 18:06	1
4,6-Dinitro-2-methylphenol	48	U	48	2.7	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4-Dinitrophenol	48	U	48	2.5	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4-Dinitrotoluene	9.6	U	9.6	2.0	ug/L		05/28/24 08:35	05/31/24 18:06	1
Di-n-butyl phthalate	9.6	U	9.6	1.7	ug/L		05/28/24 08:35	05/31/24 18:06	1
Di-n-octyl phthalate	9.6	U	9.6	0.79	ug/L		05/28/24 08:35	05/31/24 18:06	1
Fluoranthene	9.6	U	9.6	0.15	ug/L		05/28/24 08:35	05/31/24 18:06	1
Fluorene	9.6	U	9.6	0.076	ug/L		05/28/24 08:35	05/31/24 18:06	1
Hexachlorobenzene	9.6	U	9.6	0.15	ug/L		05/28/24 08:35	05/31/24 18:06	1
Hexachlorobutadiene	9.6	U	9.6	0.52	ug/L		05/28/24 08:35	05/31/24 18:06	1
Hexachlorocyclopentadiene	48	U	48	1.7	ug/L		05/28/24 08:35	05/31/24 18:06	1
Hexachloroethane	9.6	U	9.6	0.38	ug/L		05/28/24 08:35	05/31/24 18:06	1
Indeno[1,2,3-cd]pyrene	9.6	U	9.6	0.13	ug/L		05/28/24 08:35	05/31/24 18:06	1
Isophorone	9.6	U	9.6	0.31	ug/L		05/28/24 08:35	05/31/24 18:06	1
2-Methylphenol	9.6	U	9.6	0.20	ug/L		05/28/24 08:35	05/31/24 18:06	1
Naphthalene	9.6	U	9.6	0.10	ug/L		05/28/24 08:35	05/31/24 18:06	1

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-052124-DS-06
Lab Sample ID: 240-204972-5
Date Collected: 05/21/24 10:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	48	U	48	0.49	ug/L		05/28/24 08:35	05/31/24 18:06	1
3-Nitroaniline	48	U	48	0.54	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Nitroaniline	48	U	48	0.31	ug/L		05/28/24 08:35	05/31/24 18:06	1
Nitrobenzene	9.6	U	9.6	0.49	ug/L		05/28/24 08:35	05/31/24 18:06	1
2-Nitrophenol	9.6	U	9.6	0.54	ug/L		05/28/24 08:35	05/31/24 18:06	1
4-Nitrophenol	48	U	48	2.1	ug/L		05/28/24 08:35	05/31/24 18:06	1
N-Nitrosodiphenylamine	9.6	U	9.6	0.42	ug/L		05/28/24 08:35	05/31/24 18:06	1
N-Nitrosodi-n-propylamine	9.6	U	9.6	0.24	ug/L		05/28/24 08:35	05/31/24 18:06	1
bis (2-chloroisopropyl) ether	9.6	U	9.6	0.23	ug/L		05/28/24 08:35	05/31/24 18:06	1
Pentachlorophenol	9.6	U	9.6	3.0	ug/L		05/28/24 08:35	05/31/24 18:06	1
Phenanthrene	9.6	U	9.6	0.077	ug/L		05/28/24 08:35	05/31/24 18:06	1
Phenol	9.6	U	9.6	0.39	ug/L		05/28/24 08:35	05/31/24 18:06	1
Pyrene	9.6	U	9.6	0.080	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4,5-Trichlorophenol	9.6	U	9.6	1.9	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,4,6-Trichlorophenol	9.6	U	9.6	1.7	ug/L		05/28/24 08:35	05/31/24 18:06	1
2,6-Dinitrotoluene	9.6	U	9.6	1.0	ug/L		05/28/24 08:35	05/31/24 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*67*		*41 - 120*	*05/28/24 08:35*	*05/31/24 18:06*	*1*
2-Fluorophenol (Surr)	*62*		*10 - 127*	*05/28/24 08:35*	*05/31/24 18:06*	*1*
2,4,6-Tribromophenol (Surr)	*65*		*23 - 127*	*05/28/24 08:35*	*05/31/24 18:06*	*1*
Nitrobenzene-d5 (Surr)	*66*		*40 - 120*	*05/28/24 08:35*	*05/31/24 18:06*	*1*
Phenol-d5 (Surr)	*57*		*10 - 120*	*05/28/24 08:35*	*05/31/24 18:06*	*1*
Terphenyl-d14 (Surr)	*83*		*43 - 136*	*05/28/24 08:35*	*05/31/24 18:06*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-AC-05
Lab Sample ID: 240-204972-1
Date Collected: 05/21/24 09:45
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1232	0.11	U	0.11	0.079	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1242	**0.086**	**J**	0.11	0.081	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		05/24/24 09:05	05/28/24 14:05	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		05/24/24 09:05	05/28/24 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*10 - 149*	*05/24/24 09:05*	*05/28/24 14:05*	*1*
DCB Decachlorobiphenyl	*53*		*10 - 174*	*05/24/24 09:05*	*05/28/24 14:05*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-AC-07
Lab Sample ID: 240-204972-3
Date Collected: 05/21/24 09:50
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1242	**0.091**	**J**	0.11	0.082	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		05/24/24 09:05	05/28/24 14:35	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		05/24/24 09:05	05/28/24 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/24/24 09:05*	*05/28/24 14:35*	*1*
DCB Decachlorobiphenyl	*55*		*10 - 174*	*05/24/24 09:05*	*05/28/24 14:35*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-DS-06
Lab Sample ID: 240-204972-5
Date Collected: 05/21/24 10:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:44	06/03/24 19:03	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:44	06/03/24 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*75*		*10 - 149*	*05/31/24 08:44*	*06/03/24 19:03*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*05/31/24 08:44*	*06/03/24 19:03*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-AC-09
Lab Sample ID: 240-204972-7
Date Collected: 05/21/24 11:00
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/24/24 09:05	05/28/24 15:06	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/24/24 09:05	05/28/24 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*50*		*10 - 149*	*05/24/24 09:05*	*05/28/24 15:06*	*1*
DCB Decachlorobiphenyl	*79*		*10 - 174*	*05/24/24 09:05*	*05/28/24 15:06*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-AC-11
Lab Sample ID: 240-204972-9
Date Collected: 05/21/24 14:30
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	2.1	U	2.1	1.2	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1221	2.1	U	2.1	1.2	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1232	2.1	U	2.1	1.5	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1242	**19**		2.1	1.6	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1248	2.1	U	2.1	1.0	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1254	2.1	U	2.1	0.83	ug/L		05/24/24 09:05	05/28/24 15:36	20
Aroclor-1260	2.1	U	2.1	0.96	ug/L		05/24/24 09:05	05/28/24 15:36	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*	*p*	*10 - 149*	*05/24/24 09:05*	*05/28/24 15:36*	*20*
DCB Decachlorobiphenyl	*91*		*10 - 174*	*05/24/24 09:05*	*05/28/24 15:36*	*20*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-DS-08
Lab Sample ID: 240-204972-11
Date Collected: 05/21/24 15:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		05/24/24 09:05	05/28/24 16:52	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		05/24/24 09:05	05/28/24 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*10 - 149*	*05/24/24 09:05*	*05/28/24 16:52*	*1*
DCB Decachlorobiphenyl	*87*		*10 - 174*	*05/24/24 09:05*	*05/28/24 16:52*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-AC-13
Lab Sample ID: 240-204972-13
Date Collected: 05/21/24 15:55
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	19	U	19	11	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1221	19	U	19	11	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1232	19	U	19	14	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1242	**240**		19	15	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1248	19	U	19	9.7	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1254	19	U	19	7.8	ug/L		05/24/24 09:05	05/28/24 17:22	200
Aroclor-1260	19	U	19	8.9	ug/L		05/24/24 09:05	05/28/24 17:22	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*69*	*p*	*10 - 149*	*05/24/24 09:05*	*05/28/24 17:22*	*200*
DCB Decachlorobiphenyl	*145*		*10 - 174*	*05/24/24 09:05*	*05/28/24 17:22*	*200*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052124-DS-10
Lab Sample ID: 240-204972-15
Date Collected: 05/21/24 16:50
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.10	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1221	0.19	U	0.19	0.11	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1232	0.19	U	0.19	0.14	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1242	0.19	U	0.19	0.14	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1248	0.19	U	0.19	0.093	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1254	0.19	U	0.19	0.074	ug/L		05/24/24 09:05	05/28/24 17:52	1
Aroclor-1260	0.19	U	0.19	0.085	ug/L		05/24/24 09:05	05/28/24 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*05/24/24 09:05*	*05/28/24 17:52*	*1*
DCB Decachlorobiphenyl	*83*		*10 - 174*	*05/24/24 09:05*	*05/28/24 17:52*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-AC-05
Lab Sample ID: 240-204972-2
Date Collected: 05/21/24 09:45
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		05/24/24 09:05	05/28/24 14:20	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		05/24/24 09:05	05/28/24 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*05/24/24 09:05*	*05/28/24 14:20*	*1*
DCB Decachlorobiphenyl	*77*		*10 - 174*	*05/24/24 09:05*	*05/28/24 14:20*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-AC-07
Lab Sample ID: 240-204972-4
Date Collected: 05/21/24 09:50
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		05/24/24 09:05	05/28/24 14:50	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		05/24/24 09:05	05/28/24 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*71*		*10 - 149*	*05/24/24 09:05*	*05/28/24 14:50*	*1*
DCB Decachlorobiphenyl	*85*		*10 - 174*	*05/24/24 09:05*	*05/28/24 14:50*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-DS-06
Lab Sample ID: 240-204972-6
Date Collected: 05/21/24 10:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:44	06/03/24 19:51	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:44	06/03/24 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*10 - 149*	*05/31/24 08:44*	*06/03/24 19:51*	*1*
DCB Decachlorobiphenyl	*76*		*10 - 174*	*05/31/24 08:44*	*06/03/24 19:51*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-AC-09
Lab Sample ID: 240-204972-8
Date Collected: 05/21/24 11:00
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		05/24/24 09:05	05/28/24 15:21	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		05/24/24 09:05	05/28/24 15:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/24/24 09:05*	*05/28/24 15:21*	*1*
DCB Decachlorobiphenyl	*91*		*10 - 174*	*05/24/24 09:05*	*05/28/24 15:21*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-AC-11
Date Collected: 05/21/24 14:30
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/24/24 09:05	05/28/24 15:51	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/24/24 09:05	05/28/24 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*05/24/24 09:05*	*05/28/24 15:51*	*1*
DCB Decachlorobiphenyl	*77*		*10 - 174*	*05/24/24 09:05*	*05/28/24 15:51*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-DS-08
Lab Sample ID: 240-204972-12
Date Collected: 05/21/24 15:05
Matrix: Water
Date Received: 05/22/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/24/24 09:05	05/28/24 17:07	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/24/24 09:05	05/28/24 17:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/24/24 09:05*	*05/28/24 17:07*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*05/24/24 09:05*	*05/28/24 17:07*	*1*

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052124-AC-13
Date Collected: 05/21/24 15:55
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/24/24 09:05	05/28/24 17:37	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/24/24 09:05	05/28/24 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*10 - 149*	*05/24/24 09:05*	*05/28/24 17:37*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*05/24/24 09:05*	*05/28/24 17:37*	*1*

QC Association Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204972-1

GC/MS VOA

Analysis Batch: 614815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-17	TB-052124-DS-01	Total/NA	Water	8260D	
MB 240-614815/8	Method Blank	Total/NA	Water	8260D	
LCS 240-614815/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 614939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-5	GW-052124-DS-06	Total/NA	Water	8260D	
MB 240-614939/5	Method Blank	Total/NA	Water	8260D	
LCS 240-614939/4	Lab Control Sample	Total/NA	Water	8260D	
240-204972-5 MS	GW-052124-DS-06	Total/NA	Water	8260D	
240-204972-5 MSD	GW-052124-DS-06	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 614504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-5	GW-052124-DS-06	Total/NA	Water	3510C LVI	
MB 240-614504/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 240-614504/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
240-204972-5 MS	GW-052124-DS-06	Total/NA	Water	3510C LVI	
240-204972-5 MSD	GW-052124-DS-06	Total/NA	Water	3510C LVI	

Analysis Batch: 614989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-5	GW-052124-DS-06	Total/NA	Water	8270E	614504
MB 240-614504/1-A	Method Blank	Total/NA	Water	8270E	614504
LCS 240-614504/2-A	Lab Control Sample	Total/NA	Water	8270E	614504
240-204972-5 MS	GW-052124-DS-06	Total/NA	Water	8270E	614504
240-204972-5 MSD	GW-052124-DS-06	Total/NA	Water	8270E	614504

GC Semi VOA

Prep Batch: 614304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-1	GW-052124-AC-05	Total/NA	Water	3510C	
240-204972-2	GW-052124-AC-05	Dissolved	Water	3510C	
240-204972-3	GW-052124-AC-07	Total/NA	Water	3510C	
240-204972-4	GW-052124-AC-07	Dissolved	Water	3510C	
240-204972-7	GW-052124-AC-09	Total/NA	Water	3510C	
240-204972-8	GW-052124-AC-09	Dissolved	Water	3510C	
240-204972-9	GW-052124-AC-11	Total/NA	Water	3510C	
240-204972-10	GW-052124-AC-11	Dissolved	Water	3510C	
240-204972-11	GW-052124-DS-08	Total/NA	Water	3510C	
240-204972-12	GW-052124-DS-08	Dissolved	Water	3510C	
240-204972-13	GW-052124-AC-13	Total/NA	Water	3510C	
240-204972-14	GW-052124-AC-13	Dissolved	Water	3510C	
240-204972-15	GW-052124-DS-10	Total/NA	Water	3510C	
MB 240-614304/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-614304/2-A	Lab Control Sample	Total/NA	Water	3510C	

GC Semi VOA

Analysis Batch: 614477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-1	GW-052124-AC-05	Total/NA	Water	8082A	614304
240-204972-2	GW-052124-AC-05	Dissolved	Water	8082A	614304
240-204972-3	GW-052124-AC-07	Total/NA	Water	8082A	614304
240-204972-4	GW-052124-AC-07	Dissolved	Water	8082A	614304
240-204972-7	GW-052124-AC-09	Total/NA	Water	8082A	614304
240-204972-8	GW-052124-AC-09	Dissolved	Water	8082A	614304
240-204972-9	GW-052124-AC-11	Total/NA	Water	8082A	614304
240-204972-10	GW-052124-AC-11	Dissolved	Water	8082A	614304
240-204972-11	GW-052124-DS-08	Total/NA	Water	8082A	614304
240-204972-12	GW-052124-DS-08	Dissolved	Water	8082A	614304
240-204972-13	GW-052124-AC-13	Total/NA	Water	8082A	614304
240-204972-14	GW-052124-AC-13	Dissolved	Water	8082A	614304
240-204972-15	GW-052124-DS-10	Total/NA	Water	8082A	614304
MB 240-614304/1-A	Method Blank	Total/NA	Water	8082A	614304
LCS 240-614304/2-A	Lab Control Sample	Total/NA	Water	8082A	614304

Prep Batch: 615015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-5	GW-052124-DS-06	Total/NA	Water	3510C	
240-204972-6	GW-052124-DS-06	Dissolved	Water	3510C	
MB 240-615015/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-615015/2-A	Lab Control Sample	Total/NA	Water	3510C	
240-204972-5 MS	GW-052124-DS-06	Total/NA	Water	3510C	
240-204972-5 MSD	GW-052124-DS-06	Total/NA	Water	3510C	
240-204972-6 MS	GW-052124-DS-06	Dissolved	Water	3510C	
240-204972-6 MSD	GW-052124-DS-06	Dissolved	Water	3510C	

Analysis Batch: 615304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-204972-5	GW-052124-DS-06	Total/NA	Water	8082A	615015
240-204972-6	GW-052124-DS-06	Dissolved	Water	8082A	615015
MB 240-615015/1-A	Method Blank	Total/NA	Water	8082A	615015
LCS 240-615015/2-A	Lab Control Sample	Total/NA	Water	8082A	615015
240-204972-5 MS	GW-052124-DS-06	Total/NA	Water	8082A	615015
240-204972-5 MSD	GW-052124-DS-06	Total/NA	Water	8082A	615015
240-204972-6 MS	GW-052124-DS-06	Dissolved	Water	8082A	615015
240-204972-6 MSD	GW-052124-DS-06	Dissolved	Water	8082A	615015

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-614815/8
Matrix: Water
Analysis Batch: 614815

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 06:51	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			05/30/24 06:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/30/24 06:51	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 06:51	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			05/30/24 06:51	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/30/24 06:51	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.77	ug/L			05/30/24 06:51	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			05/30/24 06:51	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			05/30/24 06:51	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			05/30/24 06:51	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			05/30/24 06:51	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			05/30/24 06:51	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			05/30/24 06:51	1
2-Hexanone	10	U	10	1.1	ug/L			05/30/24 06:51	1
Acetone	10	U	10	5.4	ug/L			05/30/24 06:51	1
Benzene	1.0	U	1.0	0.42	ug/L			05/30/24 06:51	1
Bromoform	1.0	U	1.0	0.76	ug/L			05/30/24 06:51	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/30/24 06:51	1
Carbon disulfide	1.0	U	1.0	0.59	ug/L			05/30/24 06:51	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			05/30/24 06:51	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			05/30/24 06:51	1
Chloroethane	1.0	U	1.0	0.83	ug/L			05/30/24 06:51	1
Chloroform	1.0	U	1.0	0.47	ug/L			05/30/24 06:51	1
Chloromethane	1.0	U	1.0	0.63	ug/L			05/30/24 06:51	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/24 06:51	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			05/30/24 06:51	1
Cyclohexane	1.0	U	1.0	0.48	ug/L			05/30/24 06:51	1
Dichlorobromomethane	1.0	U	1.0	0.38	ug/L			05/30/24 06:51	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			05/30/24 06:51	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			05/30/24 06:51	1
Ethylene Dibromide	1.0	U	1.0	0.41	ug/L			05/30/24 06:51	1
Isopropylbenzene	1.0	U	1.0	0.49	ug/L			05/30/24 06:51	1
Methyl acetate	10	U	10	1.7	ug/L			05/30/24 06:51	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			05/30/24 06:51	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.99	ug/L			05/30/24 06:51	1
Methyl tert-butyl ether	1.0	U	1.0	0.47	ug/L			05/30/24 06:51	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			05/30/24 06:51	1
Styrene	1.0	U	1.0	0.45	ug/L			05/30/24 06:51	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 06:51	1
Toluene	1.0	U	1.0	0.44	ug/L			05/30/24 06:51	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/24 06:51	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			05/30/24 06:51	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 06:51	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			05/30/24 06:51	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/24 06:51	1
Xylenes, Total	2.0	U	2.0	0.42	ug/L			05/30/24 06:51	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			05/30/24 06:51	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			05/30/24 06:51	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-614815/8
Matrix: Water
Analysis Batch: 614815

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		62 - 137		05/30/24 06:51	1
4-Bromofluorobenzene (Surr)	89		56 - 136		05/30/24 06:51	1
Toluene-d8 (Surr)	91		78 - 122		05/30/24 06:51	1
Dibromofluoromethane (Surr)	104		73 - 120		05/30/24 06:51	1

Lab Sample ID: LCS 240-614815/5
Matrix: Water
Analysis Batch: 614815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	23.9		ug/L		96	64 - 131
1,1,2,2-Tetrachloroethane	25.0	23.2		ug/L		93	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.7		ug/L		99	51 - 146
1,1,2-Trichloroethane	25.0	24.6		ug/L		99	70 - 138
1,1-Dichloroethane	25.0	23.4		ug/L		93	72 - 127
1,1-Dichloroethene	25.0	23.8		ug/L		95	63 - 134
1,2,4-Trichlorobenzene	25.0	23.4		ug/L		94	44 - 147
1,2-Dibromo-3-Chloropropane	25.0	22.1		ug/L		88	53 - 135
1,2-Dichlorobenzene	25.0	23.8		ug/L		95	78 - 120
1,2-Dichloroethane	25.0	23.9		ug/L		96	66 - 128
1,2-Dichloropropane	25.0	23.0		ug/L		92	75 - 133
1,3-Dichlorobenzene	25.0	23.0		ug/L		92	80 - 120
1,4-Dichlorobenzene	25.0	22.9		ug/L		92	80 - 120
2-Hexanone	50.0	48.3		ug/L		97	43 - 167
Acetone	50.0	47.4		ug/L		95	50 - 149
Benzene	25.0	23.1		ug/L		92	77 - 123
Bromoform	25.0	25.8		ug/L		103	57 - 129
Bromomethane	12.5	11.6		ug/L		92	36 - 142
Carbon disulfide	25.0	22.2		ug/L		89	43 - 140
Carbon tetrachloride	25.0	24.6		ug/L		98	55 - 137
Chlorobenzene	25.0	24.1		ug/L		97	80 - 121
Chloroethane	12.5	12.1		ug/L		97	38 - 152
Chloroform	25.0	21.9		ug/L		88	74 - 122
Chloromethane	12.5	11.0		ug/L		88	47 - 143
cis-1,2-Dichloroethene	25.0	21.7		ug/L		87	77 - 123
cis-1,3-Dichloropropene	25.0	21.2		ug/L		85	64 - 130
Cyclohexane	25.0	20.1		ug/L		80	58 - 146
Dichlorobromomethane	25.0	22.1		ug/L		88	69 - 126
Dichlorodifluoromethane	12.5	9.16		ug/L		73	34 - 153
Ethylbenzene	25.0	25.3		ug/L		101	80 - 121
Ethylene Dibromide	25.0	23.8		ug/L		95	71 - 134
m-Xylene & p-Xylene	25.0	25.0		ug/L		100	80 - 120
Isopropylbenzene	25.0	27.1		ug/L		108	74 - 128
Methyl acetate	50.0	41.7		ug/L		83	42 - 169
2-Butanone (MEK)	50.0	42.1		ug/L		84	54 - 156
4-Methyl-2-pentanone (MIBK)	50.0	45.3		ug/L		91	46 - 158
Methyl tert-butyl ether	25.0	23.5		ug/L		94	65 - 126
Methylene Chloride	25.0	25.0		ug/L		100	71 - 125

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-614815/5
Matrix: Water
Analysis Batch: 614815

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	25.0	24.9		ug/L		100	80 - 123
Styrene	25.0	25.4		ug/L		102	80 - 135
Tetrachloroethene	25.0	25.0		ug/L		100	76 - 123
Toluene	25.0	23.9		ug/L		96	80 - 123
trans-1,2-Dichloroethene	25.0	21.2		ug/L		85	75 - 124
trans-1,3-Dichloropropene	25.0	24.3		ug/L		97	57 - 129
Trichloroethene	25.0	22.4		ug/L		90	70 - 122
Trichlorofluoromethane	12.5	12.9		ug/L		103	30 - 170
Vinyl chloride	12.5	11.1		ug/L		89	60 - 144
Xylenes, Total	50.0	49.9		ug/L		100	80 - 121
Methylcyclohexane	25.0	23.4		ug/L		94	62 - 136
Chlorodibromomethane	25.0	24.2		ug/L		97	70 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*62 - 137*
4-Bromofluorobenzene (Surr)	*102*		*56 - 136*
Toluene-d8 (Surr)	*99*		*78 - 122*
Dibromofluoromethane (Surr)	*94*		*73 - 120*

Lab Sample ID: MB 240-614939/5
Matrix: Water
Analysis Batch: 614939

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 16:53	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			05/30/24 16:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.41	ug/L			05/30/24 16:53	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			05/30/24 16:53	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			05/30/24 16:53	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			05/30/24 16:53	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.77	ug/L			05/30/24 16:53	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.91	ug/L			05/30/24 16:53	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			05/30/24 16:53	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			05/30/24 16:53	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			05/30/24 16:53	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			05/30/24 16:53	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			05/30/24 16:53	1
2-Hexanone	10	U	10	1.1	ug/L			05/30/24 16:53	1
Acetone	10	U	10	5.4	ug/L			05/30/24 16:53	1
Benzene	1.0	U	1.0	0.42	ug/L			05/30/24 16:53	1
Bromoform	1.0	U	1.0	0.76	ug/L			05/30/24 16:53	1
Bromomethane	1.0	U	1.0	0.42	ug/L			05/30/24 16:53	1
Carbon disulfide	1.0	U	1.0	0.59	ug/L			05/30/24 16:53	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			05/30/24 16:53	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			05/30/24 16:53	1
Chloroethane	1.0	U	1.0	0.83	ug/L			05/30/24 16:53	1
Chloroform	1.0	U	1.0	0.47	ug/L			05/30/24 16:53	1
Chloromethane	1.0	U	1.0	0.63	ug/L			05/30/24 16:53	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-614939/5
Matrix: Water
Analysis Batch: 614939

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.0	U	1.0	0.46	ug/L			05/30/24 16:53	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			05/30/24 16:53	1
Cyclohexane	1.0	U	1.0	0.48	ug/L			05/30/24 16:53	1
Dichlorobromomethane	1.0	U	1.0	0.38	ug/L			05/30/24 16:53	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			05/30/24 16:53	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			05/30/24 16:53	1
Ethylene Dibromide	1.0	U	1.0	0.41	ug/L			05/30/24 16:53	1
Isopropylbenzene	1.0	U	1.0	0.49	ug/L			05/30/24 16:53	1
Methyl acetate	10	U	10	1.7	ug/L			05/30/24 16:53	1
2-Butanone (MEK)	10	U	10	1.2	ug/L			05/30/24 16:53	1
4-Methyl-2-pentanone (MIBK)	10	U	10	0.99	ug/L			05/30/24 16:53	1
Methyl tert-butyl ether	1.0	U	1.0	0.47	ug/L			05/30/24 16:53	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			05/30/24 16:53	1
Styrene	1.0	U	1.0	0.45	ug/L			05/30/24 16:53	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 16:53	1
Toluene	1.0	U	1.0	0.44	ug/L			05/30/24 16:53	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			05/30/24 16:53	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			05/30/24 16:53	1
Trichloroethene	1.0	U	1.0	0.44	ug/L			05/30/24 16:53	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			05/30/24 16:53	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/30/24 16:53	1
Xylenes, Total	2.0	U	2.0	0.42	ug/L			05/30/24 16:53	1
Methylcyclohexane	1.0	U	1.0	0.33	ug/L			05/30/24 16:53	1
Chlorodibromomethane	1.0	U	1.0	0.39	ug/L			05/30/24 16:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*62 - 137*		*05/30/24 16:53*	*1*
4-Bromofluorobenzene (Surr)	*91*		*56 - 136*		*05/30/24 16:53*	*1*
Toluene-d8 (Surr)	*94*		*78 - 122*		*05/30/24 16:53*	*1*
Dibromofluoromethane (Surr)	*97*		*73 - 120*		*05/30/24 16:53*	*1*

