



## APRIL 2022 ADDITIONAL SOIL SAMPLING REPORT

This report presents a summary of field activities conducted and analytical data collected at the Goodfellow Federal Center, 4300 Goodfellow Blvd. in St. Louis, Missouri, in April 2022.

Previously, in July 2021, surface and subsurface soil sampling was conducted at the site to identify soil contamination, in accordance with [GSA's Remedial Investigation Work Plan \(RIWP\)](#) approved by the Missouri Department of Natural Resources in March 2021.

In April 2022, additional surface and subsurface soil sampling was conducted at 35 boring locations near and around areas previously determined to exhibit soil contamination at concentrations exceeding the designated project action limits (PALs) identified in the RIWP for the purpose of more fully delineating the nature and extent of soil contamination, and to collect data needed to assess risk to the potential human exposure scenarios identified in the RIWP.

The soil samples collected were tested for several analytical parameters (including metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and volatile organic compounds (VOCs). Laboratory analytical methods are detailed in Section 4.0 of this report. Analytical results were compared to the PALs listed on page 292 of the RIWP.

Laboratory results are presented in Section 5.0 of this report. Arsenic was the only metal detected above its PAL in surface soil, in one sample. No PCBs were detected in surface soil. Several PAH compounds were detected in surface soil samples, as summarized on Table 3 of the attached report. No VOCs were detected in surface soil at concentrations above their respective PALs.

Arsenic was also the only metal detected above its PAL in subsurface soil, in one sample. No PCBs were detected in subsurface soil. Several PAH compounds were detected in subsurface soil samples, as summarized in Table 3 of the attached report. No VOCs were detected in subsurface soil at concentrations above their respective PALs.

Based on the results of this additional soil sampling, GSA now anticipates completing a baseline human health risk assessment of the site. These activities are part of the remedial investigation, one step in the [CERCLA process](#), which GSA is following in preparation for [transferring ownership of the property](#) sometime around 2024.

If you have any questions, please email [r6environmental@gsa.gov](mailto:r6environmental@gsa.gov), and GSA will provide responses from the appropriate experts. Note that the tables and figures in this report are not accessible for people using screen reader technology. The information can be furnished upon request by contacting 816-223-6198 or [r6environmental@gsa.gov](mailto:r6environmental@gsa.gov).

**Goodfellow Federal Complex  
Additional Soil Sampling Report**



**General Services Administration  
Kansas City, Missouri**

**Goodfellow Federal Complex  
4300 Goodfellow Boulevard  
St. Louis, Missouri**

**Project No. 143702**

**July 2022**

**Goodfellow Federal Complex  
Additional Soil Sampling Report  
Goodfellow Federal Complex; 4300 Goodfellow Boulevard  
St. Louis, Missouri**

**July 2022**

Prepared for



General Services  
Administration

Prepared by



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143702

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Additional Soil Sampling Report**



**General Services Administration  
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prepared for

**General Services Administration  
Kansas City, Missouri  
Goodfellow Federal Complex  
4300 Goodfellow Boulevard  
St. Louis, Missouri**

**Project No. 143702**

**July 2022**

prepared by

**Burns & McDonnell  
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## TABLE OF CONTENTS

	<u>Page No.</u>
<b>1.0 INTRODUCTION .....</b>	<b>1-1</b>
1.1 Project Documentation.....	1-1
1.2 Objective.....	1-2
1.3 Responsible Agency.....	1-3
1.4 Contaminants of Concern .....	1-3
1.5 General Comments.....	1-3
<b>2.0 REPORT ORGANIZATION .....</b>	<b>2-1</b>
<b>3.0 FIELD ACTIVITIES .....</b>	<b>3-1</b>
3.1 Deviations from Work Plan .....	3-1
3.2 Health and Safety.....	3-2
3.3 Pre-Sampling Survey and Borehole Mark-Outs .....	3-2
3.4 Underground Utility Locates .....	3-2
3.5 Direct-Push Soil Sampling.....	3-2
3.5.1 Vertical Delineation Borings .....	3-3
3.5.2 Step-Out Borings .....	3-4
3.5.3 Soil Boring GB-72 .....	3-5
3.5.4 Geology.....	3-5
3.5.5 Field Screening .....	3-5
3.6 Borehole Abandonment .....	3-6
3.7 Decontamination.....	3-6
3.8 Surveying.....	3-6
3.9 Characterization and Disposal of Investigation-Derived Waste.....	3-6
<b>4.0 LABORATORY METHODS .....</b>	<b>4-1</b>
<b>5.0 ANALYTICAL RESULTS .....</b>	<b>5-1</b>
5.1 Surface Soil.....	5-1
5.1.1 Metals.....	5-1
5.1.2 Polychlorinated Biphenyls .....	5-2
5.1.3 Polycyclic Aromatic Hydrocarbons.....	5-2
5.1.4 Total Petroleum Hydrocarbons .....	5-4
5.1.5 Volatile Organic Compounds .....	5-5
5.2 Subsurface Soil .....	5-5
5.2.1 Metals.....	5-5
5.2.2 Polychlorinated Biphenyls .....	5-6
5.2.3 Polycyclic Aromatic Hydrocarbons.....	5-6
5.2.4 Total Petroleum Hydrocarbons .....	5-8
5.2.5 Volatile Organic Compounds .....	5-9
5.3 Quality Control Samples.....	5-9

<b>6.0</b>	<b>DATA VALIDATION AND QUALITY CONTROL SAMPLE RESULTS .....</b>	<b>6-1</b>
6.1	Data Validation .....	6-1
6.2	Quality Control Samples Results .....	6-1
6.2.1	Field Duplicate Samples .....	6-1
6.2.2	Matrix Spike / Matrix Duplicate Samples .....	6-1
6.2.3	Equipment Rinsate Blank Samples.....	6-1
6.2.4	Trip Blank Samples.....	6-2
<b>7.0</b>	<b>REFERENCES.....</b>	<b>7-1</b>

**EXHIBITS**

**EXHIBIT 1 – TABLE 1 (PROJECT ACTION LIMITS AND LABORATORY  
DETECTION/QUANTITATION LIMITS – SOIL SAMPLES)**

**EXHIBIT 2 – TABLE 2 (PROJECT ACTION LIMITS AND LABORATORY  
DETECTION/QUANTITATION LIMITS – AQUEOUS SAMPLES)**

**APPENDICES**

**APPENDIX A – FIELD NOTES**

**APPENDIX B – DRILLING LOGS**

**APPENDIX C – MONITORING WELL/TESTHOLE SOIL AND  
GEOTECHNICAL BORING PLUGGING REGISTRATION  
REPORTS**

**APPENDIX D – SURVEY DATA**

**APPENDIX E – ANALYTICAL LABORATORY TEST REPORT FOR SOIL  
IDW**

**APPENDIX F – WASTE PROFILE AND MANIFEST**

**APPENDIX G – ANALYTICAL LABORATORY TEST REPORTS FOR SOIL**

**APPENDIX H – DATA VALIDATION MEMORANDUM**

## LIST OF TABLES

<b>Table Name</b>	<b>Table No.</b>
Direct-Push Soil Boring and Sample Collection Summary .....	Table 1
Soil Investigation Derived Waste Results.....	Table 2
Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs).....	Table 3
Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs).....	Table 4
Frequency of Detections in Surface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs) .....	Table 5
Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs) .....	Table 6
Equipment Rinsate and Trip Blank Sample Results .....	Table 7

## LIST OF FIGURES

<b>Figure Name</b>	<b>Figure No.</b>
Area Location Map .....	Figure 1
Site Location Map.....	Figure 2
Soil Boring Location Map .....	Figure 3
Step-Out Locations for Borings GB-09 and B-11A .....	Figure 4
Step-Out Locations for Borings GB-13 and GB-19 .....	Figure 5
Step-Out Locations for Borings GB-44, GB-50, GB-62 and GB-64.....	Figure 6
Step-Out Locations for Borings GB-40 and GB-45 .....	Figure 7
Surface Soil Exceedances (Metals) Boring GB-64A.....	Figure 8
Surface Soil Exceedances (PAHs) Borings GB-09A and GB-09C .....	Figure 9
Surface Soil Exceedances (PAHs) Borings GB-13C, GB-19A, and GB-19C.....	Figure 10
Surface Soil Exceedances (PAHs) Borings GB-44A, GB-44B, GB-50A, and GB-50B...	Figure 11
Surface Soil Exceedances (PAHs) Borings GB-40A, GB-45A, and GB-45C .....	Figure 12
Surface Soil Exceedances (PAHs) Boring GB-72 .....	Figure 13
Subsurface Soil Exceedances (Metals) Boring GB-64 .....	Figure 14
Subsurface Soil Exceedances (PAHs) Boring GB-09C.....	Figure 15
Subsurface Soil Exceedances (PAHs) Borings GB-13 and GB-19C.....	Figure 16
Subsurface Soil Exceedances (PAHs) Boring GB-44B.....	Figure 17
Subsurface Soil Exceedances (PAHs) Boring GB-72 .....	Figure 18



## LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
ASTM	American Society for Testing and Materials
bgs	below ground surface
COC	<i>contaminants of concern</i>
Data Validation Memorandum	<i>Data Validation Memorandum; QA/QC Review of Analytical Data; Additional Soil Sampling Event – April 2022; Goodfellow Federal Complex; St. Louis, Missouri</i>
David Mason	David Mason & Associates
DRO	diesel range organics
Etegra	Etegra, Inc.
eV	electron volt
FSP	<i>Final Field Sampling Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
GFC	Goodfellow Federal Complex
GPRS	Ground Penetrating Radar Systems, LLC
GRO	gasoline range organics
GSA	General Services Administration
HASP	<i>Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri</i>
IDW	Investigation-derived waste
J	estimated value
MDNR	Missouri Department of Natural Resources
mg/kg	milligrams per kilogram
MS	matrix spike
MSD	matrix spike duplicate
ORO	oil range organics
Pace	Pace Analytical Services, LLC
PAH	polycyclic aromatic hydrocarbon
PAL	project action limit
PCB	polychlorinated biphenyl
PID	photoionization detector
QA	quality assurance
QAPP	<i>Final Quality Assurance Project Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
QC	quality control
R	rejected
RA Work Plan	<i>Final Risk Assessment Work Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
REDI	Roberts Environmental Drilling, Inc.
RI	remedial investigation
SLOP	St. Louis Ordnance Plant
SSSP	<i>Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis Missouri</i> <i>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015)</i>
SW-846 Methods	

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
TPH	total petroleum hydrocarbon
UN	United Nations
USCS	Unified Soil Classification System
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound
Work Plan	<i>Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
Work Plan Memorandum	<i>Work Plan Memorandum for Additional Soil Sampling for the Goodfellow Federal Complex; St. Louis, Missouri</i>

## 1.0 INTRODUCTION

The General Services Administration (GSA) has contracted Burns & McDonnell to conduct a remedial investigation (RI) at the Goodfellow Federal Complex (GFC) to identify, characterize, and delineate contamination that may be present from historical operations. RI activities include installation of 19 monitoring wells, quarterly groundwater sampling of the 19 monitoring wells, and collection of surface and subsurface soil samples using direct-push technology. The 19 monitoring wells were installed in June, 2021 (Burns & McDonnell, 2021c); quarterly monitoring well sampling of the 19 monitoring wells was conducted in July 2021, October 2021, January 2022, and April 2022 (Burns & McDonnell, 2021d, 2022a, 2022c, and 2022d); and surface and subsurface soil sampling was performed in July 2021 (Burns & McDonnell, 2021e). GSA determined additional soil sampling was needed to further delineate soil at the GFC that had exceedances 5 times greater than project action limits (PALs) identified during the July 2021 surface and subsurface soil sampling event (Burns & McDonnell, 2021e) and previous soil sampling events that were performed at the GFC. This Additional Soil Sampling Report presents a summary of field activities conducted and analytical data collected during the additional soil sampling activities.

The GFC is located at 4300 Goodfellow Boulevard in St. Louis, Missouri and occupies a portion of the former St. Louis Ordnance Plant (SLOP) near the western boundary of the City of St. Louis, Missouri (see **Figure 1**). The GFC property is owned and operated by the GSA. The GFC encompasses approximately 66 acres, and is bordered northeast by the former SLOP, southeast by Planned Industrial Drive, southwest by Lincoln Way, and northwest by Goodfellow Boulevard. The site location is shown on **Figure 2**. The GFC is developed with buildings, utility tunnels, and a separated stormwater and sanitary sewer collection system.

The former SLOP was constructed in the early 1940s and fabricated .30 and .50 caliber ammunition. Previous environmental investigations at the GFC and SLOP have identified contamination present in soil and groundwater.

### 1.1 Project Documentation

The following planning documents provided general guidance for the additional soil sampling activities:

- The Missouri Department of Natural Resources (MDNR)-approved *Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri* (Work Plan) (Etegra, Inc. [Etegra], 2021), which consist of the following:
  - *Final Field Sampling Plan; Goodfellow Federal Complex, St. Louis, Missouri* (FSP),

- *Final Quality Assurance Project Plan; Goodfellow Federal Complex, St. Louis, Missouri (QAPP), and*
- *Final Risk Assessment Work Plan; Goodfellow Federal Complex, St. Louis, Missouri (RA Work Plan);*
- *Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri (HASP) (Burns & McDonnell, 2021a);*
- *Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri (SSSP) (Burns & McDonnell, 2021b); and*
- *Work Plan Memorandum for Additional Soil Sampling for the Goodfellow Federal Complex; St. Louis, Missouri (Work Plan Memorandum) (Burns & McDonnell, 2022b).*

## 1.2 Objective

The primary objective was to collect sufficient soil data to horizontally and vertically delineate soil that had exceedances 5 times greater than PALs identified during the July 2021 surface and subsurface soil sampling event (Burns & McDonnell, 2021d) and previous soil sampling events that were performed at the GFC (see **Figure 3**). The secondary objective was to collect additional soil data to assess risk to the potential human exposure scenarios identified in RA Work Plan. The vertical and horizontal extent of the impacts at the GFC will be assessed to support the human health risk assessment process. To support the objectives, the following additional soil sampling activities were identified:

- Survey 13 historic boring locations that were identified as having soil concentrations with exceedances 5 times greater than PALs;
- Mark out 35 proposed boring locations in the vicinity of the surveyed historical boring locations requiring further delineation;
- Conduct public and private utility locates to identify underground utilities, anomalies, and potential obstructions;
- Collect surface and subsurface soil samples at 35 proposed boring locations for laboratory chemical analysis;
- Survey the new boring locations; and
- Characterize and dispose of soil and water investigation-derived waste (IDW).

Burns & McDonnell's scope of services completed for this project were conducted in general accordance with the Work Plan Memorandum and the Work Plan. The objectives were completed as identified above.

### **1.3 Responsible Agency**

The MDNR is the regulatory agency responsible for this project. Deliverables will be submitted to MDNR for review and approval.

### **1.4 Contaminants of Concern**

The soil contaminants of concern (COCs) that were investigated as part of this additional soil sampling effort were based on constituents exceeding 5 times greater than PALs identified during the July 2021 surface and subsurface soil sampling event (Burns & McDonnell, 2021d) and include the following:

- Arsenic;
- Polycyclic aromatic hydrocarbons (PAHs);
- Total petroleum hydrocarbons (TPH) (gasoline range organics [GRO], diesel range organics [DRO], and oil range organics [ORO]); and
- Volatile organic compounds (VOCs).

### **1.5 General Comments**

Burns & McDonnell's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Burns & McDonnell makes no warranties, express or implied, regarding the findings, conclusions, or recommendations. Burns & McDonnell does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report.

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents of concern may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this sampling event. Subsurface conditions may vary from those encountered at specific borings, wells, or during other surveys; tests; assessments; investigations; or exploratory services. The

data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

## 2.0 REPORT ORGANIZATION

This Additional Soil Sampling Report has been divided into seven sections as follows:

- Section 1.0, Introduction, discusses the project objectives, site location, and other general project information.
- Section 2.0, Report Organization, discusses this Soil Sampling Report sectional outline.
- Section 3.0, Field Activities, discusses the field activities that were conducted at the GFC during soil sampling activities.
- Section 4.0, Laboratory Methods, presents the analytical methods that soil samples were analyzed for during soil sampling activities.
- Section 5.0, Soil Analytical Results, discusses the soil analytical results for the soil sampling activities.
- Section 6.0, Data Validation and Quality Control Sample Results, discusses data validation related aspects of the soil sampling activities.
- Section 7.0, References, includes a list of references used in the report.