Lab Sample ID: LCS 240-614939/4
Matrix: Water
Analysis Batch: 614939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	26.1		ug/L		104	64 - 131
1,1,2,2-Tetrachloroethane	25.0	24.4		ug/L		97	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	29.6		ug/L		118	51 - 146
1,1,2-Trichloroethane	25.0	24.4		ug/L		98	70 - 138
1,1-Dichloroethane	25.0	24.5		ug/L		98	72 - 127
1,1-Dichloroethene	25.0	29.6		ug/L		118	63 - 134
1,2,4-Trichlorobenzene	25.0	25.0		ug/L		100	44 - 147
1,2-Dibromo-3-Chloropropane	25.0	23.7		ug/L		95	53 - 135
1,2-Dichlorobenzene	25.0	24.7		ug/L		99	78 - 120
1,2-Dichloroethane	25.0	23.7		ug/L		95	66 - 128
1,2-Dichloropropane	25.0	23.8		ug/L		95	75 - 133
1,3-Dichlorobenzene	25.0	25.1		ug/L		100	80 - 120

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-614939/4
Matrix: Water
Analysis Batch: 614939

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	80 - 120
2-Hexanone	50.0	53.1		ug/L		106	43 - 167
Acetone	50.0	53.2		ug/L		106	50 - 149
Benzene	25.0	24.2		ug/L		97	77 - 123
Bromoform	25.0	29.2		ug/L		117	57 - 129
Bromomethane	12.5	9.04		ug/L		72	36 - 142
Carbon disulfide	25.0	30.4		ug/L		121	43 - 140
Carbon tetrachloride	25.0	32.6		ug/L		130	55 - 137
Chlorobenzene	25.0	24.1		ug/L		96	80 - 121
Chloroethane	12.5	10.8		ug/L		86	38 - 152
Chloroform	25.0	24.2		ug/L		97	74 - 122
Chloromethane	12.5	8.77		ug/L		70	47 - 143
cis-1,2-Dichloroethene	25.0	23.4		ug/L		94	77 - 123
cis-1,3-Dichloropropene	25.0	23.6		ug/L		94	64 - 130
Cyclohexane	25.0	28.1		ug/L		112	58 - 146
Dichlorobromomethane	25.0	25.9		ug/L		104	69 - 126
Dichlorodifluoromethane	12.5	10.3		ug/L		82	34 - 153
Ethylbenzene	25.0	25.1		ug/L		100	80 - 121
Ethylene Dibromide	25.0	24.8		ug/L		99	71 - 134
m-Xylene & p-Xylene	25.0	25.7		ug/L		103	80 - 120
Isopropylbenzene	25.0	27.3		ug/L		109	74 - 128
Methyl acetate	50.0	42.1		ug/L		84	42 - 169
2-Butanone (MEK)	50.0	44.7		ug/L		89	54 - 156
4-Methyl-2-pentanone (MIBK)	50.0	52.6		ug/L		105	46 - 158
Methyl tert-butyl ether	25.0	22.3		ug/L		89	65 - 126
Methylene Chloride	25.0	27.1		ug/L		108	71 - 125
o-Xylene	25.0	25.4		ug/L		102	80 - 123
Styrene	25.0	26.5		ug/L		106	80 - 135
Tetrachloroethene	25.0	25.7		ug/L		103	76 - 123
Toluene	25.0	23.8		ug/L		95	80 - 123
trans-1,2-Dichloroethene	25.0	28.5		ug/L		114	75 - 124
trans-1,3-Dichloropropene	25.0	24.9		ug/L		100	57 - 129
Trichloroethene	25.0	24.7		ug/L		99	70 - 122
Trichlorofluoromethane	12.5	14.0		ug/L		112	30 - 170
Vinyl chloride	12.5	9.36		ug/L		75	60 - 144
Xylenes, Total	50.0	51.1		ug/L		102	80 - 121
Methylcyclohexane	25.0	29.2		ug/L		117	62 - 136
Chlorodibromomethane	25.0	28.2		ug/L		113	70 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*62 - 137*
4-Bromofluorobenzene (Surr)	*96*		*56 - 136*
Toluene-d8 (Surr)	*96*		*78 - 122*
Dibromofluoromethane (Surr)	*98*		*73 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 614939

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	1.0	U	25.0	24.3		ug/L		97	60 - 130
1,1,2,2-Tetrachloroethane	1.0	U	25.0	23.3		ug/L		93	54 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	25.0	24.5		ug/L		98	41 - 147
1,1,2-Trichloroethane	1.0	U	25.0	24.0		ug/L		96	69 - 131
1,1-Dichloroethane	1.0	U	25.0	24.7		ug/L		99	68 - 125
1,1-Dichloroethene	1.0	U	25.0	26.1		ug/L		104	56 - 135
1,2,4-Trichlorobenzene	1.0	U	25.0	23.2		ug/L		93	29 - 156
1,2-Dibromo-3-Chloropropane	2.0	U	25.0	20.8		ug/L		83	41 - 129
1,2-Dichlorobenzene	1.0	U	25.0	23.6		ug/L		94	73 - 120
1,2-Dichloroethane	1.0	U	25.0	23.9		ug/L		96	63 - 126
1,2-Dichloropropane	1.0	U	25.0	22.9		ug/L		92	69 - 130
1,3-Dichlorobenzene	1.0	U	25.0	23.5		ug/L		94	73 - 120
1,4-Dichlorobenzene	1.0	U	25.0	22.9		ug/L		92	74 - 120
2-Hexanone	10	U	50.0	49.3		ug/L		99	35 - 156
Acetone	10	U	50.0	41.9		ug/L		84	33 - 149
Benzene	1.0	U	25.0	23.7		ug/L		95	64 - 128
Bromoform	1.0	U	25.0	26.0		ug/L		104	47 - 125
Bromomethane	1.0	U	12.5	8.42		ug/L		67	28 - 150
Carbon disulfide	1.0	U	25.0	24.6		ug/L		98	38 - 140
Carbon tetrachloride	1.0	U	25.0	29.0		ug/L		116	51 - 133
Chlorobenzene	1.0	U	25.0	23.7		ug/L		95	74 - 121
Chloroethane	1.0	U	12.5	10.4		ug/L		83	10 - 199
Chloroform	1.0	U	25.0	24.5		ug/L		98	70 - 122
Chloromethane	1.0	U	12.5	8.40		ug/L		67	32 - 149
cis-1,2-Dichloroethene	1.0	U	25.0	23.5		ug/L		94	66 - 128
cis-1,3-Dichloropropene	1.0	U	25.0	20.8		ug/L		83	47 - 125
Cyclohexane	1.0	U	25.0	23.2		ug/L		93	42 - 147
Dichlorobromomethane	1.0	U	25.0	25.1		ug/L		101	62 - 125
Dichlorodifluoromethane	1.0	U	12.5	7.47		ug/L		60	38 - 139
Ethylbenzene	1.0	U	25.0	24.1		ug/L		96	67 - 127
Ethylene Dibromide	1.0	U	25.0	24.0		ug/L		96	69 - 125
m-Xylene & p-Xylene	2.0	U	25.0	24.6		ug/L		98	71 - 123
Isopropylbenzene	1.0	U	25.0	25.5		ug/L		102	64 - 129
Methyl acetate	10	U	50.0	37.4		ug/L		75	37 - 155
2-Butanone (MEK)	10	U	50.0	39.4		ug/L		79	40 - 151
4-Methyl-2-pentanone (MIBK)	10	U	50.0	48.4		ug/L		97	31 - 153
Methyl tert-butyl ether	1.0	U	25.0	21.0		ug/L		84	47 - 134
Methylene Chloride	5.0	U	25.0	25.6		ug/L		102	62 - 129
o-Xylene	1.0	U	25.0	24.9		ug/L		100	70 - 125
Styrene	1.0	U	25.0	26.0		ug/L		104	70 - 139
Tetrachloroethene	1.0	U	25.0	23.4		ug/L		94	62 - 131
Toluene	1.0	U	25.0	23.1		ug/L		92	58 - 135
trans-1,2-Dichloroethene	1.0	U	25.0	27.5		ug/L		110	56 - 136
trans-1,3-Dichloropropene	1.0	U	25.0	22.9		ug/L		92	47 - 120
Trichloroethene	1.0	U	25.0	23.5		ug/L		94	61 - 124
Trichlorofluoromethane	1.0	U	12.5	11.6		ug/L		93	24 - 177
Vinyl chloride	1.0	U	12.5	8.53		ug/L		68	43 - 157
Xylenes, Total	2.0	U	50.0	49.5		ug/L		99	71 - 123

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 614939

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methylcyclohexane	1.0	U	25.0	22.9		ug/L		92	39 - 144
Chlorodibromomethane	1.0	U	25.0	26.2		ug/L		105	65 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*62 - 137*
4-Bromofluorobenzene (Surr)	*97*		*56 - 136*
Toluene-d8 (Surr)	*97*		*78 - 122*
Dibromofluoromethane (Surr)	*98*		*73 - 120*

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 614939

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	1.0	U	25.0	25.1		ug/L		100	60 - 130	3	17
1,1,2,2-Tetrachloroethane	1.0	U	25.0	23.4		ug/L		94	54 - 145	0	15
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	25.0	23.9		ug/L		96	41 - 147	3	35
1,1,2-Trichloroethane	1.0	U	25.0	23.8		ug/L		95	69 - 131	1	14
1,1-Dichloroethane	1.0	U	25.0	24.9		ug/L		100	68 - 125	1	13
1,1-Dichloroethene	1.0	U	25.0	27.0		ug/L		108	56 - 135	4	26
1,2,4-Trichlorobenzene	1.0	U	25.0	23.4		ug/L		93	29 - 156	1	19
1,2-Dibromo-3-Chloropropane	2.0	U	25.0	21.4		ug/L		86	41 - 129	3	22
1,2-Dichlorobenzene	1.0	U	25.0	23.7		ug/L		95	73 - 120	1	14
1,2-Dichloroethane	1.0	U	25.0	23.6		ug/L		94	63 - 126	1	12
1,2-Dichloropropane	1.0	U	25.0	23.2		ug/L		93	69 - 130	1	13
1,3-Dichlorobenzene	1.0	U	25.0	23.8		ug/L		95	73 - 120	1	14
1,4-Dichlorobenzene	1.0	U	25.0	23.2		ug/L		93	74 - 120	1	15
2-Hexanone	10	U	50.0	49.9		ug/L		100	35 - 156	1	17
Acetone	10	U	50.0	42.7		ug/L		85	33 - 149	2	34
Benzene	1.0	U	25.0	23.8		ug/L		95	64 - 128	0	14
Bromoform	1.0	U	25.0	26.5		ug/L		106	47 - 125	2	15
Bromomethane	1.0	U	12.5	8.25		ug/L		66	28 - 150	2	26
Carbon disulfide	1.0	U	25.0	26.5		ug/L		106	38 - 140	8	23
Carbon tetrachloride	1.0	U	25.0	29.9		ug/L		119	51 - 133	3	24
Chlorobenzene	1.0	U	25.0	23.8		ug/L		95	74 - 121	0	14
Chloroethane	1.0	U	12.5	9.91		ug/L		79	10 - 199	4	30
Chloroform	1.0	U	25.0	24.4		ug/L		97	70 - 122	0	14
Chloromethane	1.0	U	12.5	8.44		ug/L		68	32 - 149	0	27
cis-1,2-Dichloroethene	1.0	U	25.0	23.9		ug/L		96	66 - 128	2	14
cis-1,3-Dichloropropene	1.0	U	25.0	21.4		ug/L		85	47 - 125	3	13
Cyclohexane	1.0	U	25.0	23.5		ug/L		94	42 - 147	1	35
Dichlorobromomethane	1.0	U	25.0	25.0		ug/L		100	62 - 125	1	13
Dichlorodifluoromethane	1.0	U	12.5	7.05		ug/L		56	38 - 139	6	35
Ethylbenzene	1.0	U	25.0	24.0		ug/L		96	67 - 127	0	15
Ethylene Dibromide	1.0	U	25.0	24.3		ug/L		97	69 - 125	1	14
m-Xylene & p-Xylene	2.0	U	25.0	24.6		ug/L		98	71 - 123	0	16
Isopropylbenzene	1.0	U	25.0	25.6		ug/L		102	64 - 129	0	18
Methyl acetate	10	U	50.0	38.1		ug/L		76	37 - 155	2	18

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 614939

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Butanone (MEK)	10	U	50.0	41.1		ug/L		82	40 - 151	4	20
4-Methyl-2-pentanone (MIBK)	10	U	50.0	50.0		ug/L		100	31 - 153	3	15
Methyl tert-butyl ether	1.0	U	25.0	21.6		ug/L		86	47 - 134	3	16
Methylene Chloride	5.0	U	25.0	25.7		ug/L		103	62 - 129	0	17
o-Xylene	1.0	U	25.0	24.8		ug/L		99	70 - 125	0	15
Styrene	1.0	U	25.0	25.8		ug/L		103	70 - 139	1	18
Tetrachloroethene	1.0	U	25.0	24.1		ug/L		96	62 - 131	3	20
Toluene	1.0	U	25.0	23.0		ug/L		92	58 - 135	0	14
trans-1,2-Dichloroethene	1.0	U	25.0	27.5		ug/L		110	56 - 136	0	15
trans-1,3-Dichloropropene	1.0	U	25.0	23.4		ug/L		93	47 - 120	2	14
Trichloroethene	1.0	U	25.0	23.8		ug/L		95	61 - 124	2	15
Trichlorofluoromethane	1.0	U	12.5	11.4		ug/L		91	24 - 177	2	34
Vinyl chloride	1.0	U	12.5	8.91		ug/L		71	43 - 157	4	24
Xylenes, Total	2.0	U	50.0	49.4		ug/L		99	71 - 123	0	15
Methylcyclohexane	1.0	U	25.0	23.1		ug/L		92	39 - 144	1	35
Chlorodibromomethane	1.0	U	25.0	26.8		ug/L		107	65 - 120	2	13

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*62 - 137*
4-Bromofluorobenzene (Surr)	*94*		*56 - 136*
Toluene-d8 (Surr)	*93*		*78 - 122*
Dibromofluoromethane (Surr)	*99*		*73 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-614504/1-A
Matrix: Water
Analysis Batch: 614989

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	10	U	10	0.17	ug/L		05/28/24 08:35	05/31/24 12:43	1
Acenaphthylene	10	U	10	0.13	ug/L		05/28/24 08:35	05/31/24 12:43	1
Acetophenone	10	U	10	0.37	ug/L		05/28/24 08:35	05/31/24 12:43	1
Anthracene	10	U	10	0.14	ug/L		05/28/24 08:35	05/31/24 12:43	1
Atrazine	10	U	10	0.95	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzaldehyde	10	U	10	0.76	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzo[a]anthracene	10	U	10	0.068	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzo[b]fluoranthene	10	U	10	0.15	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzo[k]fluoranthene	10	U	10	0.14	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzo[g,h,i]perylene	10	U	10	0.18	ug/L		05/28/24 08:35	05/31/24 12:43	1
Benzo[a]pyrene	10	U	10	0.17	ug/L		05/28/24 08:35	05/31/24 12:43	1
Butyl benzyl phthalate	10	U	10	0.67	ug/L		05/28/24 08:35	05/31/24 12:43	1
1,1'-Biphenyl	10	U	10	0.49	ug/L		05/28/24 08:35	05/31/24 12:43	1
Bis(2-chloroethoxy)methane	10	U	10	0.22	ug/L		05/28/24 08:35	05/31/24 12:43	1
Bis(2-chloroethyl)ether	10	U	10	0.40	ug/L		05/28/24 08:35	05/31/24 12:43	1
Bis(2-ethylhexyl) phthalate	10	U	10	2.2	ug/L		05/28/24 08:35	05/31/24 12:43	1
4-Bromophenyl phenyl ether	10	U	10	0.50	ug/L		05/28/24 08:35	05/31/24 12:43	1
Caprolactam	10	U	10	3.8	ug/L		05/28/24 08:35	05/31/24 12:43	1
Carbazole	10	U	10	0.49	ug/L		05/28/24 08:35	05/31/24 12:43	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-614504/1-A
Matrix: Water
Analysis Batch: 614989

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614504

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	10	U	10	0.32	ug/L		05/28/24 08:35	05/31/24 12:43	1
4-Chloro-3-methylphenol	10	U	10	0.30	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Chloronaphthalene	10	U	10	0.23	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Chlorophenol	10	U	10	0.27	ug/L		05/28/24 08:35	05/31/24 12:43	1
4-Chlorophenyl phenyl ether	10	U	10	0.55	ug/L		05/28/24 08:35	05/31/24 12:43	1
Chrysene	10	U	10	0.066	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Methylnaphthalene	10	U	10	0.11	ug/L		05/28/24 08:35	05/31/24 12:43	1
3 & 4 Methylphenol	10	U	10	0.19	ug/L		05/28/24 08:35	05/31/24 12:43	1
Dibenz(a,h)anthracene	10	U	10	0.15	ug/L		05/28/24 08:35	05/31/24 12:43	1
Dibenzofuran	10	U	10	0.27	ug/L		05/28/24 08:35	05/31/24 12:43	1
3,3'-Dichlorobenzidine	50	U	50	1.2	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4-Dichlorophenol	10	U	10	0.26	ug/L		05/28/24 08:35	05/31/24 12:43	1
Diethyl phthalate	10	U	10	0.41	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4-Dimethylphenol	10	U	10	0.25	ug/L		05/28/24 08:35	05/31/24 12:43	1
Dimethyl phthalate	10	U	10	0.52	ug/L		05/28/24 08:35	05/31/24 12:43	1
4,6-Dinitro-2-methylphenol	50	U	50	2.8	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4-Dinitrophenol	50	U	50	2.6	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4-Dinitrotoluene	10	U	10	2.1	ug/L		05/28/24 08:35	05/31/24 12:43	1
Di-n-butyl phthalate	10	U	10	1.8	ug/L		05/28/24 08:35	05/31/24 12:43	1
Di-n-octyl phthalate	10	U	10	0.82	ug/L		05/28/24 08:35	05/31/24 12:43	1
Fluoranthene	10	U	10	0.16	ug/L		05/28/24 08:35	05/31/24 12:43	1
Fluorene	10	U	10	0.079	ug/L		05/28/24 08:35	05/31/24 12:43	1
Hexachlorobenzene	10	U	10	0.16	ug/L		05/28/24 08:35	05/31/24 12:43	1
Hexachlorobutadiene	10	U	10	0.54	ug/L		05/28/24 08:35	05/31/24 12:43	1
Hexachlorocyclopentadiene	50	U	50	1.8	ug/L		05/28/24 08:35	05/31/24 12:43	1
Hexachloroethane	10	U	10	0.40	ug/L		05/28/24 08:35	05/31/24 12:43	1
Indeno[1,2,3-cd]pyrene	10	U	10	0.14	ug/L		05/28/24 08:35	05/31/24 12:43	1
Isophorone	10	U	10	0.32	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Methylphenol	10	U	10	0.21	ug/L		05/28/24 08:35	05/31/24 12:43	1
Naphthalene	10	U	10	0.11	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Nitroaniline	50	U	50	0.51	ug/L		05/28/24 08:35	05/31/24 12:43	1
3-Nitroaniline	50	U	50	0.57	ug/L		05/28/24 08:35	05/31/24 12:43	1
4-Nitroaniline	50	U	50	0.33	ug/L		05/28/24 08:35	05/31/24 12:43	1
Nitrobenzene	10	U	10	0.51	ug/L		05/28/24 08:35	05/31/24 12:43	1
2-Nitrophenol	10	U	10	0.56	ug/L		05/28/24 08:35	05/31/24 12:43	1
4-Nitrophenol	50	U	50	2.2	ug/L		05/28/24 08:35	05/31/24 12:43	1
N-Nitrosodiphenylamine	10	U	10	0.44	ug/L		05/28/24 08:35	05/31/24 12:43	1
N-Nitrosodi-n-propylamine	10	U	10	0.25	ug/L		05/28/24 08:35	05/31/24 12:43	1
bis (2-chloroisopropyl) ether	10	U	10	0.24	ug/L		05/28/24 08:35	05/31/24 12:43	1
Pentachlorophenol	10	U	10	3.1	ug/L		05/28/24 08:35	05/31/24 12:43	1
Phenanthrene	10	U	10	0.080	ug/L		05/28/24 08:35	05/31/24 12:43	1
Phenol	10	U	10	0.40	ug/L		05/28/24 08:35	05/31/24 12:43	1
Pyrene	10	U	10	0.083	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4,5-Trichlorophenol	10	U	10	2.0	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,4,6-Trichlorophenol	10	U	10	1.8	ug/L		05/28/24 08:35	05/31/24 12:43	1
2,6-Dinitrotoluene	10	U	10	1.1	ug/L		05/28/24 08:35	05/31/24 12:43	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-614504/1-A
Matrix: Water
Analysis Batch: 614989

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614504

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	79		41 - 120	05/28/24 08:35	05/31/24 12:43	1
2-Fluorophenol (Surr)	78		10 - 127	05/28/24 08:35	05/31/24 12:43	1
2,4,6-Tribromophenol (Surr)	86		23 - 127	05/28/24 08:35	05/31/24 12:43	1
Nitrobenzene-d5 (Surr)	81		40 - 120	05/28/24 08:35	05/31/24 12:43	1
Phenol-d5 (Surr)	73		10 - 120	05/28/24 08:35	05/31/24 12:43	1
Terphenyl-d14 (Surr)	100		43 - 136	05/28/24 08:35	05/31/24 12:43	1

Lab Sample ID: LCS 240-614504/2-A
Matrix: Water
Analysis Batch: 614989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	32.0	20.9		ug/L		65	50 - 120
Acenaphthylene	32.0	20.4		ug/L		64	49 - 120
Acetophenone	32.0	23.6		ug/L		74	52 - 120
Anthracene	32.0	23.0		ug/L		72	55 - 124
Atrazine	32.0	26.2		ug/L		82	50 - 152
Benzaldehyde	32.0	29.3		ug/L		92	36 - 168
Benzo[a]anthracene	32.0	24.1		ug/L		75	55 - 130
Benzo[b]fluoranthene	32.0	24.4		ug/L		76	51 - 130
Benzo[k]fluoranthene	32.0	25.5		ug/L		80	53 - 130
Benzo[g,h,i]perylene	32.0	23.4		ug/L		73	55 - 135
Benzo[a]pyrene	32.0	24.7		ug/L		77	51 - 123
Butyl benzyl phthalate	32.0	23.7		ug/L		74	48 - 140
1,1'-Biphenyl	32.0	20.5		ug/L		64	48 - 120
Bis(2-chloroethoxy)methane	32.0	22.7		ug/L		71	50 - 121
Bis(2-chloroethyl)ether	32.0	21.0		ug/L		66	47 - 120
Bis(2-ethylhexyl) phthalate	32.0	21.2		ug/L		66	45 - 142
4-Bromophenyl phenyl ether	32.0	24.2		ug/L		76	51 - 129
Caprolactam	32.0	6.46	J	ug/L		20	10 - 120
Carbazole	32.0	24.0		ug/L		75	56 - 135
4-Chloroaniline	32.0	4.05	J	ug/L		13	10 - 120
4-Chloro-3-methylphenol	32.0	24.2		ug/L		76	57 - 126
2-Chloronaphthalene	32.0	20.3		ug/L		63	50 - 120
2-Chlorophenol	32.0	25.1		ug/L		78	57 - 120
4-Chlorophenyl phenyl ether	32.0	22.6		ug/L		71	52 - 122
Chrysene	32.0	23.8		ug/L		74	52 - 126
2-Methylnaphthalene	32.0	20.4		ug/L		64	47 - 120
3 & 4 Methylphenol	32.0	24.6		ug/L		77	41 - 120
Dibenz(a,h)anthracene	32.0	23.6		ug/L		74	57 - 132
Dibenzofuran	32.0	21.6		ug/L		67	52 - 120
3,3'-Dichlorobenzidine	64.0	45.3	J	ug/L		71	39 - 150
2,4-Dichlorophenol	32.0	23.2		ug/L		73	57 - 122
Diethyl phthalate	32.0	22.1		ug/L		69	51 - 127
2,4-Dimethylphenol	32.0	17.2		ug/L		54	33 - 120
Dimethyl phthalate	32.0	23.2		ug/L		73	40 - 136
4,6-Dinitro-2-methylphenol	64.0	47.6	J	ug/L		74	45 - 130
2,4-Dinitrophenol	64.0	38.6	J	ug/L		60	27 - 126

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-614504/2-A
Matrix: Water
Analysis Batch: 614989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	32.0	27.0		ug/L		84	55 - 131
Di-n-butyl phthalate	32.0	23.6		ug/L		74	56 - 138
Di-n-octyl phthalate	32.0	22.5		ug/L		70	45 - 135
Fluoranthene	32.0	23.9		ug/L		75	56 - 135
Fluorene	32.0	22.0		ug/L		69	52 - 124
Hexachlorobenzene	32.0	24.4		ug/L		76	49 - 127
Hexachlorobutadiene	32.0	18.0		ug/L		56	36 - 120
Hexachlorocyclopentadiene	32.0	8.07	J	ug/L		25	10 - 120
Hexachloroethane	32.0	18.8		ug/L		59	39 - 120
Indeno[1,2,3-cd]pyrene	32.0	23.8		ug/L		74	55 - 134
Isophorone	32.0	22.6		ug/L		71	50 - 127
2-Methylphenol	32.0	23.2		ug/L		72	47 - 120
Naphthalene	32.0	19.9		ug/L		62	46 - 120
2-Nitroaniline	32.0	26.1	J	ug/L		81	51 - 138
3-Nitroaniline	32.0	25.9	J	ug/L		81	13 - 156
4-Nitroaniline	32.0	30.3	J	ug/L		95	44 - 156
Nitrobenzene	32.0	22.7		ug/L		71	50 - 123
2-Nitrophenol	32.0	25.7		ug/L		80	53 - 127
4-Nitrophenol	64.0	33.9	J	ug/L		53	14 - 120
N-Nitrosodiphenylamine	32.0	23.4		ug/L		73	53 - 127
N-Nitrosodi-n-propylamine	32.0	23.3		ug/L		73	49 - 128
bis (2-chloroisopropyl) ether	32.0	21.6		ug/L		67	34 - 126
Pentachlorophenol	64.0	44.8		ug/L		70	24 - 124
Phenanthrene	32.0	22.7		ug/L		71	54 - 120
Phenol	32.0	19.1		ug/L		60	10 - 120
Pyrene	32.0	24.1		ug/L		75	53 - 135
2,4,5-Trichlorophenol	32.0	25.7		ug/L		80	51 - 129
2,4,6-Trichlorophenol	32.0	23.7		ug/L		74	51 - 128
2,6-Dinitrotoluene	32.0	26.7		ug/L		83	54 - 134

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*68*		*41 - 120*
2-Fluorophenol (Surr)	*84*		*10 - 127*
2,4,6-Tribromophenol (Surr)	*83*		*23 - 127*
Nitrobenzene-d5 (Surr)	*70*		*40 - 120*
Phenol-d5 (Surr)	*59*		*10 - 120*
Terphenyl-d14 (Surr)	*76*		*43 - 136*