Included as attachments to this Additional Soil Sampling Report are supporting tables, figures, and appendices. **Appendix A** includes copies of the field notes; **Appendix B** includes drilling logs; **Appendix C** includes the Monitoring Well/Test Hole/Soil and Geotechnical Boring Plugging Registration Report; **Appendix D** includes the survey data; **Appendix E** includes the analytical laboratory test report for soil IDW; **Appendix F** includes waste profile and manifest; **Appendix G** includes the analytical laboratory test reports for soil; and **Appendix H** includes the *Data Validation Memorandum; QA/QC Review of Analytical Data; Additional Soil Sampling Event – April 2022; Goodfellow Federal Complex; St. Louis, Missouri* (Data Validation Memorandum) (Burns & McDonnell, 2022e). The tables and figures in the appendices may not be accessible for people using screen reader technology. The information can be furnished upon request by contacting 816-223-6198 or [r6environmental@gsa.gov](mailto:r6environmental@gsa.gov).

### 3.0 FIELD ACTIVITIES

Field activities were completed to meet the project objectives and were conducted in general accordance with the MDNR-approved FSP and Work Plan Memorandum. The field activities conducted at the GFC during the additional soil sampling activities consisted of the following:

- Conduct pre-sampling surveying and borehole mark-outs;
- Conduct underground utility locates;
- Collect surface and subsurface soil samples at 35 boring locations for analytical analysis;
- Survey the 35 boring locations; and
- Characterize and dispose of soil and water IDW.

#### 3.1 Deviations from Work Plan

Deviations from the Work Plan Memorandum are noted below.

- The planned boring at GB-03 to vertically delineate PAHs was unable to be completed. Multiple attempts to advance this boring were tried; however, shallow refusal was encountered during each attempt due to the buried foundation associated with the former building. As the planned boring at GB-03 was unable to be completed, the Burns & McDonnell Project Manager, directed the field geologist to advance a step-out boring (GB-72) to the same target depths planned for at GB-03.
- Four samples were collected from GB-72; one surface soil sample (0.5-1.5 feet below ground surface [bgs]) and three subsurface samples (4-5 feet bgs, 8-9 feet bgs, and 12-13 feet bgs). As GB-72 was a new unique boring, each soil sample was analyzed for the following basic site-wide COCs:
  - Metals (antimony, arsenic, copper, lead, and zinc);
  - Polychlorinated biphenyls (PCBs) (aroclor 1016, 1221, 1232, 1242, 1248, 1254, and 1260);
  - PAHs;
  - TPH (GRO, DRO, and ORO); and
  - VOCs.



### 3.2 Health and Safety

Burns & McDonnell conducted the fieldwork under a HASP and a SSSP developed for this project. Work was performed using Level D personal protective equipment in accordance with Burns & McDonnell's core safety rules and practices. There were no safety incidents reported during the additional soil sampling activities conducted in April 2022.

### 3.3 Pre-Sampling Survey and Borehole Mark-Outs

Pre-sampling surveying and borehole mark-outs were conducted on April 1, 2022. Burns & McDonnell's surveying contractor David Mason & Associates (David Mason) of St. Louis, Missouri, a Missouri-licensed surveyor performed the pre-sampling survey using a sub-centimeter accurate Global Positioning System to locate the 13 historic borings (GB-03, GB-09, GB-13, GB-19, GB-40, GB-44, GB-45, GB-50, GB-59, GB-62, GB-64, B-11A, and DPTS-2) identified as having soil concentrations with exceedances 5 times greater than PALs. The locations of the historic borings and associated vertical delineation borings and step-out borings were marked out by Burns & McDonnell personnel. The locations of the historic soil borings and those historical borings requiring further delineation are illustrated on **Figure 3**. The locations of the step-out borings are illustrated on **Figure 4** through **Figure 7**.

### 3.4 Underground Utility Locates

Burns & McDonnell's drilling subcontractor, Roberts Environmental Drilling, Inc. (REDI) of Millstadt, Illinois, a Missouri-licensed water well driller, contacted the State of Missouri's One Call service to locate underground utilities prior to commencement of onsite intrusive activities. As the GFC is a secured federal facility, no public utilities were marked at the facility.

Burns & McDonnell also subcontracted Ground Penetrating Radar Systems, LLC (GPRS) of St. Louis, Missouri to provide private utility locating services. GPRS performed an initial survey of proposed boring locations with a receiver to detect live power or radio frequency signals. The areas were then scanned using a 400-megahertz ground penetrating radar antenna to locate any subsurface anomalies or potential utilities. GPRS's private utility locating services were performed on April 4 through 6, 2022, prior to drilling activities.

### 3.5 Direct-Push Soil Sampling

Thirty-five direct-push soil borings were advanced using direct-push technology by REDI from April 11, 12, and 14, 2022. The locations of the soil borings are illustrated on **Figures 3** through **7**. At each soil boring location, a track-mounted direct-push rig (Geoprobe® 8040DT) was used to advance a MacroCore® sampler and continuously sample the soil.

**Table 1** presents a summary of the soil borings and soil samples including depth intervals; survey locations and elevations; analytical analyses; and associated quality assurance (QA)/quality control (QC) samples.

Soil samples for chemical and moisture content analysis were collected in laboratory provided containers, labeled, and immediately placed on ice in a cooler following sample collection. The cooler was secured with a custody seal prior to shipment. Samples were shipped or provided to a laboratory courier under chain-of-custody to the contract laboratory, Pace Analytical Services, LLC (Pace) of Lenexa, Kansas, a National Environmental Laboratory Accreditation Program accredited laboratory.

### **3.5.1 Vertical Delineation Borings**

Five soil boring locations (BG-13, GB-40, GB-59, GB-64, and DPTS-2) were collocated adjacent to historical borings and advanced to predetermined depth to vertically delineate soil. A single boring was advanced directly adjacent (approximately 1-foot) to each of the historic boring locations to collect additional subsurface soil samples from deeper intervals. The first subsurface soil sample was collected 2 feet below the depth from which the corresponding historical subsurface soil sample had a PAL exceedance. The second subsurface soil sample was collected 4 feet deeper than the first at GB-13, GB-40, GB-64, and DPTS-2. The second subsurface sample at GB-59 was collected 1-foot below the first subsurface soil sample.

Each soil boring was advanced to a predetermined depth, and soil cores were obtained continuously. A Burns & McDonnell field geologist classified the soil cores in general accordance with the Unified Soil Classification System (USCS), screened the recovered soil with a photoionization detector (PID) equipped with a 10.6 electron volt (eV) ultraviolet lamp. At each soil boring, two subsurface soil samples were collected. Boring depths and sample intervals for each boring are described below:

- Boring GB-13 was advanced to a depth of 12 feet bgs and two subsurface soil samples were collected. The first sample was collected from a depth interval of 7-8 feet bgs and the second sample was collected from a depth interval of 11-12 feet bgs.
- Boring GB-40 was advanced to a depth of 20 feet bgs and two subsurface soil samples were collected. The first sample was collected from a depth interval of 15-16 feet bgs and the second sample was collected from a depth interval of 19-20 feet bgs.
- Boring GB-59 was advanced to a depth of 20 feet bgs and two subsurface soil sample were collected. The first sample was collected from a depth interval of 12-13 feet bgs and the second sample was collected from a depth interval of 14-15 feet bgs.

- Boring GB-64 was advanced to a depth of 15 feet bgs and two subsurface soil samples were collected. The first sample was collected from a depth interval of 9-10 feet bgs and the second sample was collected from a depth interval of 13-14 feet bgs.
- Boring DPTS-2 was advanced to a depth of 15 feet bgs and two subsurface soil samples were collected. The first sample will be collected from a depth interval of 9-10 feet bgs and the second sample was collected from a depth interval of 13-14 feet bgs.

Subsurface soil samples collected from GB-13, GB-40, and DPTS-2 were submitted to Pace for PAH and moisture content analysis. Subsurface soil samples from GB-59 were submitted to Pace for TPH (GRO, DRO, and ORO), VOCs, and moisture content analysis. Subsurface soil samples collected from GB-64 were submitted to Pace for arsenic and moisture content analysis.

### 3.5.2 Step-Out Borings

At historical borings GB-09, GB-13, GB-19, GB-40, GB-44, GB-45, GB-50, GB-62, GB-64, and B-11A, step-out borings were advanced at locations 10 to 20 feet laterally from these 10 historical soil boring locations to collect additional surface and subsurface soil samples for delineation. Three step-out borings were advanced around nine historical borings (GB-09, GB 13, GB-19, GB-40, GB-45, GB-50, GB-62, GB-64, and B-11A) and two step-out borings were advanced around historical boring GB-44.

Most step-out soil borings were advanced to a minimum depth of 10 feet bgs, and soil cores were obtained continuously. A Burns & McDonnell field geologist classified the soil cores in general accordance with the USCS, screened the recovered soil with a PID equipped with a 10.6 eV ultraviolet lamp. Based on PID field screening and visual and olfactory observations, if impacts were present at depth, the soil borings were advanced to a depth where impacts were not present. Of the 29 step-out soil borings completed, one was advanced to a depth greater than 10 feet bgs (GB-09B at 15 feet bgs).

Soil samples for chemical analysis were collected from each of the 29 step-out soil borings. At each soil boring, a single surface and subsurface soil sample was collected. Surface soil samples were collected from the 0 to 2-foot interval, if pavement (concrete/asphalt and subbase) was not present. If pavement was present, the representative surface soil sample was collected from a 1-foot interval immediately below the pavement and associated pavement base aggregate. Of the 29 step-out soil borings completed, 20 were advance through pavement. Pavement thickness in these borings ranged from 0.3 to 3.8 feet and are summarized on **Table 1**. Subsurface soil samples were collected from a 1- to 2-foot interval that exhibited the highest impacts based on PID field screening and visual and olfactory observations. If no impacts

were detected via PID field screening or observations (visual or olfactory), a shallow subsurface soil sample was collected from a 1-foot interval immediately below the surface soil sample.

Surface and subsurface soil samples collected from step-out borings (GB-09A/B/C, GB-13A/B/C, GB-19A/B/C, BG-40A/B/C, GB-44A/B, GB-45A/B/C, GB-50A/B/C, GB-62A/B/C, and B-11AA/B/C) were submitted to Pace for PAH and moisture content analysis. Surface and subsurface soil samples collected from step-out boring GB-64A/B/C were submitted to Pace for arsenic and moisture content analysis.

### **3.5.3 Soil Boring GB-72**

Soil Boring GB-72 was completed as a step-out boring in the vicinity of historical boring GB-03 due to shallow refusal as discussed in Section 3.1. GB-72 was advanced to 13 feet bgs and soil cores were obtained continuously. A Burns & McDonnell field geologist classified the soil cores in general accordance with the USCS, screened the recovered soil with a PID equipped with a 10.6 eV ultraviolet lamp. One surface soil sample (0.5-1.5 feet bgs) and three subsurface samples (4-5 feet bgs, 8-9 feet bgs, and 12-13 feet bgs) were collected.

Surface and subsurface soil samples collected from GB-72 were submitted to Pace for PAH, PCB, metals (antimony, arsenic, copper, lead, and zinc), TPH (GRO, DRO, and ORO), VOCs, and moisture content analysis.

### **3.5.4 Geology**

Based on the field observations during continuous sampling of the soil borings, the shallow subsurface geology up to 20 feet bgs at the GFC generally consisted of fine-grained deposits composed of silty clay and clay. Free groundwater was not observed in any of the soil borings during direct-push advancement. Lithologic descriptions are presented on the drilling logs provided in **Appendix B**.

### **3.5.5 Field Screening**

Soil cores were collected continuously to observe and document soil lithology, color, moisture characteristics, and visual and olfactory indicators of potential impact. Burns & McDonnell field screened soil cores for organic vapors using a PID. This device provides a direct reading in parts per million isobutylene equivalents. Upon removal of the sampler from the borehole, a Burns & McDonnell geologist field screened recovered soil cores with a PID equipped with a 10.6 eV ultraviolet lamp source. Field screening results for each soil boring are presented on the drilling logs provided in **Appendix B**.

### 3.6 Borehole Abandonment

Following soil sampling, each of the soil borings were abandoned by REDI using bentonite chips hydrated in 1-foot lifts in accordance with applicable sections of the 10 Code of State Regulations Division 23 (Missouri Well Construction Rules), Chapter 4 (Monitoring Well Construction Code) (Missouri Secretary of State, 2019). The surface at each boring location was restored to match adjacent surface (*i.e.*, concrete, asphalt, soil). Abandonment activities were completed on the same day the borings were completed. Monitoring Well/Test Hole/Soil and Geotechnical Boring Plugging Registration Reports are provided in **Appendix C**.

### 3.7 Decontamination

Decontamination of drilling and sampling equipment was performed prior to beginning soil sampling activities and after completing each soil boring. Drilling and sampling equipment was decontaminated withalconox and potable water. An equipment rinsate blank sample was collected during each day of field work in which decontamination was conducted. Equipment rinsate blank sample were submitted to Pace for analysis of arsenic, PAHs, TPH-GRO, and/or VOCs.

### 3.8 Surveying

David Mason of St. Louis, Missouri, a Missouri-licensed surveyor, surveyed the 35 soil borings on April 21, 2022. David Mason surveyed the location (northing and easting) and elevation of the ground surface for each of the 35 soil borings. A copy of the survey data is provided in **Appendix D**, and the survey data is summarized in **Table 1**.

### 3.9 Characterization and Disposal of Investigation-Derived Waste

IDW generated from soil sampling activities (*e.g.*, soil cuttings and decontamination water) were segregated and containerized onsite. Soil cuttings were containerized in two 55-gallon United Nations (UN) drums, the decontamination pad was containerized in one 55-gallon UN drum, and decontamination water was containerized in one 55-gallon UN drum. Used personal protective equipment and general trash were disposed of as municipal solid waste in the onsite dumpster.

A composite soil sample from the soil drums was collected on April 14, 2022 for waste characterization/profiling purposes. Waste characterization samples were submitted to Pace for analysis of waste characterization parameters requested by the disposal facilities. O6 Environmental, LLC of St. Louis, Missouri completed waste characterization paperwork for the soil/decontamination pad IDW. The soil/decontamination pad IDW was characterized as non-hazardous waste (non-Resource Conservation and Recovery Act, non-Department of Transportation, and non-regulated material). The three 55-gallon

drums (700 pounds) of soil/decontamination pad were transported by Illini Environmental, Inc. and disposed of at their disposal and recycling facility in Caseyville, Illinois on June 23, 2022. Analytical laboratory test reports for soil IDW are provided in **Appendix E**. Copies of the waste profiles and manifest are provided in **Appendix F**. Analytical results for the soil IDW are summarized in **Table 2**.

The water IDW generated during the soil sampling activities was added to the existing water IDW drums used for the quarterly monitoring well sampling. Characterization and disposal of the water IDW was conducted as part of the groundwater sampling task order and is reported under a separate cover (Burns & McDonnell 2022d).

## 4.0 LABORATORY METHODS

Soil samples were analyzed for a subset of or all of the following analytical methods:

- Metals (antimony, arsenic, copper, lead, and zinc) by U.S. Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995a), IIA (1994), IIB (1995b), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015)* (SW-846 Methods) 6020B;
- PAHs by USEPA SW-846 Method 8270C selective ion monitoring (SIM);
- PCBs (arochlors 1016, 1221, 1232, 1242, 1248, 1254, and 1260) by USEPA SW-846 Method 8082;
- TPH-GRO by USEPA SW-846 Method 8260B;
- TPH-DRO and TPH-ORO by USEPA SW-846 Method 8270C;
- VOCs by USEPA SW-846 Method 8260B; and
- Moisture content by American Society for Testing and Material (ASTM) Method D2974.

Soil samples for were submitted under chain-of-custody to Pace in Lenexa, Kansas. **Table 1** presents a summary of the direct-push soil borings and soil samples including depth intervals; survey locations and elevations; chemical analyses; and associated QA/QC samples.

## 5.0 ANALYTICAL RESULTS

Surface and subsurface soil analytical results were compared to established PALs for solid samples listed in Table 1 of the MDNR-approved QAPP (see **Exhibit 1**). Surface soil analytical data are summarized in **Table 3** and subsurface soil analytical data are summarized in **Table 4**. Copies of the laboratory analytical reports are provided in **Appendix G**.

### 5.1 Surface Soil

#### 5.1.1 Metals

Metals were analyzed from soils collected from GB-72 while soils collected from GB-64A/B/C were analyzed for arsenic only. Arsenic, copper, lead, and zinc were detected in surface soil samples. Arsenic was the only metal detected above its PAL in surface soil samples. There were no detections of antimony in the surface soil samples above its respective laboratory reporting limits. Analytical results for metals in surface soil are summarized on **Table 3**. **Table 5** summarizes the frequency of metals detections in surface soil. Metals PAL exceedances in surface soil are illustrated on **Figure 8**.

##### 5.1.1.1 Arsenic

Arsenic was detected in surface soil in each of the four samples collected for arsenic analysis. Detections ranged from 4.8 milligrams per kilogram (mg/kg) (GB-64B/1.5-2.5) to 13.3 mg/kg (GB-64A/3-4). One sample (GB-64A/3-4 [13.3 mg/kg]) had a detection above the PAL of 12.3 mg/kg.