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	9.6	U	30.8	23.9		ug/L		78	33 - 120
Acenaphthylene	9.6	U	30.8	23.0		ug/L		75	34 - 120
Acetophenone	9.6	U	30.8	24.6		ug/L		80	39 - 126
Anthracene	9.6	U	30.8	25.3		ug/L		82	50 - 120
Atrazine	9.6	U F1	30.8	29.2		ug/L		95	45 - 137

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzaldehyde	9.6	U	30.8	31.9		ug/L		104	40 - 158
Benzo[a]anthracene	9.6	U	30.8	26.9		ug/L		87	47 - 131
Benzo[b]fluoranthene	9.6	U	30.8	28.8		ug/L		93	46 - 122
Benzo[k]fluoranthene	9.6	U	30.8	28.9		ug/L		94	47 - 123
Benzo[g,h,i]perylene	9.6	U	30.8	20.2		ug/L		66	43 - 132
Benzo[a]pyrene	9.6	U	30.8	27.8		ug/L		90	44 - 120
Butyl benzyl phthalate	9.6	U	30.8	27.1		ug/L		88	44 - 139
1,1'-Biphenyl	9.6	U	30.8	23.6		ug/L		77	39 - 120
Bis(2-chloroethoxy)methane	9.6	U	30.8	25.6		ug/L		83	52 - 120
Bis(2-chloroethyl)ether	9.6	U	30.8	22.9		ug/L		74	43 - 120
Bis(2-ethylhexyl) phthalate	9.6	U	30.8	24.6		ug/L		80	45 - 137
4-Bromophenyl phenyl ether	9.6	U	30.8	26.9		ug/L		87	45 - 120
Caprolactam	9.6	U	30.8	8.24	J	ug/L		27	10 - 120
Carbazole	9.6	U	30.8	26.0		ug/L		84	46 - 126
4-Chloroaniline	9.6	U	30.8	6.45	J	ug/L		21	10 - 120
4-Chloro-3-methylphenol	9.6	U	30.8	27.2		ug/L		89	53 - 123
2-Chloronaphthalene	9.6	U	30.8	23.8		ug/L		77	34 - 120
2-Chlorophenol	9.6	U	30.8	27.8		ug/L		90	48 - 124
4-Chlorophenyl phenyl ether	9.6	U	30.8	25.1		ug/L		82	45 - 120
Chrysene	9.6	U	30.8	26.4		ug/L		86	44 - 126
2-Methylnaphthalene	9.6	U	30.8	24.3		ug/L		79	29 - 120
3 & 4 Methylphenol	9.6	U	30.8	26.8		ug/L		87	23 - 127
Dibenz(a,h)anthracene	9.6	U	30.8	21.3		ug/L		69	45 - 130
Dibenzofuran	9.6	U	30.8	24.1		ug/L		78	44 - 120
3,3'-Dichlorobenzidine	48	U	61.5	48.0		ug/L		78	10 - 153
2,4-Dichlorophenol	9.6	U	30.8	26.5		ug/L		86	54 - 120
Diethyl phthalate	9.6	U	30.8	23.9		ug/L		78	51 - 120
2,4-Dimethylphenol	9.6	U	30.8	19.2		ug/L		62	21 - 120
Dimethyl phthalate	9.6	U	30.8	25.4		ug/L		83	36 - 127
4,6-Dinitro-2-methylphenol	48	U	61.5	39.5	J	ug/L		64	29 - 131
2,4-Dinitrophenol	48	U	61.5	23.6	J	ug/L		38	10 - 140
2,4-Dinitrotoluene	9.6	U	30.8	29.1		ug/L		95	53 - 127
Di-n-butyl phthalate	9.6	U	30.8	25.5		ug/L		83	50 - 129
Di-n-octyl phthalate	9.6	U	30.8	26.9		ug/L		87	45 - 128
Fluoranthene	9.6	U	30.8	25.9		ug/L		84	51 - 126
Fluorene	9.6	U	30.8	24.5		ug/L		80	45 - 120
Hexachlorobenzene	9.6	U	30.8	26.8		ug/L		87	46 - 120
Hexachlorobutadiene	9.6	U	30.8	22.4		ug/L		73	10 - 120
Hexachlorocyclopentadiene	48	U	30.8	8.99	J	ug/L		29	10 - 120
Hexachloroethane	9.6	U	30.8	21.7		ug/L		71	10 - 120
Indeno[1,2,3-cd]pyrene	9.6	U	30.8	21.9		ug/L		71	43 - 133
Isophorone	9.6	U	30.8	25.3		ug/L		82	52 - 120
2-Methylphenol	9.6	U	30.8	25.0		ug/L		81	31 - 131
Naphthalene	9.6	U	30.8	23.3		ug/L		76	29 - 120
2-Nitroaniline	48	U	30.8	28.4	J	ug/L		92	55 - 124
3-Nitroaniline	48	U	30.8	30.2	J	ug/L		98	18 - 155
4-Nitroaniline	48	U	30.8	31.7	J	ug/L		103	30 - 166
Nitrobenzene	9.6	U	30.8	25.2		ug/L		82	48 - 120
2-Nitrophenol	9.6	U	30.8	29.5		ug/L		96	51 - 120

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
4-Nitrophenol	48	U	61.5	36.4	J	ug/L		59	10 - 123
N-Nitrosodiphenylamine	9.6	U	30.8	26.3		ug/L		86	50 - 120
N-Nitrosodi-n-propylamine	9.6	U	30.8	25.0		ug/L		81	48 - 120
bis (2-chloroisopropyl) ether	9.6	U	30.8	23.2		ug/L		76	31 - 120
Pentachlorophenol	9.6	U	61.5	39.1		ug/L		64	10 - 124
Phenanthrene	9.6	U	30.8	25.1		ug/L		82	48 - 120
Phenol	9.6	U	30.8	22.0		ug/L		71	10 - 134
Pyrene	9.6	U	30.8	26.7		ug/L		87	42 - 138
2,4,5-Trichlorophenol	9.6	U	30.8	28.6		ug/L		93	49 - 120
2,4,6-Trichlorophenol	9.6	U	30.8	26.2		ug/L		85	49 - 120
2,6-Dinitrotoluene	9.6	U	30.8	29.1		ug/L		95	54 - 121

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*41 - 120*
2-Fluorophenol (Surr)	*107*		*10 - 127*
2,4,6-Tribromophenol (Surr)	*96*		*23 - 127*
Nitrobenzene-d5 (Surr)	*83*		*40 - 120*
Phenol-d5 (Surr)	*71*		*10 - 120*
Terphenyl-d14 (Surr)	*89*		*43 - 136*

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	9.6	U	32.0	25.3		ug/L		79	33 - 120	6	29
Acenaphthylene	9.6	U	32.0	24.3		ug/L		76	34 - 120	5	31
Acetophenone	9.6	U	32.0	25.4		ug/L		79	39 - 126	3	34
Anthracene	9.6	U	32.0	26.3		ug/L		82	50 - 120	4	28
Atrazine	9.6	U F1	32.0	31.0		ug/L		97	45 - 137	NC	35
Benzaldehyde	9.6	U	32.0	33.7		ug/L		105	40 - 158	5	35
Benzo[a]anthracene	9.6	U	32.0	27.9		ug/L		87	47 - 131	3	29
Benzo[b]fluoranthene	9.6	U	32.0	29.3		ug/L		91	46 - 122	2	30
Benzo[k]fluoranthene	9.6	U	32.0	29.4		ug/L		92	47 - 123	2	28
Benzo[g,h,i]perylene	9.6	U	32.0	21.2		ug/L		66	43 - 132	5	29
Benzo[a]pyrene	9.6	U	32.0	28.4		ug/L		89	44 - 120	2	28
Butyl benzyl phthalate	9.6	U	32.0	27.7		ug/L		87	44 - 139	2	32
1,1'-Biphenyl	9.6	U	32.0	24.4		ug/L		76	39 - 120	3	32
Bis(2-chloroethoxy)methane	9.6	U	32.0	25.7		ug/L		80	52 - 120	1	32
Bis(2-chloroethyl)ether	9.6	U	32.0	23.2		ug/L		73	43 - 120	2	35
Bis(2-ethylhexyl) phthalate	9.6	U	32.0	25.1		ug/L		78	45 - 137	2	35
4-Bromophenyl phenyl ether	9.6	U	32.0	27.9		ug/L		87	45 - 120	4	33
Caprolactam	9.6	U	32.0	8.90	J	ug/L		28	10 - 120	8	35
Carbazole	9.6	U	32.0	26.7		ug/L		83	46 - 126	3	35
4-Chloroaniline	9.6	U	32.0	6.31	J	ug/L		20	10 - 120	2	35
4-Chloro-3-methylphenol	9.6	U	32.0	27.7		ug/L		87	53 - 123	2	31
2-Chloronaphthalene	9.6	U	32.0	24.6		ug/L		77	34 - 120	3	34
2-Chlorophenol	9.6	U	32.0	28.4		ug/L		89	48 - 124	2	35

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chlorophenyl phenyl ether	9.6	U	32.0	26.0		ug/L		81	45 - 120	3	32
Chrysene	9.6	U	32.0	27.7		ug/L		86	44 - 126	5	28
2-Methylnaphthalene	9.6	U	32.0	24.8		ug/L		77	29 - 120	2	34
3 & 4 Methylphenol	9.6	U	32.0	27.9		ug/L		87	23 - 127	4	34
Dibenz(a,h)anthracene	9.6	U	32.0	22.4		ug/L		70	45 - 130	5	28
Dibenzofuran	9.6	U	32.0	25.7		ug/L		80	44 - 120	6	31
3,3'-Dichlorobenzidine	48	U	64.0	49.2	J	ug/L		77	10 - 153	2	35
2,4-Dichlorophenol	9.6	U	32.0	26.8		ug/L		84	54 - 120	1	31
Diethyl phthalate	9.6	U	32.0	25.5		ug/L		80	51 - 120	6	30
2,4-Dimethylphenol	9.6	U	32.0	19.1		ug/L		60	21 - 120	0	35
Dimethyl phthalate	9.6	U	32.0	27.0		ug/L		84	36 - 127	6	31
4,6-Dinitro-2-methylphenol	48	U	64.0	43.3	J	ug/L		68	29 - 131	9	35
2,4-Dinitrophenol	48	U	64.0	27.1	J	ug/L		42	10 - 140	14	35
2,4-Dinitrotoluene	9.6	U	32.0	31.1		ug/L		97	53 - 127	7	30
Di-n-butyl phthalate	9.6	U	32.0	26.8		ug/L		84	50 - 129	5	33
Di-n-octyl phthalate	9.6	U	32.0	27.5		ug/L		86	45 - 128	2	33
Fluoranthene	9.6	U	32.0	27.3		ug/L		85	51 - 126	5	29
Fluorene	9.6	U	32.0	25.7		ug/L		80	45 - 120	5	29
Hexachlorobenzene	9.6	U	32.0	28.2		ug/L		88	46 - 120	5	32
Hexachlorobutadiene	9.6	U	32.0	22.8		ug/L		71	10 - 120	2	35
Hexachlorocyclopentadiene	48	U	32.0	9.91	J	ug/L		31	10 - 120	10	35
Hexachloroethane	9.6	U	32.0	22.3		ug/L		70	10 - 120	3	35
Indeno[1,2,3-cd]pyrene	9.6	U	32.0	22.9		ug/L		72	43 - 133	5	28
Isophorone	9.6	U	32.0	25.5		ug/L		80	52 - 120	1	31
2-Methylphenol	9.6	U	32.0	26.1		ug/L		82	31 - 131	5	34
Naphthalene	9.6	U	32.0	23.3		ug/L		73	29 - 120	0	35
2-Nitroaniline	48	U	32.0	30.3	J	ug/L		95	55 - 124	6	32
3-Nitroaniline	48	U	32.0	32.9	J	ug/L		103	18 - 155	9	35
4-Nitroaniline	48	U	32.0	33.8	J	ug/L		106	30 - 166	7	35
Nitrobenzene	9.6	U	32.0	25.3		ug/L		79	48 - 120	1	31
2-Nitrophenol	9.6	U	32.0	29.4		ug/L		92	51 - 120	1	32
4-Nitrophenol	48	U	64.0	39.7	J	ug/L		62	10 - 123	9	35
N-Nitrosodiphenylamine	9.6	U	32.0	27.1		ug/L		85	50 - 120	3	31
N-Nitrosodi-n-propylamine	9.6	U	32.0	25.8		ug/L		81	48 - 120	3	33
bis (2-chloroisopropyl) ether	9.6	U	32.0	23.7		ug/L		74	31 - 120	2	34
Pentachlorophenol	9.6	U	64.0	42.6		ug/L		67	10 - 124	8	35
Phenanthrene	9.6	U	32.0	26.3		ug/L		82	48 - 120	4	29
Phenol	9.6	U	32.0	23.1		ug/L		72	10 - 134	5	35
Pyrene	9.6	U	32.0	27.5		ug/L		86	42 - 138	3	28
2,4,5-Trichlorophenol	9.6	U	32.0	30.6		ug/L		96	49 - 120	7	32
2,4,6-Trichlorophenol	9.6	U	32.0	27.4		ug/L		86	49 - 120	5	31
2,6-Dinitrotoluene	9.6	U	32.0	30.8		ug/L		96	54 - 121	6	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*78*		*41 - 120*
2-Fluorophenol (Surr)	*101*		*10 - 127*
2,4,6-Tribromophenol (Surr)	*95*		*23 - 127*
Nitrobenzene-d5 (Surr)	*79*		*40 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 614989

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 614504

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Phenol-d5 (Surr)	*70*		*10 - 120*
Terphenyl-d14 (Surr)	*87*		*43 - 136*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-614304/1-A
Matrix: Water
Analysis Batch: 614477

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 614304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/24/24 09:05	05/28/24 16:06	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/24/24 09:05	05/28/24 16:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*46*		*10 - 149*	*05/24/24 09:05*	*05/28/24 16:06*	*1*
DCB Decachlorobiphenyl	*78*		*10 - 174*	*05/24/24 09:05*	*05/28/24 16:06*	*1*

Lab Sample ID: LCS 240-614304/2-A
Matrix: Water
Analysis Batch: 614477

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 614304

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.95		ug/L		78	28 - 140		
Aroclor-1260			2.50	2.29		ug/L		91	39 - 153		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*61*		*10 - 149*
DCB Decachlorobiphenyl	*90*		*10 - 174*

Lab Sample ID: MB 240-615015/1-A
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615015

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/31/24 08:44	06/03/24 18:48	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/31/24 08:44	06/03/24 18:48	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-615015/1-A
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615015

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		10 - 149	05/31/24 08:44	06/03/24 18:48	1
DCB Decachlorobiphenyl	84		10 - 174	05/31/24 08:44	06/03/24 18:48	1

Lab Sample ID: LCS 240-615015/2-A
Matrix: Water
Analysis Batch: 615304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.72		ug/L		69	28 - 140		
Aroclor-1260			2.50	1.67		ug/L		67	39 - 153		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	71		10 - 149
DCB Decachlorobiphenyl	72		10 - 174

Lab Sample ID: 240-204972-5 MS
Matrix: Water
Analysis Batch: 615304

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 615015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.095	U	2.38	1.80		ug/L		76	50 - 120		
Aroclor-1260	0.095	U	2.38	1.76		ug/L		74	39 - 135		

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	76		10 - 149
DCB Decachlorobiphenyl	79		10 - 174

Lab Sample ID: 240-204972-5 MSD
Matrix: Water
Analysis Batch: 615304

Client Sample ID: GW-052124-DS-06
Prep Type: Total/NA
Prep Batch: 615015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.38	1.43		ug/L		60	50 - 120	23	25
Aroclor-1260	0.095	U	2.38	1.65		ug/L		69	39 - 135	6	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	52		10 - 149
DCB Decachlorobiphenyl	74		10 - 174

Lab Sample ID: 240-204972-6 MS
Matrix: Water
Analysis Batch: 615304

Client Sample ID: GW-052124-DS-06
Prep Type: Dissolved
Prep Batch: 615015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.095	U	2.40	1.62		ug/L		67	50 - 120		
Aroclor-1260	0.095	U	2.40	1.69		ug/L		70	39 - 135		

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 240-204972-6 MS
Matrix: Water
Analysis Batch: 615304

Client Sample ID: GW-052124-DS-06
Prep Type: Dissolved
Prep Batch: 615015

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	*62*		*10 - 149*
DCB Decachlorobiphenyl	*73*		*10 - 174*

Lab Sample ID: 240-204972-6 MSD
Matrix: Water
Analysis Batch: 615304

Client Sample ID: GW-052124-DS-06
Prep Type: Dissolved
Prep Batch: 615015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.38	1.68		ug/L		71	50 - 120	4	25
Aroclor-1260	0.095	U	2.38	1.51		ug/L		64	39 - 135	11	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	*71*		*10 - 149*
DCB Decachlorobiphenyl	*73*		*10 - 174*

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204972-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-204972-5	GW-052124-DS-06	101	90	94	97
240-204972-5 MS	GW-052124-DS-06	97	97	97	98
240-204972-5 MSD	GW-052124-DS-06	96	94	93	99
240-204972-17	TB-052124-DS-01	110	90	93	103
LCS 240-614815/5	Lab Control Sample	97	102	99	94
LCS 240-614939/4	Lab Control Sample	96	96	96	98
MB 240-614815/8	Method Blank	106	89	91	104
MB 240-614939/5	Method Blank	99	91	94	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(41-120)	(10-127)	(23-127)	(40-120)	(10-120)	(43-136)
240-204972-5	GW-052124-DS-06	67	62	65	66	57	83
240-204972-5 MS	GW-052124-DS-06	78	107	96	83	71	89
240-204972-5 MSD	GW-052124-DS-06	78	101	95	79	70	87
LCS 240-614504/2-A	Lab Control Sample	68	84	83	70	59	76
MB 240-614504/1-A	Method Blank	79	78	86	81	73	100

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204972-1	GW-052124-AC-05	64	53
240-204972-3	GW-052124-AC-07	59	55
240-204972-5	GW-052124-DS-06	75	75
240-204972-5 MS	GW-052124-DS-06	76	79
240-204972-5 MSD	GW-052124-DS-06	52	74
240-204972-7	GW-052124-AC-09	50	79
240-204972-9	GW-052124-AC-11	60 p	91
240-204972-11	GW-052124-DS-08	66	87
240-204972-13	GW-052124-AC-13	69 p	145
240-204972-15	GW-052124-DS-10	61	83

Surrogate Summary

Client: GHD Services Inc. Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
LCS 240-614304/2-A	Lab Control Sample	61	90
LCS 240-615015/2-A	Lab Control Sample	71	72
MB 240-614304/1-A	Method Blank	46	78
MB 240-615015/1-A	Method Blank	73	84

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-204972-2	GW-052124-AC-05	60	77
240-204972-4	GW-052124-AC-07	71	85
240-204972-6	GW-052124-DS-06	58	76
240-204972-6 MS	GW-052124-DS-06	62	73
240-204972-6 MSD	GW-052124-DS-06	71	73
240-204972-8	GW-052124-AC-09	59	91
240-204972-10	GW-052124-AC-11	61	77
240-204972-12	GW-052124-DS-08	59	75
240-204972-14	GW-052124-AC-13	52	75

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-204972-1

Client Sample ID: GW-052124-AC-05
Date Collected: 05/21/24 09:45
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 14:05

Client Sample ID: GW-052124-AC-05
Date Collected: 05/21/24 09:45
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 14:20

Client Sample ID: GW-052124-AC-07
Date Collected: 05/21/24 09:50
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 14:35

Client Sample ID: GW-052124-AC-07
Date Collected: 05/21/24 09:50
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 14:50

Client Sample ID: GW-052124-DS-06
Date Collected: 05/21/24 10:05
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	614939	CS	EET CLE	05/30/24 20:21
Total/NA	Prep	3510C LVI			614504	LK2	EET CLE	05/28/24 08:35
Total/NA	Analysis	8270E		1	614989	MRU	EET CLE	05/31/24 18:06
Total/NA	Prep	3510C			615015	GBS	EET CLE	05/31/24 08:44
Total/NA	Analysis	8082A		1	615304	MBB	EET CLE	06/03/24 19:03

Client Sample ID: GW-052124-DS-06
Date Collected: 05/21/24 10:05
Date Received: 05/22/24 10:00

Lab Sample ID: 240-204972-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615015	GBS	EET CLE	05/31/24 08:44
Dissolved	Analysis	8082A		1	615304	MBB	EET CLE	06/03/24 19:51

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052124-AC-09
Lab Sample ID: 240-204972-7
Date Collected: 05/21/24 11:00
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 15:06

Client Sample ID: GW-052124-AC-09
Lab Sample ID: 240-204972-8
Date Collected: 05/21/24 11:00
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 15:21

Client Sample ID: GW-052124-AC-11
Lab Sample ID: 240-204972-9
Date Collected: 05/21/24 14:30
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		20	614477	LSH	EET CLE	05/28/24 15:36

Client Sample ID: GW-052124-AC-11
Lab Sample ID: 240-204972-10
Date Collected: 05/21/24 14:30
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 15:51

Client Sample ID: GW-052124-DS-08
Lab Sample ID: 240-204972-11
Date Collected: 05/21/24 15:05
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 16:52

Client Sample ID: GW-052124-DS-08
Lab Sample ID: 240-204972-12
Date Collected: 05/21/24 15:05
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 17:07

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052124-AC-13
Lab Sample ID: 240-204972-13
Date Collected: 05/21/24 15:55
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		200	614477	LSH	EET CLE	05/28/24 17:22

Client Sample ID: GW-052124-AC-13
Lab Sample ID: 240-204972-14
Date Collected: 05/21/24 15:55
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Dissolved	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 17:37

Client Sample ID: GW-052124-DS-10
Lab Sample ID: 240-204972-15
Date Collected: 05/21/24 16:50
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			614304	GBS	EET CLE	05/24/24 09:05
Total/NA	Analysis	8082A		1	614477	LSH	EET CLE	05/28/24 17:52

Client Sample ID: TB-052124-DS-01
Lab Sample ID: 240-204972-17
Date Collected: 05/21/24 17:30
Matrix: Water
Date Received: 05/22/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	614815	TJL2	EET CLE	05/30/24 08:08

Laboratory References:
EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-204972-1
Project/Site: 12616852, GM Bedford, E117014

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

CHAIN OF CUSTODY RECORD

COC Number: GHD-20240521175440

Page 1 of 1

ADDRESS: 6300 N River Road - Suite 302, Rosemont, IL 60018

PHONE: (773) 380-993 FAX:

Project No/Phase/Task Code: 11228036	Laboratory Name: Eurofins TestAmerica, Canton	Lab Location: 180 South Van Buren Avenue Barberton, OH 44203	SSOW ID: E117014
Project Name: GM Bedford	Lab Contact: 330-497-9396		Cooler No: 4 Coolers
Project Location: 105 GM Drive, Bedford, IN. 47421, Bedford, IN			Carrier: FedEx Priority Overnight
GHD Chemistry Contact:			Airbill No: 8181 5130 8717
Sampler(s): AC, DS			Total # of Containers: 53

Item	Sample Identification (containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code	Grab (G) /Comp (C)	Filtered (Y/N)	Analysis Requested: PCB (dissolved)	PCB (total)	VOCs	SVOCs	Chloride	Vinyl Chloride	Chlorinated Organics	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
1	GW-052124-AC-05	05/21/24	9:45	WG	G	Y	x	x						4		
2	GW-052124-AC-07	05/21/24	9:50	WG	G	Y	x	x						4		
3	GW-052124-DS-06	05/21/24	10:05	WG	G	Y	x	x	x	x				27	X	
4	GW-052124-AC-09	05/21/24	11:00	WG	G	Y	x	x						4		
5	GW-052124-AC-11	05/21/24	14:30	WG	G	Y	x	x						4		
6	GW-052124-DS-08	05/21/24	15:05	WG	G	Y	x	x						4		
7	GW-052124-AC-13	05/21/24	15:55	WG	G	Y	x	x						4		
8	GW-052124-DS-10	05/21/24	16:50	WG	G	N		x						1		
9	TB-052124-DS-01	05/21/24	17:30	WG	G	N			x					1		
10																
11																
12																
13																
14																
15																
16																
17																
18																

240-204972 Chain of Custody

TAT Required in business days (use separate COCs fro different TATs)
(Standards include 1 day, 2 days, 3 days, 1 week, 2 weeks)

Notes/Special Requirements:

	Relinquished By:	Company	Date	Time		Received By:	Company	Date	Time
1	[signature]	GHD	5/21	1800	1	[signature]	EE	5-22-24	1000
2					2				
3					3				

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GM Bedford Site Name _____ Cooler unpacked by: MMG

Cooler Received on 5-22-24 Opened on 5-22-24

FedEx. 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used. Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☑ See Multiple Cooler Form

IR GUN # 17 (CF 0.2 °C) Observed Cooler Temp _____ °C Corrected Cooler Temp _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 3	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC439975
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

Missing 1 cooler containing Sample #3

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # . _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 14	4.1	4.9	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	3.9	4.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	4.3	4.5	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____	4.5	4.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

5/22/2024

Login Container Summary Report

240-204972

6/5/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-052124-AC-05	240-204972-A-1	Amber Glass 1 liter - unpreserved				
GW-052124-AC-05	240-204972-B-1	Amber Glass 1 liter - unpreserved				
GW-052124-AC-05-DISS	240-204972-A-2	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-AC-05-DISS	240-204972-B-2	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-AC-07	240-204972-A-3	Amber Glass 1 liter - unpreserved				
GW-052124-AC-07	240-204972-B-3	Amber Glass 1 liter - unpreserved				
GW-052124-AC-07-DISS	240-204972-A-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-AC-07-DISS	240-204972-B-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-DS-06	240-204972-A-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-A-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-A-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-B-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-B-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-B-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-C-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-C-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-C-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052124-DS-06	240-204972-D-5	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-D-5 MS	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-D-5 MSD	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-E-5	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-E-5 MS	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-E-5 MSD	Amber Glass 250ml - unpreserved				
GW-052124-DS-06	240-204972-F-5	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06	240-204972-F-5 MS	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06	240-204972-F-5 MSD	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06	240-204972-G-5	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06	240-204972-G-5 MS	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06	240-204972-G-5 MSD	Amber Glass 1 liter - unpreserved				
GW-052124-DS-06-DISS	240-204972-A-6	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-DS-06-DISS	240-204972-A-6 MS	Amber Glass 1 liter - unpreserved - Dis				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-052124-DS-06-DISS	240-204972-A-6 MSD	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-DS-06-DISS	240-204972-B-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-DS-06-DISS	240-204972-B-6 MS	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-DS-06-DISS	240-204972-B-6 MSD	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-AC-09	240-204972-A-7	Amber Glass 1 liter - unpreserved				
GW-052124-AC-09	240-204972-B-7	Amber Glass 1 liter - unpreserved				
GW-052124-AC-09-DISS	240-204972-A-8	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-AC-09-DISS	240-204972-B-8	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-AC-11	240-204972-A-9	Amber Glass 1 liter - unpreserved				
GW-052124-AC-11	240-204972-B-9	Amber Glass 1 liter - unpreserved				
GW-052124-AC-11-DISS	240-204972-A-10	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-AC-11-DISS	240-204972-B-10	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-DS-08	240-204972-A-11	Amber Glass 1 liter - unpreserved				
GW-052124-DS-08	240-204972-B-11	Amber Glass 1 liter - unpreserved				
GW-052124-DS-08-DISS	240-204972-A-12	Amber Glass 1 liter - unpreserved - Dis				
GW-052124-DS-08-DISS	240-204972-B-12	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-AC-13	240-204972-A-13	Amber Glass 1 liter - unpreserved				
GW-052124-AC-13	240-204972-B-13	Amber Glass 1 liter - unpreserved				
GW-052124-AC-13-DISS	240-204972-A-14	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-AC-13-DISS	240-204972-B-14	Amber Glass 1 liter - unpreserved - Dis.				
GW-052124-DS-10	240-204972-A-15	Amber Glass 1 liter - unpreserved				
TB-052124-DS-01	240-204972-A-17	Voa Vial 40ml - Hydrochloric Acid				

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 6/7/2024 6:20:13 AM

JOB DESCRIPTION

12616852, GM Bedford, E117014

JOB NUMBER

240-205106-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
6/7/2024 6:20:13 AM

Authorized for release by
Denise Heckler, Project Manager II
Denise.Heckler@et.eurofinsus.com
(330)966-9477

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 9
Client Sample Results 10
QC Association Summary 32
QC Sample Results 34
Surrogate Summary 37
Lab Chronicle 39
Certification Summary 43
Chain of Custody 44

Job ID: 240-205106-1 Eurofins Cleveland

Job Narrative
240-205106-1

Receipt
The samples were received on 5/23/2024 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.9°C, 2.4°C, 2.6°C, 2.6°C, 2.7°C and 2.8°C.

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs
Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-052224-AC-17 (240-205106-5), GW-052224-AC-17 (240-205106-5[MS]), GW-052224-AC-17 (240-205106-5[MSD]), GW-052224-DS-14 (240-205106-7), GW-052224-DS-14 (240-205106-8), GW-052224-DS-16 (240-205106-9), GW-052224-DS-16 (240-205106-10), GW-052224-DS-20 (240-205106-17) and GW-052224-DS-20 (240-205106-18).

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-052224-DS-16 (240-205106-9). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A - Dissolved: Internal standard (ISTD) response for the following sample exceeded the control limit on Column CLP-1 0.53mm ID: GW-052224-DS-14 (240-205106-8). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

Method 8082A - Dissolved: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: GW-052224-AC-17 (240-205106-5), GW-052224-AC-17 (240-205106-5[MS]), GW-052224-AC-17 (240-205106-5[MSD]), GW-052224-DS-14 (240-205106-7), GW-052224-DS-14 (240-205106-8), GW-052224-DS-16 (240-205106-9), GW-052224-DS-16 (240-205106-10), GW-052224-DS-20 (240-205106-17) and GW-052224-DS-20 (240-205106-18).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 300.0_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 240-615286 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-205106-1	GW-052224-DS-12	Water	05/22/24 09:55	05/23/24 10:00
240-205106-2	GW-052224-DS-12	Water	05/22/24 09:55	05/23/24 10:00
240-205106-3	GW-052224-AC-15	Water	05/22/24 10:10	05/23/24 10:00
240-205106-4	GW-052224-AC-15	Water	05/22/24 10:10	05/23/24 10:00
240-205106-5	GW-052224-AC-17	Water	05/22/24 11:10	05/23/24 10:00
240-205106-6	GW-052224-AC-17	Water	05/22/24 11:10	05/23/24 10:00
240-205106-7	GW-052224-DS-14	Water	05/22/24 11:30	05/23/24 10:00
240-205106-8	GW-052224-DS-14	Water	05/22/24 11:30	05/23/24 10:00
240-205106-9	GW-052224-DS-16	Water	05/22/24 12:15	05/23/24 10:00
240-205106-10	GW-052224-DS-16	Water	05/22/24 12:15	05/23/24 10:00
240-205106-11	GW-052224-AC-19	Water	05/22/24 14:40	05/23/24 10:00
240-205106-12	GW-052224-AC-19	Water	05/22/24 14:40	05/23/24 10:00
240-205106-13	GW-052224-DS-18	Water	05/22/24 15:05	05/23/24 10:00
240-205106-14	GW-052224-DS-18	Water	05/22/24 15:05	05/23/24 10:00
240-205106-15	GW-052224-AC-21	Water	05/22/24 16:00	05/23/24 10:00
240-205106-16	GW-052224-AC-21	Water	05/22/24 16:00	05/23/24 10:00
240-205106-17	GW-052224-DS-20	Water	05/22/24 16:10	05/23/24 10:00
240-205106-18	GW-052224-DS-20	Water	05/22/24 16:10	05/23/24 10:00
240-205106-19	TB-052224-AC-02	Water	05/22/24 18:00	05/23/24 10:00

Detection Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205106-1

Client Sample ID: GW-052224-DS-12 — Lab Sample ID: 240-205106-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	1.2		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: GW-052224-DS-12 — Lab Sample ID: 240-205106-2

No Detections.

Client Sample ID: GW-052224-AC-15 — Lab Sample ID: 240-205106-3

No Detections.

Client Sample ID: GW-052224-AC-15 — Lab Sample ID: 240-205106-4

No Detections.

Client Sample ID: GW-052224-AC-17 — Lab Sample ID: 240-205106-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1900	F1 F2	20	2.6	mg/L	20		300.0-1993 R2.1	Total/NA

Client Sample ID: GW-052224-AC-17 — Lab Sample ID: 240-205106-6

No Detections.

Client Sample ID: GW-052224-DS-14 — Lab Sample ID: 240-205106-7

No Detections.

Client Sample ID: GW-052224-DS-14 — Lab Sample ID: 240-205106-8

No Detections.

Client Sample ID: GW-052224-DS-16 — Lab Sample ID: 240-205106-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	0.098		0.097	0.049	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052224-DS-16 — Lab Sample ID: 240-205106-10

No Detections.

Client Sample ID: GW-052224-AC-19 — Lab Sample ID: 240-205106-11

No Detections.

Client Sample ID: GW-052224-AC-19 — Lab Sample ID: 240-205106-12

No Detections.

Client Sample ID: GW-052224-DS-18 — Lab Sample ID: 240-205106-13

No Detections.

Client Sample ID: GW-052224-DS-18 — Lab Sample ID: 240-205106-14

No Detections.

Client Sample ID: GW-052224-AC-21 — Lab Sample ID: 240-205106-15

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052224-AC-21 — Lab Sample ID: 240-205106-16

No Detections.

Client Sample ID: GW-052224-DS-20 — Lab Sample ID: 240-205106-17

No Detections.

Client Sample ID: GW-052224-DS-20 — Lab Sample ID: 240-205106-18

No Detections.

Client Sample ID: TB-052224-AC-02 — Lab Sample ID: 240-205106-19

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205106-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205106-1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: GW-052224-DS-12
Date Collected: 05/22/24 09:55
Date Received: 05/23/24 10:00

Lab Sample ID: 240-205106-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**1.2**		1.0	0.45	ug/L			05/31/24 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*78 - 122*		*05/31/24 15:00*	*1*
Dibromofluoromethane (Surr)	*104*		*73 - 120*		*05/31/24 15:00*	*1*
4-Bromofluorobenzene (Surr)	*91*		*56 - 136*		*05/31/24 15:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*62 - 137*		*05/31/24 15:00*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-5
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/31/24 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*78 - 122*		*05/31/24 15:25*	*1*
Dibromofluoromethane (Surr)	*105*		*73 - 120*		*05/31/24 15:25*	*1*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/31/24 15:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*62 - 137*		*05/31/24 15:25*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: TB-052224-AC-02
Lab Sample ID: 240-205106-19
Date Collected: 05/22/24 18:00
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/31/24 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*78 - 122*		*05/31/24 11:41*	*1*
Dibromofluoromethane (Surr)	*105*		*73 - 120*		*05/31/24 11:41*	*1*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/31/24 11:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*117*		*62 - 137*		*05/31/24 11:41*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-DS-12
Lab Sample ID: 240-205106-1
Date Collected: 05/22/24 09:55
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/03/24 21:47	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/03/24 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/31/24 08:39*	*06/03/24 21:47*	*1*
DCB Decachlorobiphenyl	*64*		*10 - 174*	*05/31/24 08:39*	*06/03/24 21:47*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-AC-15
Lab Sample ID: 240-205106-3
Date Collected: 05/22/24 10:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		05/31/24 08:39	06/03/24 22:20	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		05/31/24 08:39	06/03/24 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*10 - 149*	*05/31/24 08:39*	*06/03/24 22:20*	*1*
DCB Decachlorobiphenyl	*59*		*10 - 174*	*05/31/24 08:39*	*06/03/24 22:20*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-5
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1242	0.11	U	0.11	0.082	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		05/31/24 08:39	06/03/24 22:54	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		05/31/24 08:39	06/03/24 22:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*47*		*10 - 149*	*05/31/24 08:39*	*06/03/24 22:54*	*1*
DCB Decachlorobiphenyl	*28*		*10 - 174*	*05/31/24 08:39*	*06/03/24 22:54*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-DS-14
Lab Sample ID: 240-205106-7
Date Collected: 05/22/24 11:30
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/04/24 00:35	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/04/24 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*10 - 149*	*05/31/24 08:39*	*06/04/24 00:35*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*05/31/24 08:39*	*06/04/24 00:35*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-DS-16
Lab Sample ID: 240-205106-9
Date Collected: 05/22/24 12:15
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1248	**0.098**		0.097	0.049	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		05/31/24 08:39	06/04/24 01:09	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		05/31/24 08:39	06/04/24 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*05/31/24 08:39*	*06/04/24 01:09*	*1*
DCB Decachlorobiphenyl	*23*		*10 - 174*	*05/31/24 08:39*	*06/04/24 01:09*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-AC-19
Lab Sample ID: 240-205106-11
Date Collected: 05/22/24 14:40
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		05/31/24 08:39	06/04/24 01:42	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		05/31/24 08:39	06/04/24 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/31/24 08:39*	*06/04/24 01:42*	*1*
DCB Decachlorobiphenyl	*41*		*10 - 174*	*05/31/24 08:39*	*06/04/24 01:42*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-DS-18
Lab Sample ID: 240-205106-13
Date Collected: 05/22/24 15:05
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/04/24 03:07	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/04/24 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*46*		*10 - 149*	*05/31/24 08:39*	*06/04/24 03:07*	*1*
DCB Decachlorobiphenyl	*49*		*10 - 174*	*05/31/24 08:39*	*06/04/24 03:07*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-AC-21
Lab Sample ID: 240-205106-15
Date Collected: 05/22/24 16:00
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		05/31/24 08:39	06/04/24 03:40	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		05/31/24 08:39	06/04/24 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*05/31/24 08:39*	*06/04/24 03:40*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*05/31/24 08:39*	*06/04/24 03:40*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052224-DS-20
Lab Sample ID: 240-205106-17
Date Collected: 05/22/24 16:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.096	U	0.096	0.054	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1221	0.096	U	0.096	0.055	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1232	0.096	U	0.096	0.071	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1242	0.096	U	0.096	0.073	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1248	0.096	U	0.096	0.048	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1254	0.096	U	0.096	0.038	ug/L		05/31/24 08:39	06/04/24 04:14	1
Aroclor-1260	0.096	U	0.096	0.044	ug/L		05/31/24 08:39	06/04/24 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*53*		*10 - 149*	*05/31/24 08:39*	*06/04/24 04:14*	*1*
DCB Decachlorobiphenyl	*54*		*10 - 174*	*05/31/24 08:39*	*06/04/24 04:14*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-DS-12
Date Collected: 05/22/24 09:55
Date Received: 05/23/24 10:00

Lab Sample ID: 240-205106-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/03/24 22:03	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/03/24 22:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*05/31/24 08:39*	*06/03/24 22:03*	*1*
DCB Decachlorobiphenyl	*68*		*10 - 174*	*05/31/24 08:39*	*06/03/24 22:03*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-AC-15
Lab Sample ID: 240-205106-4
Date Collected: 05/22/24 10:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/03/24 22:37	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/03/24 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*05/31/24 08:39*	*06/03/24 22:37*	*1*
DCB Decachlorobiphenyl	*68*		*10 - 174*	*05/31/24 08:39*	*06/03/24 22:37*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-6
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		05/31/24 08:39	06/03/24 23:44	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		05/31/24 08:39	06/03/24 23:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*10 - 149*	*05/31/24 08:39*	*06/03/24 23:44*	*1*
DCB Decachlorobiphenyl	*41*		*10 - 174*	*05/31/24 08:39*	*06/03/24 23:44*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-DS-14
Lab Sample ID: 240-205106-8
Date Collected: 05/22/24 11:30
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/04/24 00:52	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/04/24 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*52*		*10 - 149*	*05/31/24 08:39*	*06/04/24 00:52*	*1*
DCB Decachlorobiphenyl	*57*		*10 - 174*	*05/31/24 08:39*	*06/04/24 00:52*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-DS-16
Lab Sample ID: 240-205106-10
Date Collected: 05/22/24 12:15
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.057	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1221	0.10	U	0.10	0.058	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1232	0.10	U	0.10	0.075	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1242	0.10	U	0.10	0.077	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1248	0.10	U	0.10	0.051	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/31/24 08:39	06/04/24 01:26	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/31/24 08:39	06/04/24 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*54*		*10 - 149*	*05/31/24 08:39*	*06/04/24 01:26*	*1*
DCB Decachlorobiphenyl	*52*		*10 - 174*	*05/31/24 08:39*	*06/04/24 01:26*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-AC-19
Date Collected: 05/22/24 14:40
Date Received: 05/23/24 10:00

Lab Sample ID: 240-205106-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		05/31/24 08:39	06/04/24 02:50	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		05/31/24 08:39	06/04/24 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*10 - 149*	*05/31/24 08:39*	*06/04/24 02:50*	*1*
DCB Decachlorobiphenyl	*56*		*10 - 174*	*05/31/24 08:39*	*06/04/24 02:50*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-DS-18
Date Collected: 05/22/24 15:05
Date Received: 05/23/24 10:00

Lab Sample ID: 240-205106-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.099	U	0.099	0.055	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1221	0.099	U	0.099	0.056	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1232	0.099	U	0.099	0.073	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1242	0.099	U	0.099	0.075	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1248	0.099	U	0.099	0.050	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1254	0.099	U	0.099	0.040	ug/L		05/31/24 08:39	06/04/24 03:24	1
Aroclor-1260	0.099	U	0.099	0.046	ug/L		05/31/24 08:39	06/04/24 03:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*51*		*10 - 149*	*05/31/24 08:39*	*06/04/24 03:24*	*1*
DCB Decachlorobiphenyl	*58*		*10 - 174*	*05/31/24 08:39*	*06/04/24 03:24*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-AC-21
Lab Sample ID: 240-205106-16
Date Collected: 05/22/24 16:00
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/04/24 03:57	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/04/24 03:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*55*		*10 - 149*	*05/31/24 08:39*	*06/04/24 03:57*	*1*
DCB Decachlorobiphenyl	*66*		*10 - 174*	*05/31/24 08:39*	*06/04/24 03:57*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052224-DS-20
Lab Sample ID: 240-205106-18
Date Collected: 05/22/24 16:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		05/31/24 08:39	06/04/24 04:31	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		05/31/24 08:39	06/04/24 04:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*48*		*10 - 149*	*05/31/24 08:39*	*06/04/24 04:31*	*1*
DCB Decachlorobiphenyl	*57*		*10 - 174*	*05/31/24 08:39*	*06/04/24 04:31*	*1*

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

General Chemistry

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-5
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0-1993 R2.1)	1900	F1 F2	20	2.6	mg/L			06/04/24 08:21	20

GC/MS VOA

Analysis Batch: 614997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205106-1	GW-052224-DS-12	Total/NA	Water	8260D	
240-205106-5	GW-052224-AC-17	Total/NA	Water	8260D	
240-205106-19	TB-052224-AC-02	Total/NA	Water	8260D	
MB 240-614997/6	Method Blank	Total/NA	Water	8260D	
LCS 240-614997/4	Lab Control Sample	Total/NA	Water	8260D	
240-205106-5 MS	GW-052224-AC-17	Total/NA	Water	8260D	
240-205106-5 MSD	GW-052224-AC-17	Total/NA	Water	8260D	

GC Semi VOA

Prep Batch: 615012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205106-1	GW-052224-DS-12	Total/NA	Water	3510C	
240-205106-2	GW-052224-DS-12	Dissolved	Water	3510C	
240-205106-3	GW-052224-AC-15	Total/NA	Water	3510C	
240-205106-4	GW-052224-AC-15	Dissolved	Water	3510C	
240-205106-5	GW-052224-AC-17	Total/NA	Water	3510C	
240-205106-6	GW-052224-AC-17	Dissolved	Water	3510C	
240-205106-7	GW-052224-DS-14	Total/NA	Water	3510C	
240-205106-8	GW-052224-DS-14	Dissolved	Water	3510C	
240-205106-9	GW-052224-DS-16	Total/NA	Water	3510C	
240-205106-10	GW-052224-DS-16	Dissolved	Water	3510C	
240-205106-11	GW-052224-AC-19	Total/NA	Water	3510C	
240-205106-12	GW-052224-AC-19	Dissolved	Water	3510C	
240-205106-13	GW-052224-DS-18	Total/NA	Water	3510C	
240-205106-14	GW-052224-DS-18	Dissolved	Water	3510C	
240-205106-15	GW-052224-AC-21	Total/NA	Water	3510C	
240-205106-16	GW-052224-AC-21	Dissolved	Water	3510C	
240-205106-17	GW-052224-DS-20	Total/NA	Water	3510C	
240-205106-18	GW-052224-DS-20	Dissolved	Water	3510C	
MB 240-615012/1-A	Method Blank	Total/NA	Water	3510C	
LCS 240-615012/2-A	Lab Control Sample	Total/NA	Water	3510C	
240-205106-5 MS	GW-052224-AC-17	Total/NA	Water	3510C	
240-205106-5 MSD	GW-052224-AC-17	Total/NA	Water	3510C	
240-205106-6 MS	GW-052224-AC-17	Dissolved	Water	3510C	
240-205106-6 MSD	GW-052224-AC-17	Dissolved	Water	3510C	

Analysis Batch: 615307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205106-1	GW-052224-DS-12	Total/NA	Water	8082A	615012
240-205106-2	GW-052224-DS-12	Dissolved	Water	8082A	615012
240-205106-3	GW-052224-AC-15	Total/NA	Water	8082A	615012
240-205106-4	GW-052224-AC-15	Dissolved	Water	8082A	615012
240-205106-5	GW-052224-AC-17	Total/NA	Water	8082A	615012
240-205106-6	GW-052224-AC-17	Dissolved	Water	8082A	615012
240-205106-7	GW-052224-DS-14	Total/NA	Water	8082A	615012
240-205106-8	GW-052224-DS-14	Dissolved	Water	8082A	615012
240-205106-9	GW-052224-DS-16	Total/NA	Water	8082A	615012
240-205106-10	GW-052224-DS-16	Dissolved	Water	8082A	615012
240-205106-11	GW-052224-AC-19	Total/NA	Water	8082A	615012
240-205106-12	GW-052224-AC-19	Dissolved	Water	8082A	615012

GC Semi VOA (Continued)

Analysis Batch: 615307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205106-13	GW-052224-DS-18	Total/NA	Water	8082A	615012
240-205106-14	GW-052224-DS-18	Dissolved	Water	8082A	615012
240-205106-15	GW-052224-AC-21	Total/NA	Water	8082A	615012
240-205106-16	GW-052224-AC-21	Dissolved	Water	8082A	615012
240-205106-17	GW-052224-DS-20	Total/NA	Water	8082A	615012
240-205106-18	GW-052224-DS-20	Dissolved	Water	8082A	615012
MB 240-615012/1-A	Method Blank	Total/NA	Water	8082A	615012
LCS 240-615012/2-A	Lab Control Sample	Total/NA	Water	8082A	615012
240-205106-5 MS	GW-052224-AC-17	Total/NA	Water	8082A	615012
240-205106-5 MSD	GW-052224-AC-17	Total/NA	Water	8082A	615012
240-205106-6 MS	GW-052224-AC-17	Dissolved	Water	8082A	615012
240-205106-6 MSD	GW-052224-AC-17	Dissolved	Water	8082A	615012

General Chemistry

Analysis Batch: 615286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205106-5	GW-052224-AC-17	Total/NA	Water	300.0-1993 R2.1	
MB 240-615286/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-615286/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
240-205106-5 MS	GW-052224-AC-17	Total/NA	Water	300.0-1993 R2.1	
240-205106-5 MSD	GW-052224-AC-17	Total/NA	Water	300.0-1993 R2.1	

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-614997/6
Matrix: Water
Analysis Batch: 614997

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	1.0	U	1.0	0.45	ug/L			05/31/24 10:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*78 - 122*		*05/31/24 10:26*	*1*
Dibromofluoromethane (Surr)	*103*		*73 - 120*		*05/31/24 10:26*	*1*
4-Bromofluorobenzene (Surr)	*96*		*56 - 136*		*05/31/24 10:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*62 - 137*		*05/31/24 10:26*	*1*

Lab Sample ID: LCS 240-614997/4
Matrix: Water
Analysis Batch: 614997

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Vinyl chloride			12.5	9.60		ug/L		77	60 - 144		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*78 - 122*
Dibromofluoromethane (Surr)	*102*		*73 - 120*
4-Bromofluorobenzene (Surr)	*109*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*106*		*62 - 137*

Lab Sample ID: 240-205106-5 MS
Matrix: Water
Analysis Batch: 614997

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Vinyl chloride	1.0	U	12.5	9.36		ug/L		75	43 - 157		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*78 - 122*
Dibromofluoromethane (Surr)	*102*		*73 - 120*
4-Bromofluorobenzene (Surr)	*110*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*107*		*62 - 137*

Lab Sample ID: 240-205106-5 MSD
Matrix: Water
Analysis Batch: 614997

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	1.0	U	12.5	9.76		ug/L		78	43 - 157	4	24

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*78 - 122*
Dibromofluoromethane (Surr)	*102*		*73 - 120*
4-Bromofluorobenzene (Surr)	*110*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*107*		*62 - 137*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-615012/1-A
Matrix: Water
Analysis Batch: 615307

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615012

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		05/31/24 08:39	06/03/24 21:13	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		05/31/24 08:39	06/03/24 21:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*59*		*10 - 149*	*05/31/24 08:39*	*06/03/24 21:13*	*1*
DCB Decachlorobiphenyl	*75*		*10 - 174*	*05/31/24 08:39*	*06/03/24 21:13*	*1*

Lab Sample ID: LCS 240-615012/2-A
Matrix: Water
Analysis Batch: 615307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615012

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.57		ug/L		63	28 - 140		
Aroclor-1260			2.50	1.63		ug/L		65	39 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*51*		*10 - 149*
DCB Decachlorobiphenyl	*62*		*10 - 174*

Lab Sample ID: 240-205106-5 MS
Matrix: Water
Analysis Batch: 615307

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA
Prep Batch: 615012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016	0.11	U	2.50	1.42		ug/L		57	50 - 120		
Aroclor-1260	0.11	U	2.50	1.31		ug/L		52	39 - 135		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*49*		*10 - 149*
DCB Decachlorobiphenyl	*31*		*10 - 174*

Lab Sample ID: 240-205106-5 MSD
Matrix: Water
Analysis Batch: 615307

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA
Prep Batch: 615012

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.11	U	2.50	1.43		ug/L		57	50 - 120	1	25
Aroclor-1260	0.11	U	2.50	1.17		ug/L		47	39 - 135	11	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*50*		*10 - 149*
DCB Decachlorobiphenyl	*22*		*10 - 174*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 240-205106-6 MS
Matrix: Water
Analysis Batch: 615307

Client Sample ID: GW-052224-AC-17
Prep Type: Dissolved
Prep Batch: 615012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aroclor-1016	0.11	U	2.63	1.61		ug/L		61	50 - 120
Aroclor-1260	0.11	U	2.63	1.68		ug/L		64	39 - 135

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*52*		*10 - 149*
DCB Decachlorobiphenyl	*43*		*10 - 174*

Lab Sample ID: 240-205106-6 MSD
Matrix: Water
Analysis Batch: 615307

Client Sample ID: GW-052224-AC-17
Prep Type: Dissolved
Prep Batch: 615012

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aroclor-1016	0.11	U	2.48	1.64		ug/L		66	50 - 120	1	25
Aroclor-1260	0.11	U	2.48	1.62		ug/L		65	39 - 135	4	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*56*		*10 - 149*
DCB Decachlorobiphenyl	*40*		*10 - 174*

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-615286/3
Matrix: Water
Analysis Batch: 615286

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.13	mg/L			06/04/24 03:05	1

Lab Sample ID: LCS 240-615286/4
Matrix: Water
Analysis Batch: 615286

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.6		mg/L		97	90 - 110

Lab Sample ID: 240-205106-5 MS
Matrix: Water
Analysis Batch: 615286

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	1900	F1 F2	1000	2870		mg/L		94	80 - 120

Lab Sample ID: 240-205106-5 MSD
Matrix: Water
Analysis Batch: 615286

Client Sample ID: GW-052224-AC-17
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	1900	F1 F2	1000	3550	F1 F2	mg/L		162	80 - 120	21	15

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205106-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(78-122)	(73-120)	(56-136)	(62-137)
240-205106-1	GW-052224-DS-12	98	104	91	118
240-205106-5	GW-052224-AC-17	101	105	93	119
240-205106-5 MS	GW-052224-AC-17	103	102	110	107
240-205106-5 MSD	GW-052224-AC-17	103	102	110	107
240-205106-19	TB-052224-AC-02	101	105	93	117
LCS 240-614997/4	Lab Control Sample	103	102	109	106
MB 240-614997/6	Method Blank	99	103	96	116

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-205106-1	GW-052224-DS-12	59	64
240-205106-3	GW-052224-AC-15	63	59
240-205106-5	GW-052224-AC-17	47	28
240-205106-5 MS	GW-052224-AC-17	49	31
240-205106-5 MSD	GW-052224-AC-17	50	22
240-205106-7	GW-052224-DS-14	54	54
240-205106-9	GW-052224-DS-16	61	23
240-205106-11	GW-052224-AC-19	59	41
240-205106-13	GW-052224-DS-18	46	49
240-205106-15	GW-052224-AC-21	60	69
240-205106-17	GW-052224-DS-20	53	54
LCS 240-615012/2-A	Lab Control Sample	51	62
MB 240-615012/1-A	Method Blank	59	75