##### 5.1.1.2 Copper

Copper was detected at a concentration of 19.2 mg/kg in the only surface soil sample (GB-72/0.5-1.5) collected for copper analysis. The detection did not exceed the PAL of 310 mg/kg.

##### 5.1.1.3 Lead

Lead was detected at a concentration of 60.3 mg/kg in the only surface soil sample (GB-72/0.5-1.5) collected for lead analysis. The detection did not exceed the PAL of 400 mg/kg.

##### 5.1.1.4 Zinc

Zinc was detected at a concentration of 106 mg/kg in the only surface soil sample (GB-72/0.5-1.5) collected for zinc analysis. The detection did not exceed the PAL of 2,300 mg/kg.



### 5.1.2 Polychlorinated Biphenyls

PCBs (aroclor) 1016, 1221, 1232, 1242, 1248, 1254, and 1260 were not detected in the only surface soil sample (GB-72/0.5-1.5) collected for PCB analysis above their respective laboratory reporting limits.

Analytical results for PCBs in surface soil are summarized on **Table 3**. **Table 5** summarizes the frequency of PCB detections in surface soil.

### 5.1.3 Polycyclic Aromatic Hydrocarbons

Each of the 16 PAH constituents – acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene were detected in surface soil samples. PAH concentrations exceeding PALs were detected in surface soil samples for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and naphthalene. The highest concentrations of each PAH constituent occurred in one sample (GB-19C/1-2). Analytical results for PAHs in surface soil are summarized on **Table 3**. **Table 7** summarizes the frequency of PAH detections in surface soil. PAH PAL exceedances in surface soil are illustrated on **Figures 9** through **13**.

#### 5.1.3.1 Acenaphthene

Acenaphthene was detected in surface soil from 13 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0060 mg/kg (GB-13B/0.5-1.5) to 14.60 estimated value (J) mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 360 mg/kg.

#### 5.1.3.2 Acenaphthylene

Acenaphthylene was detected in surface soil from 12 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0054 mg/kg (GB-40A/1-2) to 1.400 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 4,180 mg/kg.

#### 5.1.3.3 Anthracene

Anthracene was detected in surface soil from 20 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0046 mg/kg (GB-13A/0.5-1.5) to 28.40 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 1,800 mg/kg.

#### 5.1.3.4 Benzo(a)anthracene

Benzo(a)anthracene was detected in surface soil from 25 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (GB-62B/2.5-3.5) to 37.00 J mg/kg

(GB-19C/1-2). Three samples (GB-09A/3-4 [1.350 mg/kg], and GB-19A/0.5-1.5 [1.270 mg/kg], GB-19C/1-2 [37.00 J mg/kg]) had detections above the PAL of 1.1 mg/kg.

#### **5.1.3.5 Benzo(a)pyrene**

Benzo(a)pyrene was detected in surface soil from 23 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (GB-11AB/1.5-2.5) to 27.10 J mg/kg (GB-19C/1-2). Thirteen samples had detections above the PAL of 0.11 mg/kg. PAL exceedances ranged from 0.1130 mg/kg at GB-50B/1-2 to 27.10 J mg/kg at GB-19C/1-2.

#### **5.1.3.6 Benzo(b)fluoranthene**

Benzo(b)fluoranthene was detected in surface soil from 25 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0079 mg/kg (GB-62B/2.5-3.5) to 51.80 J mg/kg (GB-19C/1-2). Five samples (GB-09A/3-4 [1.700 mg/kg], GB-19A/0.5-1.5 [1.790 mg/kg], GB-19C/1-2 [51.80 J mg/kg], GB-50A/1.5-2.5 [1.710 mg/kg], and GB-72/0.5-1.5 [1.520 mg/kg]) had detections above the PAL of 1.1 mg/kg.

#### **5.1.3.7 Benzo(g,h,i)perylene**

Benzo(g,h,i)perylene was detected in surface soil from 22 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0046 mg/kg (GB-62C/1-2) to 12.90 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 1,720 mg/kg.

#### **5.1.3.8 Benzo(k)fluoranthene**

Benzo(k)fluoranthene was detected in surface soil from 22 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0041 mg/kg (GB-62C/1-2) to 10.40 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 11 mg/kg.

#### **5.1.3.9 Chrysene**

Chrysene was detected in surface soil from 25 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0056 mg/kg (GB-62C/1-2) to 31.00 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 110 mg/kg.

#### **5.1.3.10 Dibenzo(a,h)anthracene**

Dibenzo(a,h)anthracene was detected in surface soil from 15 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (B-11AA/1-2) to 3.480 J mg/kg (GB-19C/1-2). Three samples (GB-09A/3-4 [0.1240 mg/kg], GB-19A/0.5-1.5 [0.1620 mg/kg], and GB-19C/1-2 [3.480 J mg/kg]) had detections above the PAL of 0.11 mg/kg.

#### 5.1.3.11 Fluoranthene

Fluoranthene was detected in surface soil from 26 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0053 mg/kg (GB-62A/1-2) to 117.0 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 240 mg/kg.

#### 5.1.3.12 Fluorene

Fluorene was detected in surface soil from 13 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0069 mg/kg (GB-13B/0.5-1.5) to 13.60 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 240 mg/kg.

#### 5.1.3.13 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene was detected in surface soil from 22 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0040 mg/kg (GB-62C/1-2) to 12.10 J mg/kg (GB-19C/1-2). One sample (GB-19C/1-2 [12.10 mg/kg]) had a detection above the PAL of 1.1 mg/kg.

#### 5.1.3.14 Naphthalene

Naphthalene was detected in surface soil from 10 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (GB-44A/3.5-4.5) to 13.90 mg/kg (GB-19C/1-2). One sample (GB-19C/1-2 [13.90 J mg/kg]) had a detection above the PAL of 3.8 mg/kg.

#### 5.1.3.15 Phenanthrene

Phenanthrene was detected in surface soil from 26 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0057 mg/kg (GB-62A/1-2) to 135.0 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 2,170 mg/kg.

#### 5.1.3.16 Pyrene

Pyrene was detected in surface soil from 26 of the 27 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0047 mg/kg (GB-62A/1-2) to 92.20 J mg/kg (GB-19C/1-2). None of the detections exceeded the PAL of 180 mg/kg.

### 5.1.4 Total Petroleum Hydrocarbons

TPH-DRO and TPH-ORO were the only TPH constituents detected in the only surface soil sample (GB-72/0.5-1.5) collected for TPH analysis. TPH-DRO and TPH-ORO were detected at concentrations of 155 mg/kg and 360 mg/kg, respectively. Neither the TPH-DRO or TPH-ORO detection exceeded their respective PALs of 4,150 mg/kg and 124,000 mg/kg. Analytical results for TPH are summarized on **Table 3**. **Table 5** summarized the frequency of TPH detections in surface soil.

### 5.1.5 Volatile Organic Compounds

VOCs were not detected in the only surface soil sample (GB-72/0.5-1.5) collected for VOC analysis above their respective laboratory reporting limits. Analytical results for VOCs in surface soil are summarized on **Table 3**. **Table 5** summarizes the frequency of VOC detections in surface soil.

## 5.2 Subsurface Soil

### 5.2.1 Metals

Metals were analyzed from subsurface soils collected from GB-72 while subsurface soils collected from GB-64A/B/C were analyzed for arsenic only. Arsenic, copper, lead, and zinc were detected in subsurface soil samples. Arsenic was the only metal detected above its PAL in surface soil samples. There were no detections of antimony in the subsurface soil samples above its respective laboratory reporting limits. Analytical results for metals in surface soil are summarized on **Table 4**. **Table 6** summarizes the frequency of metals detections in subsurface soil. Metals PAL exceedances in subsurface soil are illustrated on **Figure 14**.

#### 5.2.1.1 Arsenic

Arsenic was detected in subsurface soil in each of the eight samples collected for arsenic analysis. Detections ranged from 1.9 mg/kg (GB-72/12-13) to 15.6 mg/kg (GB-64/9-10). One sample (GB-64/9-10 [15.6 mg/kg]) had a detection above the PAL of 12.3 mg/kg.

#### 5.2.1.2 Copper

Copper was detected in subsurface soil in each of the three samples collected for copper analysis. Detections ranged from 9.4 mg/kg (GB-72/12-13) to 23.0 mg/kg (GB-72/4-5). None of the detections exceeded the PAL of 310 mg/kg.

#### 5.2.1.3 Lead

Lead was detected in subsurface soil in each of the three samples collected for lead analysis. Detections ranged from 7.7 mg/kg (GB-72/12-13) to 46.5 mg/kg (GB-72/4-5). None of the detections exceeded the PAL of 400 mg/kg.