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-205106-2	GW-052224-DS-12	61	68
240-205106-4	GW-052224-AC-15	60	68
240-205106-6	GW-052224-AC-17	58	41
240-205106-6 MS	GW-052224-AC-17	52	43
240-205106-6 MSD	GW-052224-AC-17	56	40
240-205106-8	GW-052224-DS-14	52	57
240-205106-10	GW-052224-DS-16	54	52

Surrogate Summary

Client: GHD Services Inc. Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)									
		TCX1	DCBP1								
Lab Sample ID	Client Sample ID	(10-149)	(10-174)								
240-205106-12	GW-052224-AC-19	55	56								
240-205106-14	GW-052224-DS-18	51	58								
240-205106-16	GW-052224-AC-21	55	66								
240-205106-18	GW-052224-DS-20	48	57								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Lab Chronicle

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205106-1

Client Sample ID: GW-052224-DS-12
Lab Sample ID: 240-205106-1
Date Collected: 05/22/24 09:55
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	614997	TJL2	EET CLE	05/31/24 15:00
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 21:47

Client Sample ID: GW-052224-DS-12
Lab Sample ID: 240-205106-2
Date Collected: 05/22/24 09:55
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 22:03

Client Sample ID: GW-052224-AC-15
Lab Sample ID: 240-205106-3
Date Collected: 05/22/24 10:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 22:20

Client Sample ID: GW-052224-AC-15
Lab Sample ID: 240-205106-4
Date Collected: 05/22/24 10:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 22:37

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-5
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	614997	TJL2	EET CLE	05/31/24 15:25
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 22:54
Total/NA	Analysis	300.0-1993 R2.1		20	615286	JWW	EET CLE	06/04/24 08:21

Client Sample ID: GW-052224-AC-17
Lab Sample ID: 240-205106-6
Date Collected: 05/22/24 11:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/03/24 23:44

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052224-DS-14
Lab Sample ID: 240-205106-7
Date Collected: 05/22/24 11:30
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 00:35

Client Sample ID: GW-052224-DS-14
Lab Sample ID: 240-205106-8
Date Collected: 05/22/24 11:30
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 00:52

Client Sample ID: GW-052224-DS-16
Lab Sample ID: 240-205106-9
Date Collected: 05/22/24 12:15
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 01:09

Client Sample ID: GW-052224-DS-16
Lab Sample ID: 240-205106-10
Date Collected: 05/22/24 12:15
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 01:26

Client Sample ID: GW-052224-AC-19
Lab Sample ID: 240-205106-11
Date Collected: 05/22/24 14:40
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 01:42

Client Sample ID: GW-052224-AC-19
Lab Sample ID: 240-205106-12
Date Collected: 05/22/24 14:40
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 02:50

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052224-DS-18
Lab Sample ID: 240-205106-13
Date Collected: 05/22/24 15:05
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 03:07

Client Sample ID: GW-052224-DS-18
Lab Sample ID: 240-205106-14
Date Collected: 05/22/24 15:05
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 03:24

Client Sample ID: GW-052224-AC-21
Lab Sample ID: 240-205106-15
Date Collected: 05/22/24 16:00
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 03:40

Client Sample ID: GW-052224-AC-21
Lab Sample ID: 240-205106-16
Date Collected: 05/22/24 16:00
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 03:57

Client Sample ID: GW-052224-DS-20
Lab Sample ID: 240-205106-17
Date Collected: 05/22/24 16:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Total/NA	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 04:14

Client Sample ID: GW-052224-DS-20
Lab Sample ID: 240-205106-18
Date Collected: 05/22/24 16:10
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615012	GBS	EET CLE	05/31/24 08:39
Dissolved	Analysis	8082A		1	615307	MBB	EET CLE	06/04/24 04:31

Lab Chronicle

Client: GHD Services Inc.
Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: TB-052224-AC-02
Lab Sample ID: 240-205106-19

Date Collected: 05/22/24 18:00
Matrix: Water
Date Received: 05/23/24 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	614997	TJL2	EET CLE	05/31/24 11:41

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-205106-1
Project/Site: 12616852, GM Bedford, E117014

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

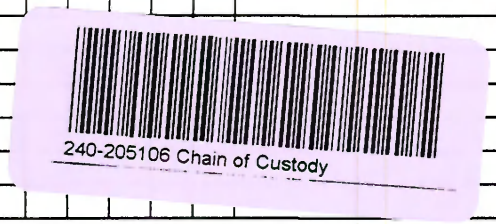
CHAIN OF CUSTODY RECORD

COC Number: GHD-20240522175134

ADDRESS: 6300 N River Road - Suite 302, Rosemont, IL 60018
PHONE: (773) 380-993 FAX:

Project No/Phase/Task Code: 11228036	Laboratory Name: Eurofins TestAmerica, Canton	Lab Location: 180 South Van Buren Avenue Barberton, OH 44203	SSOW ID: E117014
Project Name: GM Bedford	Lab Contact: 330-497-9396		Cooler No: 5 Coolers
Project Location: 105 GM Drive, Bedford, IN. 47421, Bedford, IN			Carrier: FedEx Priority Overnight
GHD Chemistry Contact:			Airbill No: 8181 5130 8706
Sampler(s): AC, DS			Total # of Containers: 60

Item	Sample Identification (containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code	Sample Type: Grab (G) /Comp (C)	Sample Type: Filtered (Y/N)	Analysis Requested: PCB (dissolved)	PCB (total)	VOCs	SVOCs	Chloride	Vinyl Chloride	Chlorinated Organics	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
1	GW-052224-DS-12	05/22/24	9:55	WG	G	Y	x	x				x		7		
2	GW-052224-AC-15	05/22/24	10:10	WG	G	Y	x	x						4		
3	GW-052224-AC-17	05/22/24	11:10	WG	G	Y	x	x			x	x		24	X	
4	GW-052224-DS-14	05/22/24	11:30	WG	G	Y	x	x						4		
5	GW-052224-DS-16	05/22/24	12:15	WG	G	Y	x	x						4		
6	GW-052224-AC-19	05/22/24	14:40	WG	G	Y	x	x						4		
7	GW-052224-DS-18	05/22/24	15:05	WG	G	Y	x	x						4		
8	GW-052224-AC-21	05/22/24	16:00	WG	G	N	x	x						4		
9	GW-052224-DS-20	05/22/24	16:10	WG	G	Y	x	x						4		
10	TB-052224-AC-02	05/22/24	18:00	WG	G	N						x		1		
11																
12																
13																
14																
15																
16																
17																
18																



TAT Required in business days (use separate COCs fro different TATs)
(Standards include 1 day, 2 days, 3 days, 1 week, 2 weeks)

Notes/Special Requirements:

	Relinquished By:	Company	Date	Time	Received By:	Company	Date	Time
1	Allison Meier	GHD	5/22/24	1815	1 J. Moroski	EETNC	05/23/24	1000
2					2			
3					3			

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client CHD Site Name _____ Cooler unpacked by: J MOROSKO

Cooler Received on 05/23/24 Opened on 05/23/24

FedEx: 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 17 (CF T0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Y)	(Y) (Y)
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes No	(NA) pH Strip Lot# HC339814
14. Were VOAs on the COC?	(Yes)	No
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	(No) NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	(Yes)	No
17. Was a LL Hg or Me Hg trip blank present? _____	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

~~Received 3x additional TB~~ JM 5.23

Received 3x HCl VOA w/ no sample IDs, matched by sample - 12 having the only test that needed them.

19. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	1.7	1.9	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.4	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.4	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.2	2.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.6	2.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	2.5	2.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

5/23/2024

Login Container Summary Report

240-205106

6/7/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-052224-DS-12	240-205106-A-1	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-DS-12	240-205106-B-1	Voa Vial 40ml Hydrochloric Acid				
GW-052224-DS-12	240-205106-C-1	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-DS-12	240-205106-D-1	Amber Glass 1 liter - unpreserved				
GW-052224-DS-12	240-205106-E-1	Amber Glass 1 liter - unpreserved				
GW-052224-DS-12 (DISS)	240-205106-A-2	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-DS-12 (DISS)	240-205106-B-2	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-AC-15	240-205106-E-3	Amber Glass 1 liter - unpreserved				
GW-052224-AC-15	240-205106-F-3	Amber Glass 1 liter - unpreserved				
GW-052224 AC-15 (DISS)	240-205106-A-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-15 (DISS)	240-205106-B-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-17	240-205106-A-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-A-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-A-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-B-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-B-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-B-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-C-5	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-C-5 MS	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-C-5 MSD	Voa Vial 40ml - Hydrochloric Acid				
GW-052224-AC-17	240-205106-D-5	Plastic 60 mL - unpreserved				
GW-052224-AC-17	240-205106-D-5 MS	Plastic 60 mL - unpreserved				
GW-052224-AC-17	240-205106-D-5 MSD	Plastic 60 mL - unpreserved				
GW-052224-AC-17	240-205106-E-5	Amber Glass 1 liter - unpreserved				
GW-052224-AC-17	240-205106-E-5 MS	Amber Glass 1 liter - unpreserved				
GW-052224-AC-17	240-205106-E-5 MSD	Amber Glass 1 liter - unpreserved				
GW-052224 AC-17	240-205106-F-5	Amber Glass 1 liter unpreserved				
GW-052224-AC-17	240-205106-F-5 MS	Amber Glass 1 liter - unpreserved				
GW-052224 AC-17	240-205106-F-5 MSD	Amber Glass 1 liter - unpreserved				
GW-052224-AC-17 (DISS)	240-205106-A-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-17 (DISS)	240-205106 A-6 MS	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-17 (DISS)	240-205106-A-6 MSD	Amber Glass 1 liter unpreserved - Dis.				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
GW-052224-AC-17 (DISS)	240-205106-B-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-17 (DISS)	240-205106-B-6 MS	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-AC-17 (DISS)	240-205106-B-6 MSD	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-DS-14	240-205106-A-7	Amber Glass 1 liter - unpreserved				
GW-052224-DS-14	240-205106-B-7	Amber Glass 1 liter - unpreserved				
GW-052224-DS-14 (DISS)	240-205106-A-8	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-DS-14 (DISS)	240-205106-B-8	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-DS-16	240-205106-A-9	Amber Glass 1 liter - unpreserved				
GW-052224-DS-16	240-205106-B-9	Amber Glass 1 liter - unpreserved				
GW-052224-DS-16 (DISS)	240-205106-A-10	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-DS-16 (DISS)	240-205106-B-10	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-AC-19	240-205106-A-11	Amber Glass 1 liter - unpreserved				
GW-052224-AC-19	240-205106-B-11	Amber Glass 1 liter - unpreserved				
GW-052224-AC-19 (DISS)	240-205106-A-12	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-19 (DISS)	240-205106-B-12	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-DS-18	240-205106-A-13	Amber Glass 1 liter - unpreserved				
GW-052224-DS-18	240-205106-B-13	Amber Glass 1 liter - unpreserved				
GW-052224-DS-18 (DISS)	240-205106-A-14	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-DS-18 (DISS)	240-205106-B-14	Amber Glass 1 liter - unpreserved - Dis.				
GW-052224-AC-21	240-205106-A-15	Amber Glass 1 liter - unpreserved				
GW-052224 AC-21	240-205106-B-15	Amber Glass 1 liter - unpreserved				
GW-052224-AC-21 (DISS)	240-205106-A-16	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-AC-21 (DISS)	240-205106-B-16	Amber Glass 1 liter - unpreserved - Dis				
GW-052224-DS-20	240-205106-A-17	Amber Glass 1 liter - unpreserved				
GW-052224 DS-20	240-205106-B-17	Amber Glass 1 liter - unpreserved				
GW-052224-DS-20 (DISS)	240-205106-A-18	Amber Glass 1 liter - unpreserved - Dis				
GW-052224 DS-20 (DISS)	240-205106-B-18	Amber Glass 1 liter - unpreserved - Dis				
TB-052224-AC-02	240-205106-A-19	Voa Vial 40ml - Hydrochloric Acid				

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ruth Mickle
GHD Services Inc.
26850 Haggerty Rd.
Farmington Hills, Michigan 48331

Generated 6/7/2024 9:43:19 AM

JOB DESCRIPTION

12616852, GM Bedford, E117014

JOB NUMBER

240-205261-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
6/7/2024 9:43:19 AM

Authorized for release by
Denise Heckler, Project Manager II
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Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Definitions/Glossary 5
Sample Summary 6
Detection Summary 7
Method Summary 8
Client Sample Results 9
QC Association Summary 24
QC Sample Results 25
Surrogate Summary 28
Lab Chronicle 29
Certification Summary 31
Chain of Custody 32

Job Narrative
240-205261-1

Receipt
The samples were received on 5/24/2024 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.2°C, 4.2°C and 4.4°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-615382 was outside the method criteria for the following analyte(s): 2-Chloroethyl vinyl ether. An MRL standard at or below the reporting limit (RL) was analyzed with the affected samples GW-052324-AC-23 (240-205261-3), GW-052324-DS-24 (240-205261-5), TB-052324-AC-03 (240-205261-11), (240-205269-A-9), (240-205269-C-9 MS) and (240-205269-A-9 MSD) and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following sample was received preserved with hydrochloric acid: TB-052324-AC-03 (240-205261-11). The requested target analyte list includes 2-Chloroethyl vinyl ether, an acid-labile compound that degrades in an acidic medium.

Method 8260D: The following samples were analyzed outside of analytical holding time. The sample vials were unpreserved thus indicating a 7 day holding time. Due to sample load and instrument capacity, it was not possible to complete the analysis in 7 days. The affected samples are: GW-052324-AC-23 (240-205261-3) and GW-052324-DS-24 (240-205261-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs
Method 8082A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-615201.

Method 8082A: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SW-052324-JL-22 (240-205261-1), SW-052324-JL-22 (240-205261-2), GW-052324-DS-24 (240-205261-5), GW-052324-DS-24 (240-205261-6) and GW-052324-AC-25 (240-205261-7).

Method 8082A: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not directly match any of the laboratory's Aroclor standards used for instrument calibration: GW-052324-AC-23 (240-205261-3). The sample has been quantified and reported using the best overall Aroclor/standard pattern match relative to the reference standards.

Method 8082A - Dissolved: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 240-615201.

Method 8082A - Dissolved: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: SW-052324-JL-22 (240-205261-1), SW-052324-JL-22 (240-205261-2), GW-052324-DS-24 (240-205261-5), GW-052324-DS-24 (240-205261-6) and GW-052324-AC-25 (240-205261-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Definitions/Glossary

Client: GHD Services Inc. Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-205261-1	SW-052324-JL-22	Water	05/23/24 10:17	05/24/24 09:40
240-205261-2	SW-052324-JL-22	Water	05/23/24 10:17	05/24/24 09:40
240-205261-3	GW-052324-AC-23	Water	05/23/24 10:20	05/24/24 09:40
240-205261-4	GW-052324-AC-23	Water	05/23/24 10:20	05/24/24 09:40
240-205261-5	GW-052324-DS-24	Water	05/23/24 10:35	05/24/24 09:40
240-205261-6	GW-052324-DS-24	Water	05/23/24 10:35	05/24/24 09:40
240-205261-7	GW-052324-AC-25	Water	05/23/24 13:45	05/24/24 09:40
240-205261-8	GW-052324-AC-25	Water	05/23/24 13:45	05/24/24 09:40
240-205261-9	GW-052324-AC-26	Water	05/23/24 13:50	05/24/24 09:40
240-205261-10	GW-052324-AC-26	Water	05/23/24 13:50	05/24/24 09:40
240-205261-11	TB-052324-AC-03	Water	05/23/24 15:00	05/24/24 09:40

Detection Summary

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: SW-052324-JL-22 — Lab Sample ID: 240-205261-1

No Detections.

Client Sample ID: SW-052324-JL-22 — Lab Sample ID: 240-205261-2

No Detections.

Client Sample ID: GW-052324-AC-23 — Lab Sample ID: 240-205261-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.29		0.10	0.076	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052324-AC-23 — Lab Sample ID: 240-205261-4

No Detections.

Client Sample ID: GW-052324-DS-24 — Lab Sample ID: 240-205261-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	0.090	J	0.11	0.082	ug/L	1		8082A	Total/NA

Client Sample ID: GW-052324-DS-24 — Lab Sample ID: 240-205261-6

No Detections.

Client Sample ID: GW-052324-AC-25 — Lab Sample ID: 240-205261-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17		1.0	0.13	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: GW-052324-AC-25 — Lab Sample ID: 240-205261-8

No Detections.

Client Sample ID: GW-052324-AC-26 — Lab Sample ID: 240-205261-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17		1.0	0.13	mg/L	1		300.0-1993 R2.1	Total/NA

Client Sample ID: GW-052324-AC-26 — Lab Sample ID: 240-205261-10

No Detections.

Client Sample ID: TB-052324-AC-03 — Lab Sample ID: 240-205261-11

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CLE
300.0-1993 R2.1	Anions, Ion Chromatography	EPA	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: GW-052324-AC-23
Lab Sample ID: 240-205261-3
Date Collected: 05/23/24 10:20
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U H	1.0	0.48	ug/L			06/04/24 16:32	1
1,1,2,2-Tetrachloroethane	1.0	U H	1.0	0.60	ug/L			06/04/24 16:32	1
1,1,2-Trichloroethane	1.0	U H	1.0	0.48	ug/L			06/04/24 16:32	1
1,1-Dichloroethane	1.0	U H	1.0	0.47	ug/L			06/04/24 16:32	1
1,1-Dichloroethene	1.0	U H	1.0	0.49	ug/L			06/04/24 16:32	1
1,2-Dichlorobenzene	1.0	U H	1.0	0.48	ug/L			06/04/24 16:32	1
1,2-Dichloroethane	1.0	U H	1.0	0.46	ug/L			06/04/24 16:32	1
1,2-Dichloropropane	1.0	U H	1.0	0.47	ug/L			06/04/24 16:32	1
1,3-Dichlorobenzene	1.0	U H	1.0	0.45	ug/L			06/04/24 16:32	1
1,4-Dichlorobenzene	1.0	U H	1.0	0.41	ug/L			06/04/24 16:32	1
2-Chloroethyl vinyl ether	10	U H	10	1.5	ug/L			06/04/24 16:32	1
Benzene	1.0	U H	1.0	0.42	ug/L			06/04/24 16:32	1
Bromoform	1.0	U H	1.0	0.76	ug/L			06/04/24 16:32	1
Bromomethane	1.0	U H	1.0	0.42	ug/L			06/04/24 16:32	1
Carbon tetrachloride	1.0	U H	1.0	0.26	ug/L			06/04/24 16:32	1
Chlorobenzene	1.0	U H	1.0	0.38	ug/L			06/04/24 16:32	1
Dibromochloromethane	1.0	U H	1.0	0.39	ug/L			06/04/24 16:32	1
Chloroethane	1.0	U H	1.0	0.83	ug/L			06/04/24 16:32	1
Chloroform	1.0	U H	1.0	0.47	ug/L			06/04/24 16:32	1
Chloromethane	1.0	U H	1.0	0.63	ug/L			06/04/24 16:32	1
cis-1,3-Dichloropropene	1.0	U H	1.0	0.61	ug/L			06/04/24 16:32	1
Dichlorodifluoromethane	1.0	U H	1.0	0.35	ug/L			06/04/24 16:32	1
Bromodichloromethane	1.0	U H	1.0	0.38	ug/L			06/04/24 16:32	1
Ethylbenzene	1.0	U H	1.0	0.42	ug/L			06/04/24 16:32	1
Methylene Chloride	5.0	U H	5.0	2.6	ug/L			06/04/24 16:32	1
Tetrachloroethene	1.0	U H	1.0	0.44	ug/L			06/04/24 16:32	1
Toluene	1.0	U H	1.0	0.44	ug/L			06/04/24 16:32	1
trans-1,2-Dichloroethene	1.0	U H	1.0	0.51	ug/L			06/04/24 16:32	1
trans-1,3-Dichloropropene	1.0	U H	1.0	0.67	ug/L			06/04/24 16:32	1
Trichlorofluoromethane	1.0	U H	1.0	0.45	ug/L			06/04/24 16:32	1
Vinyl chloride	1.0	U H	1.0	0.45	ug/L			06/04/24 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*78 - 122*		*06/04/24 16:32*	*1*
Dibromofluoromethane (Surr)	*100*		*73 - 120*		*06/04/24 16:32*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*06/04/24 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*62 - 137*		*06/04/24 16:32*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: GW-052324-DS-24
Lab Sample ID: 240-205261-5
Date Collected: 05/23/24 10:35
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U H	1.0	0.48	ug/L			06/04/24 16:51	1
1,1,2,2-Tetrachloroethane	1.0	U H	1.0	0.60	ug/L			06/04/24 16:51	1
1,1,2-Trichloroethane	1.0	U H	1.0	0.48	ug/L			06/04/24 16:51	1
1,1-Dichloroethane	1.0	U H	1.0	0.47	ug/L			06/04/24 16:51	1
1,1-Dichloroethene	1.0	U H	1.0	0.49	ug/L			06/04/24 16:51	1
1,2-Dichlorobenzene	1.0	U H	1.0	0.48	ug/L			06/04/24 16:51	1
1,2-Dichloroethane	1.0	U H	1.0	0.46	ug/L			06/04/24 16:51	1
1,2-Dichloropropane	1.0	U H	1.0	0.47	ug/L			06/04/24 16:51	1
1,3-Dichlorobenzene	1.0	U H	1.0	0.45	ug/L			06/04/24 16:51	1
1,4-Dichlorobenzene	1.0	U H	1.0	0.41	ug/L			06/04/24 16:51	1
2-Chloroethyl vinyl ether	10	U H	10	1.5	ug/L			06/04/24 16:51	1
Benzene	1.0	U H	1.0	0.42	ug/L			06/04/24 16:51	1
Bromoform	1.0	U H	1.0	0.76	ug/L			06/04/24 16:51	1
Bromomethane	1.0	U H	1.0	0.42	ug/L			06/04/24 16:51	1
Carbon tetrachloride	1.0	U H	1.0	0.26	ug/L			06/04/24 16:51	1
Chlorobenzene	1.0	U H	1.0	0.38	ug/L			06/04/24 16:51	1
Dibromochloromethane	1.0	U H	1.0	0.39	ug/L			06/04/24 16:51	1
Chloroethane	1.0	U H	1.0	0.83	ug/L			06/04/24 16:51	1
Chloroform	1.0	U H	1.0	0.47	ug/L			06/04/24 16:51	1
Chloromethane	1.0	U H	1.0	0.63	ug/L			06/04/24 16:51	1
cis-1,3-Dichloropropene	1.0	U H	1.0	0.61	ug/L			06/04/24 16:51	1
Dichlorodifluoromethane	1.0	U H	1.0	0.35	ug/L			06/04/24 16:51	1
Bromodichloromethane	1.0	U H	1.0	0.38	ug/L			06/04/24 16:51	1
Ethylbenzene	1.0	U H	1.0	0.42	ug/L			06/04/24 16:51	1
Methylene Chloride	5.0	U H	5.0	2.6	ug/L			06/04/24 16:51	1
Tetrachloroethene	1.0	U H	1.0	0.44	ug/L			06/04/24 16:51	1
Toluene	1.0	U H	1.0	0.44	ug/L			06/04/24 16:51	1
trans-1,2-Dichloroethene	1.0	U H	1.0	0.51	ug/L			06/04/24 16:51	1
trans-1,3-Dichloropropene	1.0	U H	1.0	0.67	ug/L			06/04/24 16:51	1
Trichlorofluoromethane	1.0	U H	1.0	0.45	ug/L			06/04/24 16:51	1
Vinyl chloride	1.0	U H	1.0	0.45	ug/L			06/04/24 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*78 - 122*		*06/04/24 16:51*	*1*
Dibromofluoromethane (Surr)	*112*		*73 - 120*		*06/04/24 16:51*	*1*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*06/04/24 16:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*62 - 137*		*06/04/24 16:51*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: TB-052324-AC-03
Lab Sample ID: 240-205261-11
Date Collected: 05/23/24 15:00
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			06/04/24 14:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			06/04/24 14:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			06/04/24 14:19	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			06/04/24 14:19	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			06/04/24 14:19	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			06/04/24 14:19	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			06/04/24 14:19	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			06/04/24 14:19	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			06/04/24 14:19	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			06/04/24 14:19	1
2-Chloroethyl vinyl ether	10	U	10	1.5	ug/L			06/04/24 14:19	1
Benzene	1.0	U	1.0	0.42	ug/L			06/04/24 14:19	1
Bromoform	1.0	U	1.0	0.76	ug/L			06/04/24 14:19	1
Bromomethane	1.0	U	1.0	0.42	ug/L			06/04/24 14:19	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			06/04/24 14:19	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			06/04/24 14:19	1
Chloroethane	1.0	U	1.0	0.83	ug/L			06/04/24 14:19	1
Chloroform	1.0	U	1.0	0.47	ug/L			06/04/24 14:19	1
Chloromethane	1.0	U	1.0	0.63	ug/L			06/04/24 14:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			06/04/24 14:19	1
Bromodichloromethane	1.0	U	1.0	0.38	ug/L			06/04/24 14:19	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			06/04/24 14:19	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			06/04/24 14:19	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			06/04/24 14:19	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			06/04/24 14:19	1
Toluene	1.0	U	1.0	0.44	ug/L			06/04/24 14:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			06/04/24 14:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			06/04/24 14:19	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			06/04/24 14:19	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			06/04/24 14:19	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			06/04/24 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*62 - 137*		*06/04/24 14:19*	*1*
4-Bromofluorobenzene (Surr)	*87*		*56 - 136*		*06/04/24 14:19*	*1*
Toluene-d8 (Surr)	*92*		*78 - 122*		*06/04/24 14:19*	*1*
Dibromofluoromethane (Surr)	*107*		*73 - 120*		*06/04/24 14:19*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: SW-052324-JL-22
Lab Sample ID: 240-205261-1
Date Collected: 05/23/24 10:17
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/03/24 09:32	06/05/24 06:53	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/03/24 09:32	06/05/24 06:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*38*		*10 - 149*	*06/03/24 09:32*	*06/05/24 06:53*	*1*
DCB Decachlorobiphenyl	*11*		*10 - 174*	*06/03/24 09:32*	*06/05/24 06:53*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052324-AC-23
Lab Sample ID: 240-205261-3
Date Collected: 05/23/24 10:20
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1242	**0.29**		0.10	0.076	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/03/24 09:32	06/05/24 07:27	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/03/24 09:32	06/05/24 07:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*61*		*10 - 149*	*06/03/24 09:32*	*06/05/24 07:27*	*1*
DCB Decachlorobiphenyl	*73*		*10 - 174*	*06/03/24 09:32*	*06/05/24 07:27*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052324-DS-24
Lab Sample ID: 240-205261-5
Date Collected: 05/23/24 10:35
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.060	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1221	0.11	U	0.11	0.061	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1232	0.11	U	0.11	0.080	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1242	**0.090**	**J**	0.11	0.082	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1248	0.11	U	0.11	0.054	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1254	0.11	U	0.11	0.043	ug/L		06/03/24 09:32	06/05/24 08:01	1
Aroclor-1260	0.11	U	0.11	0.049	ug/L		06/03/24 09:32	06/05/24 08:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*49*		*10 - 149*	*06/03/24 09:32*	*06/05/24 08:01*	*1*
DCB Decachlorobiphenyl	*44*		*10 - 174*	*06/03/24 09:32*	*06/05/24 08:01*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052324-AC-25
Lab Sample ID: 240-205261-7
Date Collected: 05/23/24 13:45
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.11	U	0.11	0.059	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1221	0.11	U	0.11	0.060	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1232	0.11	U	0.11	0.078	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1242	0.11	U	0.11	0.080	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1248	0.11	U	0.11	0.053	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1254	0.11	U	0.11	0.042	ug/L		06/03/24 09:32	06/05/24 08:35	1
Aroclor-1260	0.11	U	0.11	0.048	ug/L		06/03/24 09:32	06/05/24 08:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*10 - 149*	*06/03/24 09:32*	*06/05/24 08:35*	*1*
DCB Decachlorobiphenyl	*67*		*10 - 174*	*06/03/24 09:32*	*06/05/24 08:35*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: GW-052324-AC-26
Lab Sample ID: 240-205261-9
Date Collected: 05/23/24 13:50
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1232	0.10	U	0.10	0.076	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1242	0.10	U	0.10	0.078	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1254	0.10	U	0.10	0.041	ug/L		06/03/24 09:32	06/05/24 09:09	1
Aroclor-1260	0.10	U	0.10	0.047	ug/L		06/03/24 09:32	06/05/24 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*43*		*10 - 149*	*06/03/24 09:32*	*06/05/24 09:09*	*1*
DCB Decachlorobiphenyl	*71*		*10 - 174*	*06/03/24 09:32*	*06/05/24 09:09*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: SW-052324-JL-22
Lab Sample ID: 240-205261-2
Date Collected: 05/23/24 10:17
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.054	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1221	0.097	U	0.097	0.055	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1232	0.097	U	0.097	0.072	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1242	0.097	U	0.097	0.074	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1248	0.097	U	0.097	0.049	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1254	0.097	U	0.097	0.039	ug/L		06/03/24 09:32	06/05/24 10:17	1
Aroclor-1260	0.097	U	0.097	0.045	ug/L		06/03/24 09:32	06/05/24 10:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*34*		*10 - 149*	*06/03/24 09:32*	*06/05/24 10:17*	*1*
DCB Decachlorobiphenyl	*10*		*10 - 174*	*06/03/24 09:32*	*06/05/24 10:17*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052324-AC-23
Lab Sample ID: 240-205261-4
Date Collected: 05/23/24 10:20
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		06/03/24 09:32	06/05/24 07:44	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		06/03/24 09:32	06/05/24 07:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*63*		*10 - 149*	*06/03/24 09:32*	*06/05/24 07:44*	*1*
DCB Decachlorobiphenyl	*77*		*10 - 174*	*06/03/24 09:32*	*06/05/24 07:44*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052324-DS-24
Lab Sample ID: 240-205261-6
Date Collected: 05/23/24 10:35
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.053	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1221	0.095	U	0.095	0.054	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1242	0.095	U	0.095	0.072	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1248	0.095	U	0.095	0.048	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1254	0.095	U	0.095	0.038	ug/L		06/03/24 09:32	06/05/24 08:18	1
Aroclor-1260	0.095	U	0.095	0.044	ug/L		06/03/24 09:32	06/05/24 08:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*33*		*10 - 149*	*06/03/24 09:32*	*06/05/24 08:18*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 174*	*06/03/24 09:32*	*06/05/24 08:18*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052324-AC-25
Lab Sample ID: 240-205261-8
Date Collected: 05/23/24 13:45
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.058	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1221	0.10	U	0.10	0.059	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1232	0.10	U	0.10	0.077	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1242	0.10	U	0.10	0.079	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1248	0.10	U	0.10	0.052	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1254	0.10	U	0.10	0.042	ug/L		06/03/24 09:32	06/05/24 08:52	1
Aroclor-1260	0.10	U	0.10	0.048	ug/L		06/03/24 09:32	06/05/24 08:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*45*		*10 - 149*	*06/03/24 09:32*	*06/05/24 08:52*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*06/03/24 09:32*	*06/05/24 08:52*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Client Sample ID: GW-052324-AC-26
Lab Sample ID: 240-205261-10
Date Collected: 05/23/24 13:50
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/03/24 09:32	06/05/24 09:25	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/03/24 09:32	06/05/24 09:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*60*		*10 - 149*	*06/03/24 09:32*	*06/05/24 09:25*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 174*	*06/03/24 09:32*	*06/05/24 09:25*	*1*