#### 5.2.1.4 Zinc

Zinc was detected in subsurface soil in each of the three samples collected for zinc analysis. Detections ranged from 29.2 mg/kg (GB-72/12-13) to 60.3 mg/kg (GB-72/4-5). None of the detections exceeded the PAL of 2,300 mg/kg.

## 5.2.2 Polychlorinated Biphenyls

PCBs (aroclor) 1016, 1221, 1232, 1242, 1248, 1254, and 1260 were not detected in the three subsurface soil sample collected for PCB analysis above their respective laboratory reporting limits. Analytical results for PCBs in subsurface soil are summarized on **Table 4**. **Table 6** summarizes the frequency of PCB detections in subsurface soil

## 5.2.3 Polycyclic Aromatic Hydrocarbons

Each of the 16 PAHs constituents – acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene were detected in subsurface soil samples. PAH concentrations exceeding PALs were detected in subsurface soil samples for benzo(a)pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene,. The highest concentrations of each PAH constituent occurred in one sample (GB-44B/5-6). Analytical results for PAHs in subsurface soil are summarized on **Table 4**. **Table 6** summarizes the frequency of PAH detections in subsurface soil. PAH PAL exceedances in subsurface soil are illustrated on **Figures 15** through **18**.

### 5.2.3.1 Acenaphthene

Acenaphthene was detected in subsurface soil from 10 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0064 mg/kg (GB-11AA/4-5) to 0.6440 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 360 mg/kg.

### 5.2.3.2 Acenaphthylene

Acenaphthylene was detected in subsurface soil from six of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (GB-44B/5-6) to 0.0554 mg/kg (GB-13/7-8). None of the detections exceeded the PAL of 4,180 mg/kg.

### 5.2.3.3 Anthracene

Anthracene was detected in subsurface soil from 14 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0041 mg/kg (GB-13/11-12) to 0.5550 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 1,800 mg/kg.

#### **5.2.3.4 Benzo(a)anthracene**

Benzo(a)anthracene was detected in subsurface soil from 17 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0049 mg/kg (GB-09B/9-10) to 0.9830 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 1.1 mg/kg.

#### **5.2.3.5 Benzo(a)pyrene**

Benzo(a)pyrene was detected in subsurface soil from 14 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0050 mg/kg (GB-50A/2.5-3.5) to 0.7690 mg/kg (GB-44B/5-6). Five samples (GB-09C/5-6 [0.1120 mg/kg], GB-13/7-8 [0.3170 mg/kg], GB-19C/2-3 [0.2530 mg/kg], GB-44B/5-6 [0.7690 mg/kg], and GB-72/4-5 [0.3400 mg/kg]) had detections above the PAL of 0.11 mg/kg.

#### **5.2.3.6 Benzo(b)fluoranthene**

Benzo(b)fluoranthene was detected in subsurface soil from 19 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0063 mg/kg (GB-40C/5.5-6.5) to 1.280 mg/kg (GB-44B/5-6). One sample (GB-44B/5-6 [1.280 mg/kg]) had a detection above the PAL of 1.1 mg/kg.

#### **5.2.3.7 Benzo(g,h,i)perylene**

Benzo(g,h,i)perylene was detected in subsurface soil from 13 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0044 mg/kg (GB-50C/4-5) to 0.7250 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 1,720 mg/kg.

#### **5.2.3.8 Benzo(k)fluoranthene**

Benzo(k)fluoranthene was detected in subsurface soil from 14 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0042 mg/kg (GB-50C/4-5) to 0.5050 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 11 mg/kg.

#### **5.2.3.9 Chrysene**

Chrysene was detected in subsurface soil from 19 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0043 mg/kg (GB-40C/5.5-6.5) to 0.9480 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 110 mg/kg.

#### **5.2.3.10 Dibenzo(a,h)anthracene**

Dibenzo(a,h)anthracene was detected in subsurface soil from eight of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0069 mg/kg (GB-45A/3-4) to 0.1770 mg/kg (GB-44B/5-6). One sample (GB-44B/5-6 [0.1770 mg/kg]) had a detection above the PAL of .11 mg/kg.

### 5.2.3.11 Fluoranthene

Fluoranthene was detected in subsurface soil from 25 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0045 mg/kg (GB-50B/2.5-3.5) to 2.340 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 240 mg/kg.

### 5.2.3.12 Fluorene

Fluorene was detected in subsurface soil from 10 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0082 mg/kg (GB-45A/3-4) to 0.6890 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 240 mg/kg.

### 5.2.3.13 Indeno(1,2,3-cd)pyrene

Indeno(1,2,3-cd)pyrene was detected in subsurface soil from 12 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0053 mg/kg (GB-40A/3-4) to 0.5830 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 1.1 mg/kg.

### 5.2.3.14 Naphthalene

Naphthalene was detected in subsurface soil from eight of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0054 mg/kg (GB-11AA/4-5) to 0.1090 mg/kg (GB-72/4-5). None of the detections exceeded the PAL of 3.8 mg/kg.

### 5.2.3.15 Phenanthrene

Phenanthrene was detected in subsurface soil from 26 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0039 mg/kg (GB-40/15-16) to 2.110 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 2,170 mg/kg.

### 5.2.3.16 Pyrene

Pyrene was detected in surface soil from 23 of the 35 soil samples in which PAHs were collected for analysis. Detections ranged from 0.0056 mg/kg (GB-40/19-20) to 1.840 mg/kg (GB-44B/5-6). None of the detections exceeded the PAL of 180 mg/kg.

## 5.2.4 Total Petroleum Hydrocarbons

TPH-DRO and TPH-ORO were the only TPH constituents detected in the five subsurface soil samples collected for TPH analysis. TPH-DRO and TPH-ORO were detected in subsurface soil sample GB-72/4-5 at concentrations of 134 mg/kg and 199 mg/kg, respectively. Neither the TPH-DRO or TPH-ORO detection exceeded their respective PALs of 4,150 mg/mkg and 124,000 mg/kg. Analytical results for TPH are summarized on **Table 4**. **Table 6** summarized the frequency of TPH detections in surface soil

### 5.2.5 Volatile Organic Compounds

The VOC, acetone was detected in one of the five subsurface soil samples collected for VOC analysis at a concentration of 0.0224 mg/kg (GB-72/8-9), which is well below the PAL of 6,100 mg/kg. All other VOC constituents were not detected above their respective laboratory reporting limits. Analytical results for VOCs in surface soil are summarized on **Table 4**. **Table 6** summarizes the frequency of VOC detections in surface soil.

### 5.3 Quality Control Samples

QC samples were collected in accordance with the MDNR-approved QAPP for this sampling event and included five field duplicate samples, five matrix spike (MS)/matrix spike duplicate (MSD) sample pairs, three equipment rinsate blank samples, and three trip blanks. Copies of the laboratory analytical reports are provided in **Appendix G**. QC sample results were evaluated during data validation and results are summarized in Section 6.0.



## 6.0 DATA VALIDATION AND QUALITY CONTROL SAMPLE RESULTS

### 6.1 Data Validation

The data were reviewed for achievement of any method-specified QA/QC criteria in accordance with the MDNR-approved QAPP. Data qualifiers added as a result of the data validation review are included in the Data Validation Memorandum, provided in **Appendix H**. With the exception of the rejected (R) PAH data for the duplicate sample of GB-19C/1-2 (GB-19C/1-2D) due to confirmed matrix differences and the R data for the VOCs – 1,1,2,2-tetrachlorethane and methyl acetate in sample GB-59/14-15 due to lack of MS/MSD spike recovery, all data are valid for use, as qualified, in reporting the results of this sampling event.

### 6.2 Quality Control Samples Results

QC samples were collected in accordance with the MDNR-approved QAPP for this sampling event and included five field duplicate samples, five MS/MSD sample pairs, three equipment rinsate blank samples, and three trip blanks. Copies of the laboratory analytical reports are provided in **Appendix G**.

#### 6.2.1 Field Duplicate Samples

Five field duplicate samples (GB-19C/1-2D, GB-45C/0.5-1.5D, GB-59/12-13D, GB-64/9-105D, and GB-72/8-9D) were collected during soil sampling activities. The field duplicate samples were collocated with their respective parent samples (GB-19C/1-2, GB-45C/0.5-1.5, GB-59/12-13, GB-64/9-10, and GB-72/8-9). Field duplicate samples were analyzed for the same analytical suite as their respective parent samples (see **Table 1**). Analytical results for field duplicate samples from surface soil are presented on **Table 3**. Analytical results for field duplicate samples from subsurface soil are presented on **Table 4**.