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

General Chemistry

Client Sample ID: GW-052324-AC-25
Lab Sample ID: 240-205261-7
Date Collected: 05/23/24 13:45
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0-1993 R2.1)	17		1.0	0.13	mg/L			06/04/24 20:31	1

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

General Chemistry

Client Sample ID: GW-052324-AC-26
Lab Sample ID: 240-205261-9
Date Collected: 05/23/24 13:50
Matrix: Water
Date Received: 05/24/24 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0-1993 R2.1)	17		1.0	0.13	mg/L			06/04/24 20:50	1

QC Association Summary

Client: GHD Services Inc.
Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

GC/MS VOA

Analysis Batch: 615382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205261-3	GW-052324-AC-23	Total/NA	Water	8260D	
240-205261-5	GW-052324-DS-24	Total/NA	Water	8260D	
240-205261-11	TB-052324-AC-03	Total/NA	Water	8260D	
MB 240-615382/9	Method Blank	Total/NA	Water	8260D	
LCS 240-615382/5	Lab Control Sample	Total/NA	Water	8260D	

GC Semi VOA

Prep Batch: 615201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205261-1	SW-052324-JL-22	Total/NA	Water	3510C	
240-205261-2	SW-052324-JL-22	Dissolved	Water	3510C	
240-205261-3	GW-052324-AC-23	Total/NA	Water	3510C	
240-205261-4	GW-052324-AC-23	Dissolved	Water	3510C	
240-205261-5	GW-052324-DS-24	Total/NA	Water	3510C	
240-205261-6	GW-052324-DS-24	Dissolved	Water	3510C	
240-205261-7	GW-052324-AC-25	Total/NA	Water	3510C	
240-205261-8	GW-052324-AC-25	Dissolved	Water	3510C	
240-205261-9	GW-052324-AC-26	Total/NA	Water	3510C	
240-205261-10	GW-052324-AC-26	Dissolved	Water	3510C	
MB 240-615201/23-A	Method Blank	Total/NA	Water	3510C	
LCS 240-615201/24-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 615464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205261-1	SW-052324-JL-22	Total/NA	Water	8082A	615201
240-205261-2	SW-052324-JL-22	Dissolved	Water	8082A	615201
240-205261-3	GW-052324-AC-23	Total/NA	Water	8082A	615201
240-205261-4	GW-052324-AC-23	Dissolved	Water	8082A	615201
240-205261-5	GW-052324-DS-24	Total/NA	Water	8082A	615201
240-205261-6	GW-052324-DS-24	Dissolved	Water	8082A	615201
240-205261-7	GW-052324-AC-25	Total/NA	Water	8082A	615201
240-205261-8	GW-052324-AC-25	Dissolved	Water	8082A	615201
240-205261-9	GW-052324-AC-26	Total/NA	Water	8082A	615201
240-205261-10	GW-052324-AC-26	Dissolved	Water	8082A	615201
MB 240-615201/23-A	Method Blank	Total/NA	Water	8082A	615201
LCS 240-615201/24-A	Lab Control Sample	Total/NA	Water	8082A	615201

General Chemistry

Analysis Batch: 615288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-205261-7	GW-052324-AC-25	Total/NA	Water	300.0-1993 R2.1	
240-205261-9	GW-052324-AC-26	Total/NA	Water	300.0-1993 R2.1	
MB 240-615288/3	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 240-615288/4	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-615382/9
Matrix: Water
Analysis Batch: 615382

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.48	ug/L			06/04/24 12:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.60	ug/L			06/04/24 12:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.48	ug/L			06/04/24 12:44	1
1,1-Dichloroethane	1.0	U	1.0	0.47	ug/L			06/04/24 12:44	1
1,1-Dichloroethene	1.0	U	1.0	0.49	ug/L			06/04/24 12:44	1
1,2-Dichlorobenzene	1.0	U	1.0	0.48	ug/L			06/04/24 12:44	1
1,2-Dichloroethane	1.0	U	1.0	0.46	ug/L			06/04/24 12:44	1
1,2-Dichloropropane	1.0	U	1.0	0.47	ug/L			06/04/24 12:44	1
1,3-Dichlorobenzene	1.0	U	1.0	0.45	ug/L			06/04/24 12:44	1
1,4-Dichlorobenzene	1.0	U	1.0	0.41	ug/L			06/04/24 12:44	1
2-Chloroethyl vinyl ether	10	U	10	1.5	ug/L			06/04/24 12:44	1
Benzene	1.0	U	1.0	0.42	ug/L			06/04/24 12:44	1
Bromoform	1.0	U	1.0	0.76	ug/L			06/04/24 12:44	1
Bromomethane	1.0	U	1.0	0.42	ug/L			06/04/24 12:44	1
Carbon tetrachloride	1.0	U	1.0	0.26	ug/L			06/04/24 12:44	1
Chlorobenzene	1.0	U	1.0	0.38	ug/L			06/04/24 12:44	1
Chloroethane	1.0	U	1.0	0.83	ug/L			06/04/24 12:44	1
Chloroform	1.0	U	1.0	0.47	ug/L			06/04/24 12:44	1
Chloromethane	1.0	U	1.0	0.63	ug/L			06/04/24 12:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.61	ug/L			06/04/24 12:44	1
Bromodichloromethane	1.0	U	1.0	0.38	ug/L			06/04/24 12:44	1
Dichlorodifluoromethane	1.0	U	1.0	0.35	ug/L			06/04/24 12:44	1
Ethylbenzene	1.0	U	1.0	0.42	ug/L			06/04/24 12:44	1
Methylene Chloride	5.0	U	5.0	2.6	ug/L			06/04/24 12:44	1
Tetrachloroethene	1.0	U	1.0	0.44	ug/L			06/04/24 12:44	1
Toluene	1.0	U	1.0	0.44	ug/L			06/04/24 12:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.51	ug/L			06/04/24 12:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.67	ug/L			06/04/24 12:44	1
Trichlorofluoromethane	1.0	U	1.0	0.45	ug/L			06/04/24 12:44	1
Vinyl chloride	1.0	U	1.0	0.45	ug/L			06/04/24 12:44	1
Dibromochloromethane	1.0	U	1.0	0.39	ug/L			06/04/24 12:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*78 - 122*		*06/04/24 12:44*	*1*
Dibromofluoromethane (Surr)	*108*		*73 - 120*		*06/04/24 12:44*	*1*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*06/04/24 12:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*62 - 137*		*06/04/24 12:44*	*1*

Lab Sample ID: LCS 240-615382/5
Matrix: Water
Analysis Batch: 615382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	29.0		ug/L		116	64 - 131
1,1,2,2-Tetrachloroethane	25.0	23.0		ug/L		92	58 - 157
1,1,2-Trichloroethane	25.0	24.7		ug/L		99	70 - 138
1,1-Dichloroethane	25.0	24.1		ug/L		97	72 - 127
1,1-Dichloroethene	25.0	25.0		ug/L		100	63 - 134

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 240-615382/5
Matrix: Water
Analysis Batch: 615382

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	25.0	24.9		ug/L		99	78 - 120
1,2-Dichloroethane	25.0	26.3		ug/L		105	66 - 128
1,2-Dichloropropane	25.0	23.4		ug/L		94	75 - 133
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	80 - 120
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	80 - 120
2-Chloroethyl vinyl ether	25.0	16.0		ug/L		64	40 - 157
Benzene	25.0	24.2		ug/L		97	77 - 123
Bromoform	25.0	27.2		ug/L		109	57 - 129
Bromomethane	25.0	26.3		ug/L		105	36 - 142
Carbon tetrachloride	25.0	29.3		ug/L		117	55 - 137
Chlorobenzene	25.0	24.8		ug/L		99	80 - 121
Chloroethane	25.0	26.8		ug/L		107	38 - 152
Chloroform	25.0	25.8		ug/L		103	74 - 122
Chloromethane	25.0	25.8		ug/L		103	47 - 143
cis-1,3-Dichloropropene	25.0	24.1		ug/L		96	64 - 130
Bromodichloromethane	25.0	26.2		ug/L		105	69 - 126
Dichlorodifluoromethane	25.0	32.1		ug/L		128	34 - 153
Ethylbenzene	25.0	26.0		ug/L		104	80 - 121
Methylene Chloride	25.0	26.2		ug/L		105	71 - 125
Tetrachloroethene	25.0	26.8		ug/L		107	76 - 123
Toluene	25.0	23.8		ug/L		95	80 - 123
trans-1,2-Dichloroethene	25.0	25.5		ug/L		102	75 - 124
trans-1,3-Dichloropropene	25.0	26.3		ug/L		105	57 - 129
Trichlorofluoromethane	25.0	21.4		ug/L		85	30 - 170
Vinyl chloride	25.0	26.0		ug/L		104	60 - 144
Dibromochloromethane	25.0	25.6		ug/L		102	70 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*78 - 122*
Dibromofluoromethane (Surr)	*108*		*73 - 120*
4-Bromofluorobenzene (Surr)	*104*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*109*		*62 - 137*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-615201/23-A
Matrix: Water
Analysis Batch: 615464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.056	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1221	0.10	U	0.10	0.057	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1242	0.10	U	0.10	0.076	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1248	0.10	U	0.10	0.050	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1254	0.10	U	0.10	0.040	ug/L		06/03/24 09:32	06/05/24 03:31	1
Aroclor-1260	0.10	U	0.10	0.046	ug/L		06/03/24 09:32	06/05/24 03:31	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-615201/23-A
Matrix: Water
Analysis Batch: 615464

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 615201

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*65*		*10 - 149*	*06/03/24 09:32*	*06/05/24 03:31*	*1*
DCB Decachlorobiphenyl	*81*		*10 - 174*	*06/03/24 09:32*	*06/05/24 03:31*	*1*

Lab Sample ID: LCS 240-615201/24-A
Matrix: Water
Analysis Batch: 615464

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 615201

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Aroclor-1016			2.50	1.68		ug/L		67	28 - 140		
Aroclor-1260			2.50	1.72		ug/L		69	39 - 153		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	*63*		*10 - 149*
DCB Decachlorobiphenyl	*67*		*10 - 174*

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 240-615288/3
Matrix: Water
Analysis Batch: 615288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.13	mg/L			06/04/24 14:16	1

Lab Sample ID: LCS 240-615288/4
Matrix: Water
Analysis Batch: 615288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	48.8		mg/L		98	90 - 110		

Surrogate Summary

Client: GHD Services Inc.
Project/Site: 12616852, GM Bedford, E117014

Job ID: 240-205261-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(62-137)	(56-136)	(78-122)	(73-120)
240-205261-3	GW-052324-AC-23	104	81	84	100
240-205261-5	GW-052324-DS-24	113	92	94	112
240-205261-11	TB-052324-AC-03	110	87	92	107
LCS 240-615382/5	Lab Control Sample	109	104	97	108
MB 240-615382/9	Method Blank	112	92	95	108

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-205261-1	SW-052324-JL-22	38	11
240-205261-3	GW-052324-AC-23	61	73
240-205261-5	GW-052324-DS-24	49	44
240-205261-7	GW-052324-AC-25	56	67
240-205261-9	GW-052324-AC-26	43	71
LCS 240-615201/24-A	Lab Control Sample	63	67
MB 240-615201/23-A	Method Blank	65	81

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(10-149)	(10-174)
240-205261-2	SW-052324-JL-22	34	10
240-205261-4	GW-052324-AC-23	63	77
240-205261-6	GW-052324-DS-24	33	45
240-205261-8	GW-052324-AC-25	45	69
240-205261-10	GW-052324-AC-26	60	69

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Client Sample ID: SW-052324-JL-22
Lab Sample ID: 240-205261-1
Date Collected: 05/23/24 10:17
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Total/NA	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 06:53

Client Sample ID: SW-052324-JL-22
Lab Sample ID: 240-205261-2
Date Collected: 05/23/24 10:17
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Dissolved	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 10:17

Client Sample ID: GW-052324-AC-23
Lab Sample ID: 240-205261-3
Date Collected: 05/23/24 10:20
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	615382	MDH	EET CLE	06/04/24 16:32
Total/NA	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Total/NA	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 07:27

Client Sample ID: GW-052324-AC-23
Lab Sample ID: 240-205261-4
Date Collected: 05/23/24 10:20
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Dissolved	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 07:44

Client Sample ID: GW-052324-DS-24
Lab Sample ID: 240-205261-5
Date Collected: 05/23/24 10:35
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	615382	MDH	EET CLE	06/04/24 16:51
Total/NA	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Total/NA	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 08:01

Client Sample ID: GW-052324-DS-24
Lab Sample ID: 240-205261-6
Date Collected: 05/23/24 10:35
Matrix: Water
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Dissolved	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 08:18

Lab Chronicle

Client: GHD Services Inc. Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Client Sample ID: GW-052324-AC-25 — Lab Sample ID: 240-205261-7

Date Collected: 05/23/24 13:45 — **Matrix: Water**
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Total/NA	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 08:35
Total/NA	Analysis	300.0-1993 R2.1		1	615288	JWW	EET CLE	06/04/24 20:31

Client Sample ID: GW-052324-AC-25 — Lab Sample ID: 240-205261-8

Date Collected: 05/23/24 13:45 — **Matrix: Water**
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Dissolved	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 08:52

Client Sample ID: GW-052324-AC-26 — Lab Sample ID: 240-205261-9

Date Collected: 05/23/24 13:50 — **Matrix: Water**
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Total/NA	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 09:09
Total/NA	Analysis	300.0-1993 R2.1		1	615288	JWW	EET CLE	06/04/24 20:50

Client Sample ID: GW-052324-AC-26 — Lab Sample ID: 240-205261-10

Date Collected: 05/23/24 13:50 — **Matrix: Water**
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Dissolved	Prep	3510C			615201	SDE	EET CLE	06/03/24 09:32
Dissolved	Analysis	8082A		1	615464	MBB	EET CLE	06/05/24 09:25

Client Sample ID: TB-052324-AC-03 — Lab Sample ID: 240-205261-11

Date Collected: 05/23/24 15:00 — **Matrix: Water**
Date Received: 05/24/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	615382	MDH	EET CLE	06/04/24 14:19

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: GHD Services Inc. Job ID: 240-205261-1
Project/Site: 12616852, GM Bedford, E117014

Laboratory: Eurofins Cleveland

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-28-25
Georgia	State	4062	02-27-25
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-27-25
Kentucky (WW)	State	KY98016	12-30-24
Minnesota	NELAP	039-999-348	12-31-24
New Jersey	NELAP	OH001	06-30-24
New York	NELAP	10975	04-02-25
Ohio VAP	State	ORELAP 4062	02-27-25
Oregon	NELAP	4062	02-27-25
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
USDA	US Federal Programs	P330-18-00281	01-05-27
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-24

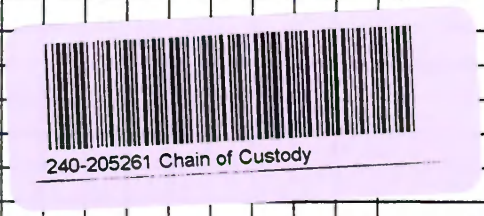
CHAIN OF CUSTODY RECORD

COC Number: GHD-20240523150016

ADDRESS: 6300 N River Road - Suite 302, Rosemont, IL 60018
PHONE: (773) 380-993 FAX:

Project No/Phase/Task Code: 11228036	Laboratory Name: Eurofins TestAmerica, Canton	Lab Location: 180 South Van Buren Avenue Barberton, OH 44203	SSOW ID: E117014
Project Name: GM Bedford	Lab Contact: 330-497-9396		Cooler No: 3 Coolers
Project Location: 105 GM Drive, Bedford, IN. 47421, Bedford, IN			Carrier: FedEx Priority Overnight
GHD Chemistry Contact:			Airbill No: 8181 5130 8691
Sampler(s): AC, DS, JL			Total # of Containers: 29

Item	Sample Identification (containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code	Grab (G)/Comp (C)	Filtered (Y/N)	Analysis Requested: PCB (dissolved)	PCB (total)	VOCs	SVOCs	Chloride	Vinyl Chloride	Chlorinated Organics	Total Containers/sample	MS/MSD Request	Comments/ Special Instructions:
1	SW-052324-JL-22	05/23/24	10:17	WS	G	Y	x	x						4		
2	GW-052324-AC-23	05/23/24	10:20	WG	G	Y	x	x					x	7		
3	GW-052324-DS-24	05/23/24	10:35	WG	G	Y	x	x					x	7		
4	GW-052324-AC-25	05/23/24	13:45	WG	G	Y	x	x			x			5		
5	GW-052324-AC-26	05/23/24	13:50	WG	G	Y	x	x			x			5		
6	TB-052324-AC-03	05/23/24	15:00	WG	G	N							x	1		
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																



TAT Required in business days (use separate COCs fro different TATs)
(Standards include 1 day, 2 days, 3 days, 1 week, 2 weeks)

Notes/Special Requirements:
Event Complete

	Relinquished By:	Company	Date	Time	Received By:	Company	Date	Time
1	[signature]	GHD	5/23/24	1530	1 MALISSA LOAR			
2					2			
3					3			

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client GHD Site Name 5-25-24
Cooler Received on 5-25-24 Opened on 5-25-24
Cooler unpacked by: MALISSA LOAR
FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____
Receipt After-hours Drop-off Date/Time _____ Storage Location _____
Eurofins Cooler # EC Foam Box Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form
IR GUN # 17 (CF +0.2 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC339814
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No
17 Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

_____
_____
_____
_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container
Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory
Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation - Date/Time VOAs Frozen _____

Login # : _____

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 17	4.0	4.2	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	4.2	4.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.0	3.2	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	

5/25/2024

Login Container Summary Report

240-205261

6/7/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
SW-052324-JL-22	240-205261-A-1	Amber Glass 1 liter - unpreserved				
SW-052324-JL-22	240-205261-B-1	Amber Glass 1 liter - unpreserved				
SW-052324-JL-22 DISS	240-205261-A-2	Amber Glass 1 liter - unpreserved - Dis.				
SW-052324-JL-22 DISS	240-205261-B-2	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-AC-23	240-205261-A-3	Voa Vial 40ml - unpreserved				
GW-052324-AC-23	240-205261-B-3	Voa Vial 40ml - unpreserved				
GW-052324-AC-23	240-205261-C-3	Voa Vial 40ml - unpreserved				
GW-052324-AC-23	240-205261-D-3	Amber Glass 1 liter - unpreserved				
GW-052324-AC-23	240-205261-E-3	Amber Glass 1 liter - unpreserved				
GW-052324-AC-23 DISS	240-205261-A-4	Amber Glass 1 liter - unpreserved - Dis				
GW-052324-AC-23 DISS	240-205261-B-4	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-DS-24	240-205261-A-5	Voa Vial 40ml - unpreserved				
GW-052324-DS-24	240-205261-B-5	Voa Vial 40ml - unpreserved				
GW-052324-DS-24	240-205261-C-5	Voa Vial 40ml - unpreserved				
GW-052324-DS-24	240-205261-D-5	Amber Glass 1 liter - unpreserved				
GW-052324-DS-24	240-205261-E-5	Amber Glass 1 liter - unpreserved				
GW-052324-DS-24 DISS	240-205261-A-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-DS-24 DISS	240-205261-B-6	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-AC-25	240-205261-A-7	Plastic 60 mL - unpreserved				
GW-052324-AC-25	240-205261-B-7	Amber Glass 1 liter - unpreserved				
GW-052324-AC-25	240-205261-C-7	Amber Glass 1 liter - unpreserved				
GW-052324-AC-25 DISS	240-205261-A-8	Amber Glass 1 liter - unpreserved - Dis				
GW-052324-AC-25 DISS	240-205261-B-8	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-AC-26	240-205261-A-9	Plastic 60 mL - unpreserved				
GW-052324-AC-26	240-205261-B-9	Amber Glass 1 liter - unpreserved				
GW-052324-AC-26	240-205261-C-9	Amber Glass 1 liter - unpreserved				
GW-052324-AC-26 DISS	240-205261-A-10	Amber Glass 1 liter - unpreserved - Dis.				
GW-052324-AC-26 DISS	240-205261-B-10	Amber Glass 1 liter - unpreserved - Dis				
TB-052324-AC-03	240-205261-A-11	Voa Vial 40ml - Hydrochloric Acid				

Technical Memorandum

September 02, 2022

To	Katie Kamm, GHD	**Contact No.**	612-524-6872
Copy to	Julie Luzwick, GHD	**Email**	Ruth.Mickle@ghd.com
From	Ruth Mickle/kg/173	**Project No.**	017307A-117014
Subject	Analytical Results and Reduced Validation Performance Monitoring Plan Sampling GM Bedford Casting Operations Facility Bedford, Indiana August 2022		

1. Introduction

This document details a validation of analytical results for water samples collected in support of the Performance Monitoring Plan (PMP) Sampling at the GM Bedford Casting Operations Facility during August 2022. Samples were submitted to Eurofins Environment Testing America (EETA), located in Barberton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i. “Quality Assurance Project Plan (QAPP) for the RCRA Facility Investigation Work Plan”, Report 408, Revision 1, July 2019.

ii. "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-2016-002, September 2016.

Item ii. will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. The samples were prepared and analyzed within the required holding times.

The samples were properly preserved and delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for organic analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis. Due to necessary sample dilutions of five times and greater, one or more surrogate recoveries could not be assessed.

Surrogate recoveries were assessed against laboratory control limits. The majority of surrogate recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy. One tetrachloro-m-xylene recovery was reported above the upper control limit for sample GW-080322-MC-09. Since the associated sample results were non-detect, no data qualification was required. Additionally, it was noted in the lab case narrative that surrogate spike solution was inadvertently omitted from one LCS sample. Since the target compound spike parameters were added to the respective LCS and recovered within acceptance range, no qualification of data was required based on the LCS surrogate results.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

LCS samples were spiked with the compounds specified in the method. The LCS data were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

PCB spike samples were spiked with the compounds specified in the method. The percent recoveries and RPD values were within the laboratory control limits criteria.

7. Field QA/QC Samples

The field QA/QC consisted of four field duplicate sets.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value for water samples.