#### 6.2.2 Matrix Spike / Matrix Duplicate Samples

Five MS/MSD sample pairs were collected during soil sampling activities. The MS/MSD samples pairs were collocated with their respective parent samples (GB-09C/5-6, GB-45A/3-4, GB-59/14-15, GB-64B/7.5-8.5, and B-11AA/1-2). MS/MSD sample pairs were analyzed for the same analytical suite as their respective parent samples (see **Table 1**).

#### 6.2.3 Equipment Rinsate Blank Samples

Three equipment rinsate blank samples (ERB-04112022, ERB04122022, and ERB04142022) were collected during soil sampling activities. Equipment rinsate blank samples were collected following decontamination of direct-push sampling equipment used for collection of soil samples for analytical analysis. Equipment rinsate blank sample results are summarized on **Table 7**. Equipment rinsate blank

sample results were compared to PALs for aqueous samples listed in Table 2 of the MDNR-approved QAPP (see **Exhibit 2**).

There were no detections of arsenic above their laboratory reporting limits in the equipment rinsate blank samples. PAH constituents – benzo(a)anthracene, benzo(b)fluoranthene, and chrysene were detected in EBR04112022. The VOC, chloroform was detected in ERB04122022. None of the PAH detections or the detection of chloroform in the equipment rinsate blank samples exceeded their respective PALs. None of the other PAH or VOC constituents were detected above their laboratory reporting limits in the equipment rinsate blank samples.

#### **6.2.4 Trip Blank Samples**

Three trip blank samples (Trip Blank, Trip Blank-001, and Trip Blank-002) were collected during soil sampling activities for VOC analysis. Analytical results for equipment rinsate blank samples are presented on **Table 7**. There were no detections of VOCs in the three trip blank samples above laboratory reporting limits.

## 7.0 REFERENCES

- Burns & McDonnell, 2021a. *Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri*, February.
- Burns & McDonnell, 2021b. *Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri*, May.
- Burns & McDonnell, 2021c. *Goodfellow Federal Complex Monitoring Well Installation Summary Report; Goodfellow Federal Complex; St. Louis, Missouri*, August.
- Burns & McDonnell, 2021d. *Goodfellow Federal Complex Quarterly Groundwater Sampling Report – July 2021; Goodfellow Federal Complex; St. Louis, Missouri*, October.
- Burns & McDonnell, 2021e. *Goodfellow Federal Complex Soil Sampling Report; Goodfellow Federal Complex; St. Louis, Missouri*, November.
- Burns & McDonnell, 2022a. *Goodfellow Federal Complex Quarterly Groundwater Sampling Report – October 2021; Goodfellow Federal Complex; St. Louis, Missouri*, January.
- Burns & McDonnell, 2022b. *Work Plan Memorandum for Additional Soil Sampling for the Goodfellow Federal Complex; St. Louis, Missouri*, March.
- Burns & McDonnell, 2022c. *Goodfellow Federal Complex Quarterly Groundwater Sampling Report – January 2022; Goodfellow Federal Complex; St. Louis, Missouri*, May.
- Burns & McDonnell, 2022d. *Goodfellow Federal Complex Quarterly Groundwater Sampling Report – April 2022; Goodfellow Federal Complex; St. Louis, Missouri*, June.
- Burns & McDonnell, 2022e. *Data Validation Memorandum; QA/QC Review of Analytical Data; Additional Soil Sampling Event – April 2022; Goodfellow Federal Complex; St. Louis, Missouri*, July.
- Etegra, 2021. *Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri*, February.
- Missouri Secretary of State, 2019. *Rules of Department of Natural Resources; Division 23 – Well Installation; Chapter 4 – Monitoring Well Construction Code*. January.

USEPA, 1993, 1994, 1995a, 1995b, 1997, 1999, 2005, 2008, and 2015. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995a), IIA (1994), IIB (1995b), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015).*

## **TABLES**

**Table 1**  
**Direct-Push Soil Boring and Sample Collection Summary**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name	Soil Boring ID	Sample ID	Sample Interval (feet bgs)	Soil Sample Type	Location <sup>1</sup>		Elevation (feet MSL)	Boring Depth (feet bgs)	Pavement Thickness <sup>2</sup> (feet)	Analytical Suite								QA/QC Samples		
					Northing (feet)	Easting (feet)				PAHs (8270C SIM)	PCBs <sup>3</sup> (8082)	Metals <sup>4</sup> (6020B)	Arsenic (6020B)	VOCs (8260B)	TPH-GRO (8260B)	TPH-DRO (8270C)	TPH-ORO (8270C)	Moisture Content (ASTM D2974)	Duplicate	MS/MSD
GFC	GB-09A	GB-09A/3-4	3-4	Surface	1041091.773	887695.785	544.945	10	3.0	X	--	--	--	--	--	--	--	X		
		GB-09A/5-6	5-6	Subsurface						X	--	--	--	--	--	--	X			
	GB-09B	GB-09B/4-5	4-5	Surface	1041080.099	887712.717	544.663	15	3.8	X	--	--	--	--	--	--	--	X		
		GB-09B/9-10	9-10	Subsurface						X	--	--	--	--	--	X				
	GB-09C	GB-09C/2-3	2-3	Surface	1041067.402	887692.299	545.136	10	2.2	X	--	--	--	--	--	--	--	X		
		GB-09C/5-6	5-6	Subsurface						X	--	--	--	--	--	X		X (PAHs only)		
	GB-13	GB-13/7-8	7-8	Subsurface	1041180.165	887077.220	553.502	12	0.0	X	--	--	--	--	--	--	--	X		
		GB-13/11-12	11-12	Subsurface						X	--	--	--	--	--	X				
	GB-13A	GB-13A/0.5-1.5	0.5-1.5	Surface	1041192.714	887084.188	553.347	10	0.0	X	--	--	--	--	--	--	--	X		
		GB-13A/5-6	5-6	Subsurface						X	--	--	--	--	--	X				
	GB-13B	GB-13B/0.5-1.5	0.5-1.5	Surface	1041187.329	887068.195	550.295	10	0.0	X	--	--	--	--	--	--	--	X		
		GB-13B/2-3	2-3	Subsurface						X	--	--	--	--	--	X				
	GB-13C	GB-13C/1-2	1-2	Surface	1041169.992	887071.705	553.427	10	0.0	X	--	--	--	--	--	--	--	X		
		GB-13C/5-6	5-6	Subsurface						X	--	--	--	--	--	X				
	GB-19A	GB-19A/0.5-1.5	0.5-1.5	Surface	1041074.045	886857.049	557.592	10	0.0	X	--	--	--	--	--	--	--	X		
		GB-19A/5.5-6.5	5.5-6.5	Subsurface						X	--	--	--	--	--	X				
	GB-19B	GB-19B/2.5-3.5	2.5-3.5	Surface	1041057.636	886862.386	557.267	10	2.6	X	--	--	--	--	--	--	--	X		
		GB-19B/4-5	4-5	Subsurface						X	--	--	--	--	--	X				
	GB-19C	GB-19C/1-2	1-2	Surface	1041054.966	886846.680	557.420	10	0.0	X	--	--	--	--	--	--	--	X	X (PAHs only)	
		GB-19C/2-3	2-3	Subsurface						X	--	--	--	--	--	X				
	GB-40	GB-40/15-16	15-16	Subsurface	1040640.322	886503.819	561.150	20	1.0	X	--	--	--	--	--	--	--	X		
		GB-40/19-20	19-20	Subsurface						X	--	--	--	--	--	X				
	GB-40A	GB-40A/1-2	1-2	Surface	1040646.121	886491.767	561.268	10	1.2	X	--	--	--	--	--	--	--	X		
		GB-40A/3-4	3-4	Subsurface						X	--	--	--	--	--	X				
	GB-40B	GB-40B/1-2	1-2	Surface	1040650.94	886511.219	561.200	10	0.3	X	--	--	--	--	--	--	--	X		
		GB-40B/5-6	5-6	Subsurface						X	--	--	--	--	--	X				
	GB-40C	GB-40C/0.5-1.5	0.5-1.5	Surface	1040623.366	886502.652	561.027	10	2.0	X	--	--	--	--	--	--	--	X		
		GB-40C/5.5-6.5	5.5-6.5	Subsurface						X	--	--	--	--	--	X				
	GB-44A	GB-44A/3.5-4.5	3.5-4.5	Surface	1040134.718	887485.468	539.797	10	3.4	X	--	--	--	--	--	--	--	X		
		GB-44A/5-6	5-6	Subsurface						X	--	--	--	--	--	X				
GB-44B	GB-44B/2.5-3.5	2.5-3.5	Surface	1040120.868	887477.133	539.802	10	2.8	X	--	--	--	--	--	--	--	X			
	GB-44B/5-6	5-6	Subsurface						X	--	--	--	--	--	X					
GB-45A	GB-45A/1-2	1-2	Surface	1040552.886	886279.952	577.667	10	0.0	X	--	--	--	--	--	--	--	X			
	GB-45A/3-4	3-4	Subsurface						X	--	--	--	--	--	X		X (PAHs only)			
GB-45B	GB-45B/1-2	1-2	Surface	1040538.988	886274.574	578.022	10	0.0	X	--	--	--	--	--	--	--	X			
	GB-45B/3-4	3-4	Subsurface						X	--	--	--	--	--	X					
GB-45C	GB-45C/0.5-1.5	0.5-1.5	Surface	1040551.682	886261.363	577.672	10	0.0	X	--	--	--	--	--	--	--	X	X (PAHs only)		
	GB-45C/2.5-3.5	2.5-3.5	Subsurface						X	--	--	--	--	--	X					