Table 4 presents non-comparable PCB data from one field duplicate set. The associated arochlor-1242 detections were qualified estimated, as noted in Table 4. The remaining duplicate sample results were within acceptable agreement.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

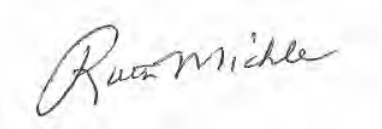
9. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and pattern recognition were evaluated according to identification criteria established by the method. The laboratory reported that several samples yielded aroclor detections that were a poor match with standard, resulting in quantitative and qualitative uncertainty. The laboratory attributed the poor match to excessive sample weathering. Based on this, the PCB results for the associated sample data were qualified estimated (J), as noted in Table 5.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Regards,



Ruth Mickle
Chemist

Table 1

Sample Collection and Analysis Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

					Analysis/Parameters		
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCB - Total & Dissolved**	**PCB - Total**	**Comments**
EETA SDG: 240-170840-1							
GW-080222-KH-01	CH-46	water	08/02/2022	11:05	X		
GW-080222-TP-02	CH-48	water	08/02/2022	11:20	X		
GW-080222-MC-03	CH-61	water	08/02/2022	11:10	X		
GW-080222-TP-04	CH-49	water	08/02/2022	14:08	X		
GW-080222-MC-05	CH-62	water	08/02/2022	14:05	X		
GW-080222-KH-06	MW-X297Y305D-1	water	08/02/2022	15:05	X		
GW-080222-MC-07	CH-63	water	08/02/2022	15:15	X		
GW-080222-KH-08	MW-X297Y305D-2	water	08/02/2022	16:15	X		
EETA SDG: 240-170954-1							
GW-080322-MC-09	CH-64	water	08/03/2022	10:10	X		MS/MSD
GW-080322-TP-11	CH-22	water	08/03/2022	09:54	X		
GW-080322-TP-12	CH-72	water	08/03/2022	10:49	X		
GW-080322-TP-13	CH-72	water	08/03/2022	11:07	X		Field duplicate of TP-12
GW-080322-KH-14	MW-X261Y356D-3	water	08/03/2022	10:15	X		
GW-080322-MC-15	CH-66	water	08/03/2022	14:55	X		
GW-080322-MC-16	CH-70	water	08/03/2022	16:10	X		
GW-080322-KH-17	MW-X178Y367D-2	water	08/03/2022	14:55	X		
EETA SDG: 240-171091-1							
GW-080422-KH-10	MW-X300Y199I-2	water	08/04/2022	11:20	X		
GW-080422-KH-18	Wet Well 4	water	08/04/2022	09:40	X		
GW-080422-KH-19	Wet Well 3	water	08/04/2022	11:00	X		
GW-080422-MC-20	CH-68	water	08/04/2022	10:00	X		
GW-080422-MC-21	CH-68	water	08/04/2022	10:30	X		Field duplicate of MC-20
GW-080422-KH-22	CH-52	water	08/04/2022	15:45	X		

Table 1

Sample Collection and Analysis Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

					Analysis/Parameters		
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCB - Total & Dissolved**	**PCB - Total**	**Comments**
EETA SDG: 240-171123-1							
GW-080522-MC-23	CH-54	water	08/05/2022	09:30	X		MS/MSD
GW-080522-MC-24	CH-53	water	08/05/2022	12:00	X		
GW-080522-DS-25	MW-X234Y157S	water	08/05/2022	10:25	X		
GW-080522-KH-26	MW-X234Y157D-1	water	08/05/2022	10:25		X	
GW-080522-DS-27	MW-X234Y157S	water	08/05/2022	10:30	X		Field duplicate of DS-25
GW-080522-KH-28	MW-X234Y157D-2	water	08/05/2022	11:05	X		
EETA SDG: 240-171203-1							
GW-080822-MC-29	CH-69	water	08/08/2022	09:45	X		
GW-080822-MC-30	CH-67	water	08/08/2022	11:20	X		
GW-080822-KH-31	MW-LOC-A	water	08/08/2022	11:35	X		
GW-080822-TP-32	CH-65	water	08/08/2022	13:31	X		
GW-080822-TP-33	CH-65	water	08/08/2022	13:44	X		Field duplicate of TP-32
GW-080822-MC-34	9-4	water	08/08/2022	14:15	X		
GW-080822-MC-35	MW-LOC-B	water	08/08/2022	15:40	X		
GW-080822-KH-36	CH-73	water	08/08/2022	14:35	X		
EETA SDG: 240-171269-1							
GW-080922-KH-37	CH-20	water	08/09/2022	10:10	X		

Notes:
EETA - Eurofins Environment Testing America
MS/MSD - Matrix Spike /Matrix Spike Duplicate
PCB - Polychlorinated biphenyls
SDG - Sample Delivery Group

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

	Location ID:	9-4	CH-20	CH-22	CH-46	CH-48	CH-49	CH-52
	Sample Name:	GW-080822-MC-34	GW-080922-KH-37	GW-080322-TP-11	GW-080222-KH-01	GW-080222-TP-02	GW-080222-TP-04	GW-080422-KH-22
	Sample Date:	08/08/2022	08/09/2022	08/03/2022	08/02/2022	08/02/2022	08/02/2022	08/04/2022
Parameters	**Unit**							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.0099 U	0.12 J	0.099 U	0.30	0.27	0.091 J	0.10 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.0099 U	0.10 U	0.099 U	0.095 U	0.096 U	0.10 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.0099 U	0.099 U	0.10 U	0.098 U	0.10 U	0.097 U	0.095 U
Total PCBs	µg/L	0	0.12 J	0	0.3	0.27	0.091 J	0
Total PCBs (dissolved)	µg/L	0	0	0	0	0	0	0

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Location ID:		CH-53	CH-54	CH-61	CH-62	CH-63	CH-64	CH-65
Sample Name:		GW-080522-MC-24	GW-080522-MC-23	GW-080222-MC-03	GW-080222-MC-05	GW-080222-MC-07	GW-080322-MC-09	GW-080822-TP-32
Sample Date:		08/05/2022	08/05/2022	08/02/2022	08/02/2022	08/02/2022	08/03/2022	08/08/2022
Parameters	**Unit**							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1242 (PCB-1242)	µg/L	0.41	0.27	0.098 U	0.095 U	0.075 J	0.10 U	0.22 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.099 U	0.10 U	0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.10 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.096 U
Total PCBs	µg/L	0.41	0.27	0	0	0.075 J	0	0.22 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0	0	0

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Location ID:		CH-65	CH-66	CH-67	CH-68	CH-68	CH-69	CH-70
Sample Name:		GW-080822-TP-33	GW-080322-MC-15	GW-080822-MC-30	GW-080422-MC-20	GW-080422-MC-21	GW-080822-MC-29	GW-080322-MC-16
Sample Date:		08/08/2022	08/03/2022	08/08/2022	08/04/2022	08/04/2022	08/08/2022	08/03/2022
		Duplicate				Duplicate		
Parameters	**Unit**							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 J	0.13 J	1.2 J	0.59 J	1.1 J	0.77 J	0.43 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.093 J	0.096 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.096 U	0.096 U	0.095 U	0.099 U	0.099 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.10 U	0.095 U	0.098 U	0.095 U	0.098 U	0.096 U	0.095 U
Total PCBs	µg/L	0.19 J	0.13 J	1.2 J	0.59 J	1.1 J	0.77 J	0.43 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0.093 J	0	0

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Location ID:		CH-72	CH-72	CH-73	MW-LOC-A	MW-LOC-B	MW-X178Y367D-2	MW-X234Y157D-1
Sample Name:		GW-080322-TP-12	GW-080322-TP-13	GW-080822-KH-36	GW-080822-KH-31	GW-080822-MC-35	GW-080322-KH-17	GW-080522-KH-26
Sample Date:		08/03/2022	08/03/2022 Duplicate	08/08/2022	08/08/2022	08/08/2022	08/03/2022	08/05/2022
Parameters	**Unit**							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1242 (PCB-1242)	µg/L	0.32	0.35 J	0.095 U	0.095 U	0.49	0.10 U	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.10 U	0.057 J	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.10 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.10 U	0.096 U	0.098 U	0.10 U	0.10 U	0.097 U	--
Total PCBs	µg/L	0.32	0.35 J	0	0	0.49	0	0
Total PCBs (dissolved)	µg/L	0	0.057 J	0	0	0	0	--

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Location ID:		MW-X234Y157D-2	MW-X234Y157S	MW-X234Y157S	MW-X261Y356D-3	MW-X297Y305D-1	MW-X297Y305D-2	MW-X300Y199I-2
Sample Name:		GW-080522-KH-28	GW-080522-DS-25	GW-080522-DS-27	GW-080322-KH-14	GW-080222-KH-06	GW-080222-KH-08	GW-080422-KH-10
Sample Date:		08/05/2022	08/05/2022	08/05/2022 Duplicate	08/03/2022	08/02/2022	08/02/2022	08/04/2022
Parameters	**Unit**							
PCBs								
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.18 J	0.19 J	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.095 U	0.095 U	0.10 U	0.10 U	0.099 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.10 U
Total PCBs	µg/L	0	0.18 J	0.19 J	0	0	0	0
Total PCBs (dissolved)	µg/L	0	0	0	0	0	0	0

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Location ID:		**Wet Well 3**	**Wet Well 4**
Sample Name:		**GW-080422-KH-19**	**GW-080422-KH-18**
Sample Date:		**08/04/2022**	**08/04/2022**
Parameters	**Unit**		
PCBs			
Aroclor-1016 (PCB-1016)	µg/L	0.99 U	0.10 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1221 (PCB-1221)	µg/L	0.99 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1232 (PCB-1232)	µg/L	0.99 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1242 (PCB-1242)	µg/L	14	0.26
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1248 (PCB-1248)	µg/L	0.99 U	0.10 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1254 (PCB-1254)	µg/L	0.99 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.11 U	0.10 U
Aroclor-1260 (PCB-1260)	µg/L	0.99 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.11 U	0.10 U
Total PCBs	µg/L	14	0.26
Total PCBs (dissolved)	µg/L	0	0

Notes:

PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.

Table 3

Analytical Method
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Parameter	Method [1]	Matrix	Holding Time	
			Collection to Extraction (Days)	Extraction to Analysis (Days)
PCB - Total & Dissolved	SW-846 8082A	Water	One year	40

Notes:

[1] Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

PCB - Polychlorinated biphenyls

Table 4

Qualified Sample Data Due to Variability in Field Duplicate Results
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Parameter	Analyte	RPD/Diff	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
PCB	Aroclor-1242	RPD=60	GW-080422-MC-20	0.59 J	GW-080422-MC-21	1.1 J	ug/L

Notes:

Diff - Difference (i.e., >1X RL for waters)
PCB - Polychlorinated Biphenyls
RPD - Relative Percent Difference
J - Estimated concentration

Table 5

Qualified Sample Data Due To Poor Chromatographic Match To Analytical Standard
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
August 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
PCB	GW-080222-MC-07	Aroclor-1242 (PCB-1242)	0.075 J	µg/L
	GW-080322-TP-13	Aroclor-1242 (PCB-1242)	0.35 J	µg/L
	GW-080322-MC-15	Aroclor-1242 (PCB-1242)	0.13 J	µg/L
	GW-080322-MC-16	Aroclor-1242 (PCB-1242)	0.43 J	µg/L
	GW-080522-DS-25	Aroclor-1248 (PCB-1248)	0.18 J	µg/L
	GW-080522-DS-27	Aroclor-1248 (PCB-1248)	0.19 J	µg/L
	GW-080822-MC-29	Aroclor-1242 (PCB-1242)	0.77 J	µg/L
	GW-080822-MC-30	Aroclor-1242 (PCB-1242)	1.2 J	µg/L
	GW-080822-TP-32	Aroclor-1242 (PCB-1242)	0.22 J	µg/L
	GW-080822-TP-33	Aroclor-1242 (PCB-1242)	0.19 J	µg/L
	GW-080922-KH-37	Aroclor-1242 (PCB-1242)	0.12 J	µg/L

Notes:
PCB - Polychlorinated Biphenyls
J - Estimated concentration

Technical Memorandum

February 22, 2023

To	Katie Kamm, GHD	**Contact No.**	612-524-6872
Copy to	Julie Luzwick, GHD	**Email**	Ruth.Mickle@ghd.com
From	Ruth Mickle/kg/177	**Project No.**	017307A-117014
Subject	Analytical Results and Reduced Validation Performance Monitoring Plan Sampling GM Bedford Casting Operations Facility Bedford, Indiana January 2023		

1. Introduction

This document details a validation of analytical results for water samples collected in support of the Performance Monitoring Plan (PMP) Sampling at the GM Bedford Casting Operations Facility during January 2023. Samples were submitted to Eurofins Environment Testing America (EETA), located in Barberton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i. “Quality Assurance Project Plan (QAPP) for the RCRA Facility Investigation Work Plan”, Report 408, Revision 1, July 2019.

ii. "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-2016-002, September 2016.

Item ii. will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. The samples were prepared and analyzed within the required holding times.

The samples were properly preserved and delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for organic analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis. Due to necessary sample dilutions of five times and greater, one or more surrogate recoveries could not be assessed.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries were within the laboratory control limits criteria, demonstrating acceptable analytical accuracy.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

LCS samples were spiked with the compounds specified in the method. The LCS data were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

PCB spike samples were spiked with the compounds specified in the method. With the exception of one spike compound, the percent recoveries and RPD values were within the laboratory control limits. Aroclor-1016 spike recoveries for sample GW-011723-SS-13 were below the lower control limit. The associated non-detect result for sample GW-011723-SS-13 was qualified estimated, as noted in Table 4.

7. Field QA/QC Samples

The field QA/QC consisted of three field duplicate sets.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value for water samples.

Table 5 presents non-comparable PCB data from one field duplicate set. The associated arochlor-1242 detections were qualified estimated, as noted in the table. The remaining duplicate sample results were within acceptable agreement.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

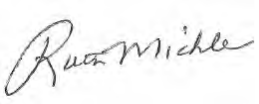
9. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and pattern recognition were evaluated according to identification criteria established by the method. The laboratory reported that several samples yielded aroclor detections that were a poor match with standard, resulting in quantitative and qualitative uncertainty. The laboratory attributed the poor match to excessive sample weathering. Based on this, the PCB results for the associated sample data were qualified estimated (J), as noted in Table 6. Additionally, Table 7 presents aroclor detections that yielded noncomparable results from second column confirmation. The associated sample data were qualified estimated, as noted in the table.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

Regards,



Ruth Mickle
Chemist

Table 1

Sample Collection and Analysis Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCBs - Total & Dissolved**	**Comments**
Eurfofins SDG: 240-179263-1						
GW-011623-AC-01	CH-46	water	01/16/2023	11:45	X	
GW-011623-JK-02	MW-LOC-A	water	01/16/2023	14:15	X	
GW-011623-JL-03	CH-65	water	01/16/2023	14:30	X	
GW-011623-AC-04	CH-49	water	01/16/2023	14:15	X	
GW-011623-SS-05	CH-54	water	01/16/2023	14:40	X	
GW-011623-JK-06	CH-62	water	01/16/2023	15:40	X	
GW-011623-JL-07	CH-52	water	01/16/2023	15:53	X	
GW-011623-AC-08	CH-61	water	01/16/2023	15:55	X	
GW-011623-SS-09	CH-53	water	01/16/2023	16:10:	X	
GW-011623-JK-10	CH-63	water	01/16/2023	16:30	X	
Eurfofins SDG: 240-179305-1						
GW-011723-AC-11	CH-22	water	01/17/2023	10:00	X	
GW-011723-AC-12	CH-22	water	01/17/2023	10:05	X	Field duplicate of AC-11
GW-011723-SS-13	CH-20	water	01/17/2023	09:55	X	MS/MSD
GW-011723-JL-14	MW-X178Y367D-2	water	01/17/2023	11:11	X	
GW-011723-SS-15	CH-64	water	01/17/2023	11:50	X	
GW-011723-AC-16	CH-66	water	01/17/2023	11:50	X	
GW-011723-JK-17	CH-69	water	01/17/2023	14:35	X	
GW-011723-SS-18	CH-68	water	01/17/2023	14:40	X	
GW-011723-AC-19	CH-72	water	01/17/2023	14:40	X	
GW-011723-JL-20	MW-X297Y305D-1	water	01/17/2023	14:48	X	
GW-011723-JK-21	CH-67	water	01/17/2023	15:25	X	
GW-011723-AC-22	CH-70	water	01/17/2023	16:00	X	
GW-011723-JL-23	MW-X261Y356D-3	water	01/17/2023	16:11	X	

Table 1

Sample Collection and Analysis Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCBs - Total & Dissolved**	**Comments**
Eurfofins SDG: 240-179375-1						
GW-011823-JK-24	Wet Well 4	water	01/18/2023	10:15	X	
GW-011823-JK-25	Wet Well 4	water	01/18/2023	10:25	X	Field duplicate of JK-24
GW-011823-AC-26	MW-LOC-B	water	01/18/2023	10:00	X	
GW-011823-JL-27	MW-X234Y157D-1	water	01/18/2023	10:45	X	
GW-011823-JK-28	Wet Well 3	water	01/18/2023	11:15	X	
GW-011823-JL-29	MW-X234Y157S	water	01/18/2023	11:25	X	MS/MSD
GW-011823-AC-30	MW-LOC-B	water	01/18/2023	10:05	X	Field duplicate of AC-26
GW-011823-JL-31	MW-X234Y157D-2	water	01/18/2023	14:25	X	
GW-011823-AC-32	9-4	water	01/18/2023	14:35	X	
GW-011823-JK-33	MW-X143Y193	water	01/18/2023	14:45	X	
GW-011823-JL-34	MW-X300Y199I-2	water	01/18/2023	15:35	X	
Eurfofins SDG: 240-179433-1						
GW-011923-JK-35	CH-73	water	01/19/2023	09:30	X	
GW-011923-JL-36	MW-X297Y305D-2	water	01/19/2023	09:55	X	
GW-011923-JK-37	CH-48	water	01/19/2023	10:15	X	

Notes:
MS/MSD - Matrix Spike /Matrix Spike Duplicate
PCBs - Polychlorinated biphenyls
SDG - Sample Delivery Group

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		9-4	CH-20	CH-22	CH-22	CH-46
Sample Name:		GW-011823-AC-32	GW-011723-SS-13	GW-011723-AC-11	GW-011723-AC-12	GW-011623-AC-01
Sample Date:		01/18/2023	01/17/2023	01/17/2023	01/17/2023 Duplicate	01/16/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.095 UJ	0.095 U	0.095 U	0.098 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.098 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.098 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.33	0.17	0.087 J	0.088 J	0.11
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.098 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.098 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.098 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.095 U	0.097 U	0.095 U	0.095 U	0.095 U
Total PCBs	µg/L	0.33	0.17	0.087 J	0.088 J	0.11
Total PCBs (dissolved)	µg/L	0	0	0	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		CH-48	CH-49	CH-52	CH-53	CH-54
Sample Name:		GW-011923-JK-37	GW-011623-AC-04	GW-011623-JL-07	GW-011623-SS-09	GW-011623-SS-05
Sample Date:		01/19/2023	01/16/2023	01/16/2023	01/16/2023	01/16/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1242 (PCB-1242)	µg/L	0.22 J	0.11	0.095 U	0.46	0.074 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U
Total PCBs	µg/L	0.22 J	0.11	0	0.46	0.074 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		CH-61	CH-62	CH-63	CH-64	CH-65
Sample Name:		GW-011623-AC-08	GW-011623-JK-06	GW-011623-JK-10	GW-011723-SS-15	GW-011623-JL-03
Sample Date:		01/16/2023	01/16/2023	01/16/2023	01/17/2023	01/16/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.10	0.086 J	0.088 J	0.10 U	0.076 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.095 U	0.095 U	0.10 U	0.096 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.11 U	0.095 U
Total PCBs	µg/L	0.1	0.086 J	0.088 J	0	0.076 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		CH-66	CH-67	CH-68	CH-69	CH-70
Sample Name:		GW-011723-AC-16	GW-011723-JK-21	GW-011723-SS-18	GW-011723-JK-17	GW-011723-AC-22
Sample Date:		01/17/2023	01/17/2023	01/17/2023	01/17/2023	01/17/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.095 U	0.15	0.12 U	0.20	0.095 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.096 U	0.12 U	0.098 U	0.095 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.10 U	0.10 U	0.12 U	0.10 U	0.095 U
Total PCBs	µg/L	0	0.15	0	0.2	0
Total PCBs (dissolved)	µg/L	0	0	0	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		CH-72	CH-73	MW-LOC-A	MW-LOC-B	MW-LOC-B
Sample Name:		GW-011723-AC-19	GW-011923-JK-35	GW-011623-JK-02	GW-011823-AC-26	GW-011823-AC-30
Sample Date:		01/17/2023	01/19/2023	01/16/2023	01/18/2023	01/18/2023 Duplicate
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.095 U	0.095 U	0.10 U	0.34 J	0.74 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.095 U	0.10 U	0.095 U	0.099 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U
Total PCBs	µg/L	0	0	0	0.34 J	0.74 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		MW-X143Y193	MW-X178Y367D-2	MW-X234Y157D-1	MW-X234Y157D-2	MW-X234Y157S
Sample Name:		GW-011823-JK-33	GW-011723-JL-14	GW-011823-JL-27	GW-011823-JL-31	GW-011823-JL-29
Sample Date:		01/18/2023	01/17/2023	01/18/2023	01/18/2023	01/18/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Aroclor-1221 (PCB-1221)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Aroclor-1232 (PCB-1232)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Aroclor-1242 (PCB-1242)	µg/L	3.8	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.096 U	0.10 U	0.20	0.095 U	0.096 U
Aroclor-1248 (PCB-1248)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.16 J
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Aroclor-1254 (PCB-1254)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Aroclor-1260 (PCB-1260)	µg/L	0.48 U	0.096 U	0.11 U	0.095 U	0.10 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.096 U	0.10 U	0.11 U	0.095 U	0.096 U
Total PCBs	µg/L	3.8	0	0	0	0.16 J
Total PCBs (dissolved)	µg/L	0	0	0.2	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Location ID:		MW-X261Y356D-3	MW-X297Y305D-1	MW-X297Y305D-2	MW-X300Y199I-2	Wet Well 3
Sample Name:		GW-011723-JL-23	GW-011723-JL-20	GW-011923-JL-36	GW-011823-JL-34	GW-011823-JK-28
Sample Date:		01/17/2023	01/17/2023	01/19/2023	01/18/2023	01/18/2023
Parameters	**Unit**					
PCBs						
Aroclor-1016 (PCB-1016)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Aroclor-1221 (PCB-1221)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.68
Aroclor-1232 (PCB-1232)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Aroclor-1242 (PCB-1242)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	13 J
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Aroclor-1248 (PCB-1248)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Aroclor-1254 (PCB-1254)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Aroclor-1260 (PCB-1260)	µg/L	0.095 U	0.098 U	0.098 U	0.11 U	1.0 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.11 U	0.11 U	0.095 U	0.11 U	0.099 U
Total PCBs	µg/L	0	0	0	0	13 J
Total PCBs (dissolved)	µg/L	0	0	0	0	0.68

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

	Location ID:	Wet Well 4	Wet Well 4
	Sample Name:	GW-011823-JK-24	GW-011823-JK-25
	Sample Date:	01/18/2023	01/18/2023 Duplicate
Parameters	**Unit**		
PCBs			
Aroclor-1016 (PCB-1016)	µg/L	0.11 U	0.097 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.11 U	0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.11 U	0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.11 U	0.097 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.11 U	0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.11 U	0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.097 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.11 U	0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.097 U	0.095 U
Total PCBs	µg/L	0	0
Total PCBs (dissolved)	µg/L	0	0

Notes:
PCB - Polychlorinated Biphenyls
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated

Table 3

Analytical Method
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

			Holding Time	
Parameter	**Method [1]**	**Matrix**	**Collection to Extraction (Days)**	**Extraction to Analysis (Days)**
PCBs - Total & Dissolved	SW-846 8082A	Water	One year	40

Notes:

[1] Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

PCBs - Polychlorinated biphenyls

Table 4

Qualified Sample Results Due to Outlying Matrix Spike/Matrix Spike Duplicate Results
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD	Control Limits % Recovery	Control Limits RPD	Assoc Sample	Qualified Result		Units
PCBs	GW-011723-SS-13	Aroclor-1016 (PCB-1016)	49	35	27	50-120	25	GW-011723-SS-13	0.095	UJ	µg/L

Notes:
MS/MSD - Matrix Spike/Matrix Spike Duplicate
PCBs - Polychlorinated biphenyls
RPD - Relative Percent Difference
UJ - Not detected; associated reporting limit is estimated

Table 5

Qualified Sample Data Due to Variability in Field Duplicate Results
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Parameter	Analyte	RPD/Diff	Sample ID	Qualified Result	Field Duplicate Sample ID	Qualified Result	Units
PCBs	Aroclor-1242 (PCB-1242)	RPD=74	**GW-011823-AC-26**	0.34 J	**GW-011823-AC-30**	0.74 J	ug/L

Notes:

Diff - Difference (i.e., >1X RL for waters)
PCBs - Polychlorinated Biphenyls
RPD - Relative Percent Difference
J - Estimated concentration

Table 6

Qualified Sample Data Due To Poor Chromatographic Match To Analytical Standard
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Parameter	Sample ID	Analyte	Qualified Result	Units
PCBs	GW-011823-JK-28	Aroclor-1242 (PCB-1242)	13 J	µg/L
	GW-011823-JL-29	Aroclor-1248 (PCB-1248)	0.16 J	µg/L
	GW-011823-AC-30	Aroclor-1242 (PCB-1242)	0.74 J	µg/L

Notes:
PCBs - Polychlorinated Biphenyls
J - Estimated concentration

Table 7

Qualified Sample Data Due to Differences in Dual Column Results
Performance Monitoring Plan Sampling
GM Bedford Casting Operations Facility
Bedford, Indiana
January 2023

Parameter	Analyte	% D (percent)	Criteria (percent)	Associated Sample ID	Qualified Result	Units
PCBs	Aroclor-1242 (PCB-1242)	>40	<40	GW-011623-JL-03	0.076 J	ug/L
	Aroclor-1242 (PCB-1242)	>40	<40	GW-011623-JK-06	0.086 J	ug/L
	Aroclor-1242 (PCB-1242)	>40	<40	GW-011923-JK-37	0.22 J	ug/L

Notes:

PCBs - Polychlorinated biphenyls
%D - Percent Difference
J - Estimated concentration

Data Verification Report

April 15, 2024

To	Katie Kamm, GHD	**Contact No.**	612-524-6872
Copy to	Julie Luzwick, GHD	**Email**	ruth.mickle@ghd.com
From	Ruth Mickle/mg/20	**Project No.**	12616852-117014
Project Name	GM Lab and Data Management Program (LDMP)		
Subject	Analytical Results and Data Verification Performance Monitoring Plan Sampling GM Powertrain Bedford, Indiana March 2024		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for water samples collected in support of the Performance Monitoring Plan (PMP) sampling at the GM Powertrain Site during March 2024. Samples were submitted to Eurofins Environment Testing, located in Barberton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. “Quality Assurance Project Plan (QAPP) for the RCRA Facility Investigation Work Plan”, Report 408, Revision 1, July 2019
2. "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-2016-002, September 2016

Item 2 will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody document and analytical report were used to determine sample holding times.

The samples were properly preserved and delivered on ice and stored by the laboratory at the required temperature (0 - 6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

The samples submitted for polychlorinated biphenyl compound (PCB) analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries were within the laboratory control limits.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

High LCS recoveries do not impact any associated non-detect sample results.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

LCS samples were spiked with the compounds specified in the method. The LCS data were within the control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as

MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed internally by the laboratory. MS/MSD samples were spiked with the compounds specified in the method. Since non-project samples were used for MS/MSD analyses, no evaluation of MS/MSD data was performed.

7. Field QA/QC Samples

There were no field QA/QC samples associated with the sampling event.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's sample-specific method detection limit (MDL) for each analyte. There were no analyte detections reported less than the reporting limit (RL). Non-detect results were presented as non-detect at the RL in Table 2.

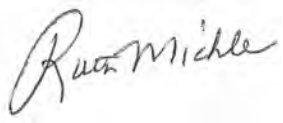
9. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and pattern recognition were evaluated according to identification criteria established by the method. The data reported adhered to the specified identification criteria.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,



Ruth Mickle
Digital Intelligence - Data Management Team Lead - Data Validator

Encl.

Table 1

Sample Collection and Analysis Summary
Performance Monitoring Plan Sampling
GM Powertrain - Bedford Plant
Bedford, Indiana
March 2024

					Analysis/Parameters	
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**Total PCBs**	**Dissolved PCBs**
Eurofins SDG: 240-201791-1						
GW-032524-AC-01	CH-65	water	03/25/2024	14:40	X	X
GW-032524-AC-02	CH-69	water	03/25/2024	15:50	X	X
GW-032524-AC-03	CH-67	water	03/25/2024	16:35	X	X
GW-032624-AC-04	CH-72	water	03/26/2024	11:05	X	X
GW-032624-AC-05	CH-63	water	03/26/2024	09:25	X	X
GW-032624-AC-06	CH-66	water	03/26/2024	10:10	X	X
GW-032624-AC-07	CH-68	water	03/26/2024	11:55	X	X
GW-032624-AC-08	CH-70	water	03/26/2024	12:45	X	X
GW-032624-SS-09	CH-61	water	03/26/2024	12:45	X	X
GW-032624-SS-10	CH-62	water	03/26/2024	13:35	X	X
GW-032624-AC-11	MW-X261Y356D-5	water	03/26/2024	14:25	X	X

Notes:
PCBs - Polychlorinated biphenyls
SDG - Sample Delivery Group

Table 2

Validated Analytical Results Summary
Performance Monitoring Plan Sampling
GM Powertrain - Bedford Plant
Bedford, Indiana
March 2024

Location ID:		CH-61	CH-62	CH-63	CH-65	CH-66	CH-67	CH-68	CH-69	CH-70	CH-72	MW-X261Y356D-5
Sample Name:		GW-032624-SS-09	GW-032624-SS-10	GW-032624-AC-05	GW-032524-AC-01	GW-032624-AC-06	GW-032524-AC-03	GW-032624-AC-07	GW-032524-AC-02	GW-032624-AC-08	GW-032624-AC-04	GW-032624-AC-11
Sample Date:		03/26/2024	03/26/2024	03/26/2024	03/25/2024	03/26/2024	03/25/2024	03/26/2024	03/25/2024	03/26/2024	03/26/2024	03/26/2024
Parameters	**Unit**											
PCBs												
Aroclor-1016 (PCB-1016)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1221 (PCB-1221)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1232 (PCB-1232)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1242 (PCB-1242)	µg/L	0.097 U	0.095 U	0.15	0.11 U	0.095 U	0.23	0.15	0.16	0.095 U	0.096 U	0.11 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1248 (PCB-1248)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1254 (PCB-1254)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Aroclor-1260 (PCB-1260)	µg/L	0.097 U	0.095 U	0.098 U	0.11 U	0.095 U	0.095 U	0.095 U	0.10 U	0.095 U	0.096 U	0.11 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.099 U	0.095 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.10 U	0.10 U	0.095 U	0.11 U
Total PCBs	µg/L	0	0	0.15	0	0	0.23	0.15	0.16	0	0	0
Total PCBs (dissolved)	µg/L	0	0	0	0	0	0	0	0	0	0	0

Notes:
PCBs - Polychlorinated biphenyls
U - Not detected at the associated reporting limit.

Table 3

Analytical Method
Performance Monitoring Plan Sampling
GM Powertrain - Bedford Plant
Bedford, Indiana
March 2024

Parameter	Method [1]	Matrix	Holding Time	
			Collection to Extraction (Days)	Extraction to Analysis (Days)
PCBs - Total & Dissolved	SW-846 8082A	Water	One year	40

Note:
PCBs - Polychlorinated biphenyls

[1] Method Reference:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

Data Verification Report

June 17, 2024

To	Katie Kamm, GHD	**Contact No.**	612-524-6872
Copy to	Julie Luzwick, GHD	**Email**	Ruth.Mickle@ghd.com
From	Ruth Mickle/ls/MEM	**Project No.**	12616852-117014
Project Name	GM Powertrain Site		
Subject	Analytical Results and Data Verification CA 750 Groundwater Monitoring GM Powertrain Bedford, Indiana May 2024		

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for water samples collected in support of the CA 750 Groundwater Monitoring at the GM Powertrain Site during May 2024. Samples were submitted to Eurofins Environment Testing (EET), located in Barberton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes/laboratory control samples (LCS)/matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. “Quality Assurance Project Plan (QAPP) for the RCRA Facility Investigation Work Plan”, Report 408, Revision 1, July 2019
2. "National Functional Guidelines for Superfund Organic Methods Data Review", EPA-540-R-2016-002, September 2016
3. "National Functional Guidelines for Inorganic Superfund Methods Data Review", EPA 540-R-2016-001, September 2016

Items 2. and 3. will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times.

Samples were properly preserved and delivered on ice and stored by the laboratory at the required temperature (0-6°C). Samples GW-052324-AC-23 and GW-052324-DS-24 were submitted with pH>2 (unpreserved) for chlorinated volatile organic compound (VOC) analyses, due to the instability of one target analyte at low pH (2-chloroethyl vinyl ether). Both samples were analyzed past the seven-day holding time for unpreserved VOC samples due to a lab issues. The associated VOC sample data (all non-detect) were qualified rejected, as noted in Table 4. The remaining samples were prepared/analyzed within the required holding times.

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for organic analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of semi-volatile organic compound (SVOC) analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. The surrogate recoveries were within the laboratory control limits.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

High LCS recoveries do not impact any associated non-detect sample results.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS contained the compounds of interest for the VOC or SVOC methods. Polychlorinated biphenyl compound (PCB) LCS samples were spiked with the compounds specified in the method. The LCS data were within the control limits criteria.

Inorganic Analyses

The LCS contained the analyte of interest. LCS recoveries were assessed per the "Guidelines". All LCS were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The VOC and SVOC MS/MSD samples were spiked with compounds of interest. PCB spike samples were spiked with the compounds specified in the method. All percent recoveries and RPD values were within the laboratory control limits criteria.

Inorganic Analyses

The MS/MSD samples were spiked with chloride, and the results were evaluated using the "Guidelines". Table 5 presents outlying matrix spike results from chloride analysis. The associated chloride result for sample GW-052224-AC-17 was qualified estimated with a potential high bias. The remaining percent recoveries and RPD values were within the control limits.

7. Field QA/QC Samples

The field QA/QC consisted of three trip blank samples and two field duplicate sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, three trip blanks were submitted to the laboratory for VOC analysis. The trip blank data were non-detect for VOC parameters.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, two field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one times the RL value for water samples.

All duplicate sample results were within acceptable agreement.

8. Analyte Reporting

The laboratory reported detected results down to the laboratory's sample-specific method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

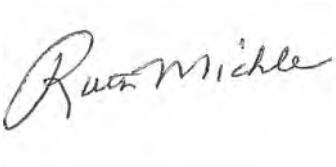
9. Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and pattern recognition were evaluated according to identification criteria established by the method. The majority of data reported adhered to the specified identification criteria. The laboratory reported that two samples yielded PCB detections that were a poor match with standard, resulting in quantitative and qualitative uncertainty. The laboratory attributed the poor match to excessive sample weathering. Based on this, the PCB results were qualified estimated (J), as noted in Table 6.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications and exceptions noted herein.

Regards,



Ruth Mickle
Digital Intelligence - Data Management Team Lead - Data Validator

Encl.

Table 1

Sample Collection and Analysis Summary
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

					Analysis/Parameters							
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCB - Total & Dissolved**	**PCB - Total**	**TCL VOC**	**Chlorinated Organics**	**Vinyl Chloride**	**TCL SVOC**	**Chloride**	**Comments**
SDG: 240-204855-1												
GW-052024-AC-01	CH-44	water	05/20/2024	14:20	X							
GW-052024-DS-02	CH-43	water	05/20/2024	14:55	X							
GW-052024-AC-03	CH-42A	water	05/20/2024	15:20	X							
GW-052024-DS-04	CH-42	water	05/20/2024	16:15	X							
SDG: 240-204972-1												
GW-052124-AC-05	MW-X315Y150	water	05/21/2024	09:45	X							
GW-052124-AC-07	MW-X315Y150	water	05/21/2024	09:50	X							FD (GW-052124-AC-05)
GW-052124-DS-06	MW-X277Y100	water	05/21/2024	10:05	X		X			X		MS/MSD
GW-052124-AC-09	MW-X315Y115	water	05/21/2024	11:00	X							
GW-052124-AC-11	MW-X227Y054	water	05/21/2024	14:30	X							
GW-052124-DS-08	MW-X261Y356D-3	water	05/21/2024	15:05	X							
GW-052124-AC-13	MW-X242Y060S	water	05/21/2024	15:55	X							
GW-052124-DS-10	MW-X261Y356D-1	water	05/21/2024	16:50		X						
TB-052124-DS-01	Trip Blank	water	05/21/2024	-			X					Trip Blank
SDG: 240-205106-1												
GW-052224-DS-12	MW-X169Y058S-1	water	05/22/2024	09:55	X				X			
GW-052224-AC-15	MW-X033Y147S	water	05/22/2024	10:10	X							
GW-052224-AC-17	MW-X146Y084	water	05/22/2024	11:10	X				X		X	MS/MSD
GW-052224-DS-14	MW-X085Y070S-1	water	05/22/2024	11:30	X							
GW-052224-DS-16	MW-X085Y070S-2	water	05/22/2024	12:15	X							
GW-052224-AC-19	MW-X043Y176	water	05/22/2024	14:40	X							

Table 1

Sample Collection and Analysis Summary
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

					Analysis/Parameters							
Sample Identification	**Location**	**Matrix**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hr:min)**	**PCB - Total & Dissolved**	**PCB - Total**	**TCL VOC**	**Chlorinated Organics**	**Vinyl Chloride**	**TCL SVOC**	**Chloride**	**Comments**
GW-052224-DS-18	MW-X300Y199I-2	water	05/22/2024	15:05	X							
GW-052224-AC-21	MW-X047Y236	water	05/22/2024	16:00	X							
GW-052224-DS-20	MW-X300Y199I-1	water	05/22/2024	16:10	X							
TB-052224-AC-02	Trip Blank	water	05/22/2024	-					X			Trip Blank
SDG: 240-205261-1												
SW-052324-JL-22	Tributary 3-3	water	05/23/2024	10:17	X							
GW-052324-AC-23	9-4	water	05/23/2024	10:20	X			X				
GW-052324-DS-24	CH-20	water	05/23/2024	10:35	X			X				
GW-052324-AC-25	ST-59	water	05/23/2024	13:45	X						X	
GW-052324-AC-26	ST-59	water	05/23/2024	13:50	X						X	FD (GW-052324-AC-25)
TB-052324-AC-03	Trip Blank	water	05/23/2024	-				X				Trip Blank

Notes:
- - Not applicable
FD - Field Duplicate of Sample in parentheses
MS/MSD - Matrix Spike /Matrix Spike Duplicate
PCB - Polychlorinated biphenyls
SDG - Sample Delivery Group
SVOC - Semi- Volatile Organic Compounds
TCL - Target Compound List
VOC - Volatile Organic Compounds

Table 2

Validated Analytical Results Summary
CA 750 Groundwater Monitoring-Groundwater Samples
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Location ID:		9-4	CH-20	CH-42	CH-42A	CH-43	CH-44	MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-2	MW-X146Y084	MW-X169Y058S-1	MW-X227Y054	MW-X242Y060S
Sample Name:		GW-052324-AC-23	GW-052324-DS-24	GW-052024-DS-04	GW-052024-AC-03	GW-052024-DS-02	GW-052024-AC-01	GW-052224-AC-15	GW-052224-AC-19	GW-052224-AC-21	GW-052224-DS-14	GW-052224-DS-16	GW-052224-AC-17	GW-052224-DS-12	GW-052124-AC-11	GW-052124-AC-13
Sample Date:		05/23/2024	05/23/2024	05/20/2024	05/20/2024	05/20/2024	05/20/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/21/2024	05/21/2024
Parameters	**Unit**															
Volatile Organic Compounds																
1,1,1-Trichloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl cyclohexane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	R	R	--	--	--	--	--	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	µg/L	R	R	--	--	--	--	--	--	--	--	--	1.0 U	1.2	--	--
Xylenes (total)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds																
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3&4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 2

Validated Analytical Results Summary
CA 750 Groundwater Monitoring-Groundwater Samples
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Location ID:		9-4	CH-20	CH-42	CH-42A	CH-43	CH-44	MW-X033Y147S	MW-X043Y176	MW-X047Y236	MW-X085Y070S-1	MW-X085Y070S-2	MW-X146Y084	MW-X169Y058S-1	MW-X227Y054	MW-X242Y060S
Sample Name:		GW-052324-AC-23	GW-052324-DS-24	GW-052024-DS-04	GW-052024-AC-03	GW-052024-DS-02	GW-052024-AC-01	GW-052224-AC-15	GW-052224-AC-19	GW-052224-AC-21	GW-052224-DS-14	GW-052224-DS-16	GW-052224-AC-17	GW-052224-DS-12	GW-052124-AC-11	GW-052124-AC-13
Sample Date:		05/23/2024	05/23/2024	05/20/2024	05/20/2024	05/20/2024	05/20/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/22/2024	05/21/2024	05/21/2024
4,6-Dinitro-2-methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Atrazine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Caprolactam	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isophorone	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	µg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCBs																
Aroclor-1016 (PCB-1016)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1221 (PCB-1221)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1232 (PCB-1232)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1242 (PCB-1242)	µg/L	0.29 J	0.090 J	0.099 U	0.13	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	19	240
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1248 (PCB-1248)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.098 J	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1254 (PCB-1254)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Aroclor-1260 (PCB-1260)	µg/L	0.10 U	0.11 U	0.099 U	0.10 U	0.098 U	0.095 U	0.11 U	0.11 U	0.10 U	0.095 U	0.097 U	0.11 U	0.095 U	2.1 U	19 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	0.095 U	0.095 U	0.12 U	0.11 U	0.095 U	0.10 U	0.095 U	0.097 U	0.095 U	0.095 U	0.10 U	0.11 U	0.095 U	0.095 U	0.095 U
Total PCBs	µg/L	0.29	0.09 J	0	0.13	0	0	0	0	0	0	0.098	0	0	19	240
Total PCBs (dissolved)	µg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Chemistry																
Chloride	mg/L	--	--	--	--	--	--	--	--	--	--	--	1900 J+	--	--	--

Table 2

Validated Analytical Results Summary
CA 750 Groundwater Monitoring-Groundwater Samples
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Location ID:		MW-X261Y356D-1	MW-X261Y356D-3	MW-X277Y100	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	MW-X315Y150	ST-59	ST-59	Tributary 3-3
Sample Name:		GW-052124-DS-10	GW-052124-DS-08	GW-052124-DS-06	GW-052224-DS-20	GW-052224-DS-18	GW-052124-AC-09	GW-052124-AC-05	GW-052124-AC-07	GW-052324-AC-25	GW-052324-AC-26	SW-052324-JL-22
Sample Date:		05/21/2024	05/21/2024	05/21/2024	05/22/2024	05/22/2024	05/21/2024	05/21/2024	05/21/2024 Duplicate	05/23/2024	05/23/2024 Duplicate	05/23/2024
Parameters	**Unit**											
Volatile Organic Compounds												
1,1,1-Trichloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,1-Dichloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,1-Dichloroethene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	--	--	2.0 U	--	--	--	--	--	--	--	--
1,2-Dibromoethane (Ethylene dibromide)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,2-Dichloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,2-Dichloropropane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	--	--	10 U	--	--	--	--	--	--	--	--
2-Chloroethyl vinyl ether	µg/L	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	µg/L	--	--	10 U	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	--	--	10 U	--	--	--	--	--	--	--	--
Acetone	µg/L	--	--	10 U	--	--	--	--	--	--	--	--
Benzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Bromodichloromethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Bromoform	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Carbon disulfide	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Carbon tetrachloride	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Chlorobenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Chloroethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Chloroform (Trichloromethane)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Cyclohexane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Dibromochloromethane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Dichlorodifluoromethane (CFC-12)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Ethylbenzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Isopropyl benzene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Methyl acetate	µg/L	--	--	10 U	--	--	--	--	--	--	--	--
Methyl cyclohexane	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Methyl tert butyl ether (MTBE)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Methylene chloride	µg/L	--	--	5.0 U	--	--	--	--	--	--	--	--
Styrene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Tetrachloroethene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Toluene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Trichloroethene	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Trichlorofluoromethane (CFC-11)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Trifluorotrichloroethane (CFC-113)	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Vinyl chloride	µg/L	--	--	1.0 U	--	--	--	--	--	--	--	--
Xylenes (total)	µg/L	--	--	2.0 U	--	--	--	--	--	--	--	--
Semivolatile Organic Compounds												
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2-Chloronaphthalene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2-Chlorophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2-Methylnaphthalene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2-Methylphenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
2-Nitroaniline	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
2-Nitrophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
3&4-Methylphenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
3-Nitroaniline	µg/L	--	--	48 U	--	--	--	--	--	--	--	--

Table 2

Validated Analytical Results Summary
CA 750 Groundwater Monitoring-Groundwater Samples
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Location ID:		MW-X261Y356D-1	MW-X261Y356D-3	MW-X277Y100	MW-X300Y199I-1	MW-X300Y199I-2	MW-X315Y115	MW-X315Y150	MW-X315Y150	ST-59	ST-59	Tributary 3-3
Sample Name:		GW-052124-DS-10	GW-052124-DS-08	GW-052124-DS-06	GW-052224-DS-20	GW-052224-DS-18	GW-052124-AC-09	GW-052124-AC-05	GW-052124-AC-07	GW-052324-AC-25	GW-052324-AC-26	SW-052324-JL-22
Sample Date:		05/21/2024	05/21/2024	05/21/2024	05/22/2024	05/22/2024	05/21/2024	05/21/2024	05/21/2024	05/23/2024	05/23/2024	05/23/2024
4,6-Dinitro-2-methylphenol	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
4-Chloroaniline	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
4-Nitroaniline	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
4-Nitrophenol	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
Acenaphthene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Acenaphthylene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Acetophenone	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Anthracene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Atrazine	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzaldehyde	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzo(a)anthracene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzo(a)pyrene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Biphenyl (1,1-Biphenyl)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
bis(2-Chloroethoxy)methane	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
bis(2-Chloroethyl)ether	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Butyl benzylphthalate (BBP)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Caprolactam	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Carbazole	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Chrysene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Di-n-butylphthalate (DBP)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Di-n-octyl phthalate (DnOP)	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Dibenz(a,h)anthracene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Dibenzofuran	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Diethyl phthalate	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Dimethyl phthalate	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Fluoranthene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Fluorene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Hexachlorobenzene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Hexachlorobutadiene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	µg/L	--	--	48 U	--	--	--	--	--	--	--	--
Hexachloroethane	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Isophorone	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
N-Nitrosodi-n-propylamine	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Naphthalene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Nitrobenzene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Pentachlorophenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Phenanthrene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Phenol	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
Pyrene	µg/L	--	--	9.6 U	--	--	--	--	--	--	--	--
PCBs												
Aroclor-1016 (PCB-1016)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1016 (PCB-1016) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1221 (PCB-1221)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1221 (PCB-1221) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1232 (PCB-1232)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1232 (PCB-1232) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1242 (PCB-1242)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.086 J	0.091 J	0.11 U	0.10 U	0.097 U
Aroclor-1242 (PCB-1242) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1248 (PCB-1248)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1248 (PCB-1248) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1254 (PCB-1254)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1254 (PCB-1254) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Aroclor-1260 (PCB-1260)	µg/L	0.19 U	0.099 U	0.095 U	0.096 U	0.095 U	0.095 U	0.11 U	0.11 U	0.11 U	0.10 U	0.097 U
Aroclor-1260 (PCB-1260) (dissolved)	µg/L	--	0.095 U	0.095 U	0.095 U	0.099 U	0.097 U	0.10 U	0.099 U	0.10 U	0.10 U	0.097 U
Total PCBs	µg/L	0	0	0	0	0	0	0.086 J	0.091 J	0	0	0
Total PCBs (dissolved)	µg/L	--	0	0	0	0	0	0	0	0	0	0
General Chemistry												
Chloride	mg/L	--	--	--	--	--	--	--	--	17	17	--

Notes:
U - Not detected at the associated reporting limit.
J - Estimated concentration.
J+ - Estimated concentration; result may be biased high
R - Rejected result.

Table 3

Analytical Methods
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Parameter	Method [1]	Matrix	Holding Time	
			Collection to Extraction (Days)	Collection/Extraction to Analysis (Days)
PCB - Total & Dissolved	SW-846 8082A	Water	One year	40
TCL SVOC	SW-846 8270E	Water	7	40
TCL VOC, Chlorinated Organics or Vinyl Chloride	SW-846 8260D	Water	-	14 (7-unpreserved)
Chloride	EPA 300.0	Water	-	28

Notes:
[1] Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986
EPA - “Methods for Chemical Analysis of Water and Waste,” EPA-600/4-79-020, revised March 1983, with subsequent revisions
PCB - Polychlorinated biphenyls
SVOC - Semi-Volatile Organic Compounds
TCL - Target Compound List
VOC - Volatile Organic Compounds

Table 4

Qualified Sample Results Due to Holding Time Exceedance
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Parameter	Sample ID	Actual Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	GW-052324-AC-23	12	7-unpreserved	1,1,1-Trichloroethane	R	ug/L
				1,1,2,2-Tetrachloroethane	R	ug/L
				1,1,2-Trichloroethane	R	ug/L
				1,1-Dichloroethane	R	ug/L
				1,1-Dichloroethene	R	ug/L
				1,2-Dichlorobenzene	R	ug/L
				1,2-Dichloroethane	R	ug/L
				1,2-Dichloropropane	R	ug/L
				1,3-Dichlorobenzene	R	ug/L
				1,4-Dichlorobenzene	R	ug/L
				2-Chloroethyl vinyl ether	R	ug/L
				Benzene	R	ug/L
				Bromodichloromethane	R	ug/L
				Bromoform	R	ug/L
				Bromomethane (Methyl bromide)	R	ug/L
				Carbon tetrachloride	R	ug/L
				Chlorobenzene	R	ug/L
				Chloroethane	R	ug/L
				Chloroform (Trichloromethane)	R	ug/L
				Chloromethane (Methyl chloride)	R	ug/L
				cis-1,3-Dichloropropene	R	ug/L
				Dibromochloromethane	R	ug/L
				Dichlorodifluoromethane (CFC-12)	R	ug/L
				Ethylbenzene	R	ug/L
				Methylene chloride	R	ug/L
				Tetrachloroethene	R	ug/L
				Toluene	R	ug/L
				trans-1,2-Dichloroethene	R	ug/L
				trans-1,3-Dichloropropene	R	ug/L
				Trichlorofluoromethane (CFC-11)	R	ug/L
				Vinyl chloride	R	ug/L

Table 4

Qualified Sample Results Due to Holding Time Exceedance
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Parameter	Sample ID	Actual Holding Time (days)	Holding Time Criteria (days)	Analyte	Qualified Sample Results	Units
VOC	GW-052324-DS-24	12	7-unpreserved	1,1,1-Trichloroethane	R	ug/L
				1,1,2,2-Tetrachloroethane	R	ug/L
				1,1,2-Trichloroethane	R	ug/L
				1,1-Dichloroethane	R	ug/L
				1,1-Dichloroethene	R	ug/L
				1,2-Dichlorobenzene	R	ug/L
				1,2-Dichloroethane	R	ug/L
				1,2-Dichloropropane	R	ug/L
				1,3-Dichlorobenzene	R	ug/L
				1,4-Dichlorobenzene	R	ug/L
				2-Chloroethyl vinyl ether	R	ug/L
				Benzene	R	ug/L
				Bromodichloromethane	R	ug/L
				Bromoform	R	ug/L
				Bromomethane (Methyl bromide)	R	ug/L
				Carbon tetrachloride	R	ug/L
				Chlorobenzene	R	ug/L
				Chloroethane	R	ug/L
				Chloroform (Trichloromethane)	R	ug/L
				Chloromethane (Methyl chloride)	R	ug/L
				cis-1,3-Dichloropropene	R	ug/L
				Dibromochloromethane	R	ug/L
				Dichlorodifluoromethane (CFC-12)	R	ug/L
				Ethylbenzene	R	ug/L
				Methylene chloride	R	ug/L
				Tetrachloroethene	R	ug/L
				Toluene	R	ug/L
				trans-1,2-Dichloroethene	R	ug/L
				trans-1,3-Dichloropropene	R	ug/L
				Trichlorofluoromethane (CFC-11)	R	ug/L
				Vinyl chloride	R	ug/L

Notes:
VOC - Volatile Organic Compounds
R - Rejected result

Qualified Sample Results Due to Outlying Matrix Spike/Matrix Spike Duplicate Results
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD	Control Limits % Recovery	Control Limits RPD	Assoc Sample	Qualified Result		Units
General Chemistry	GW-052224-AC-17	Chloride	94	162	21	80-120	15	GW-052224-AC-17	1900	J+	mg/L

Notes:
MS/MSD - Matrix Spike/Matrix Spike Duplicate
J+ - Estimated concentration, result may be biased high

Table 6

Qualified Sample Data Due To Poor Chromatographic Match To Analytical Standard
CA 750 Groundwater Monitoring
GM Powertrain - Bedford Plant
Bedford, Indiana
May 2024

Parameter	Sample ID	Analyte	Qualified Result	Units
Total PCB	GW-052224-DS-16	Aroclor-1248	0.098 J	µg/L
Total PCB	GW-052324-AC-23	Aroclor-1242	0.29 J	µg/L

Notes:
PCB - Polychlorinated Biphenyls
J - Estimated concentration