**Table 1**  
**Direct-Push Soil Boring and Sample Collection Summary**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name	Soil Boring ID	Sample ID	Sample Interval (feet bgs)	Soil Sample Type	Location <sup>1</sup>		Elevation (feet MSL)	Boring Depth (feet bgs)	Pavement Thickness <sup>2</sup> (feet)	Analytical Suite								QA/QC Samples					
					Northing (feet)	Easting (feet)				PAHs (8270C SIM)	PCBs <sup>3</sup> (8082)	Metals <sup>4</sup> (6020B)	Arsenic (6020B)	VOCs (8260B)	TPH-GRO (8260B)	TPH-DRO (8270C)	TPH-ORO (8270C)	Moisture Content (ASTM D2974)	Duplicate	MS/MSD			
GFC	GB-50A	GB-50A/1.5-2.5	1.5-2.5	Surface	1040037.051	887088.829	544.836	10	1.4	X	--	--	--	--	--	--	--	X					
		GB-50A/2.5-3.5	2.5-3.5	Subsurface						X	--	--	--	--	--	--	--	X					
	GB-50B	GB-50B/1-2	1-2	Surface	1040035.252	887108.366	545.394	10	0.8	X	--	--	--	--	--	--	--	X					
		GB-50B/2.5-3.5	2.5-3.5	Subsurface						X	--	--	--	--	--	--	X						
	GB-50C	GB-50C/1.5-2.5	1.5-2.5	Surface	1040019.562	887099.497	545.46	10	1.6	X	--	--	--	--	--	--	--	X					
		GB-50C/4-5	4-5	Subsurface						X	--	--	--	--	--	--	X						
	GB-59	GB-59/12-13	12-13	Subsurface	1040170.335	886069.87	577.628	10	2.0	--	--	--	--	X	X	X	X	X	X	X (VOCs, TPH-GRO, -DRO, & -ORO)			
		GB-59/14-15	14-15	Subsurface						--	--	--	--	X	X	X	X	X	X	X	X	X	X
	GB-62A	GB-62A/1-2	1-2	Surface	1039909.025	886622.148	542.443	10	0.0	X	--	--	--	--	--	--	--	--	X				
		GB-62A/3-4	3-4	Subsurface						X	--	--	--	--	--	--	--	X					
	GB-62B	GB-62B/2.5-3.5	2.5-3.5	Surface	1039890.57	886638.972	540.353	10	2.0	X	--	--	--	--	--	--	--	--	X				
		GB-62B/5-6	5-6	Subsurface						X	--	--	--	--	--	--	X						
	GB-62C	GB-62C/1-2	1-2	Surface	1039889.367	886621.330	541.909	10	0.0	X	--	--	--	--	--	--	--	--	X				
		GB-62C/3-4	3-4	Subsurface						X	--	--	--	--	--	--	X						
	GB-64	GB-64/9-10	9-10	Subsurface	1039712.200	886941.898	543.280	15	1.2	--	--	--	X	--	--	--	--	X	X	X (arsenic only)			
		GB-64/13-14	13-14	Subsurface						--	--	--	X	--	--	--	X						
	GB-64A	GB-64A/3-4	3-4	Surface	1039721.327	886951.09	543.355	10	3.0	--	--	--	X	--	--	--	--	X					
		GB-64A/5-6	5-6	Subsurface						--	--	--	X	--	--	--	X						
	GB-64B	GB-64B/1.5-2.5	1.5-2.5	Surface	1039703.042	886940.21	543.193	10	1.6	--	--	--	X	--	--	--	--	X					
		GB-64B/7.5-8.5	7.5-8.5	Subsurface						--	--	--	X	--	--	--	X		X (arsenic only)				
	GB-64C	GB-64C/2.5-3.5	2.5-3.5	Surface	1039717.079	886931.897	543.370	10	2.6	--	--	--	X	--	--	--	--	X					
		GB-64C/4-5	4-5	Subsurface						--	--	--	X	--	--	--	X						
	GB-72	GB-72/0.5-1.5	0.5-1.5	Surface	1041283.949	888058.261	528.134	13	0.5	X	X	X	--	X	X	X	X	X					
		GB-72/4-5	4-5	Subsurface						X	X	X	--	X	X	X	X	X					
GB-72/8-9		8-9	Subsurface	X						X	X	--	X	X	X	X	X	X	X	X	X	X (PAHs, PCBs, Metals, VOCs, TPH-GRO, -DRO, & -ORO)	
GB-72/12-13		12-13	Subsurface	X						X	X	--	X	X	X	X	X	X	X	X			
DPTS-2	DPTS-2/9-10	9-10	Subsurface	1041059.733	886560.565	560.729	15	0.0	X	--	--	--	--	--	--	--	X						
	DPTS-2/13-14	13-14	Subsurface						X	--	--	--	--	--	--	X							

**Table 1**  
**Direct-Push Soil Boring and Sample Collection Summary**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name	Soil Boring ID	Sample ID	Sample Interval (feet bgs)	Soil Sample Type	Location <sup>1</sup>		Elevation (feet MSL)	Boring Depth (feet bgs)	Pavement Thickness <sup>2</sup> (feet)	Analytical Suite								QA/QC Samples		
					Northing (feet)	Easting (feet)				PAHs (8270C SIM)	PCBs <sup>3</sup> (8082)	Metals <sup>4</sup> (6020B)	Arsenic (6020B)	VOCs (8260B)	TPH-GRO (8260B)	TPH-DRO (8270C)	TPH-ORO (8270C)	Moisture Content (ASTM D2974)	Duplicate	MS/MSD
GFC	B-11AA	B-11AA/1-2	1-2	Surface	1040961.058	887559.522	545.590	10	1.2	X	--	--	--	--	--	--	--	X		X (PAHs only)
		B-11AA/4-5	4-5	Subsurface						X	--	--	--	--	--	--	X			
	B-11AB	B-11AB/1.5-2.5	1.5-2.5	Surface	1040939.091	887562.058	545.317	10	1.6	X	--	--	--	--	--	--	--	X		
		B-11AB/4-5	4-5	Subsurface						X	--	--	--	--	--	--	X			
	B-11AC	B-11AC/1-2	1-2	Surface	1040934.569	887543.641	545.698	10	1.2	X	--	--	--	--	--	--	--	X		
		B-11AC/4-5	4-5	Subsurface						X	--	--	--	--	--	--	X			

**Notes:**

1. Coordinate system - Missouri State Plane (Missouri East 2401)
2. Pavement thickness includes the thickness of asphalt/concrete plus subbase material.
3. PCB analyzed for aroclors 1016, 1221, 1232, 1242, 1448, 1254, and 1260.
4. Metals analyzed for antimony, arsenic, copper, lead, and zinc.

ASTM - American Society for Testing and Materials

bgs - below ground surface

DRO - diesel range organics

GFC - Goodfellow Federal Complex

GRO - gasoline range organics

ID - identification

MS - matrix spike

MSD - matrix spike duplicate

MSL - mean sea level

ORO - oil range organics

PAH - polycyclic aromatic hydrocarbon

PCB - polychlorinated biphenyl

QA - quality assurance

QC - quality control

SIM - selective ion monitoring

TPH - total petroleum hydrocarbon

VOC - volatile organic compound



**Table 2**  
**Soil Investigation-Derived Waste Results**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

		Sample ID:	IDW Soil 04142022
		Sample Date:	4/14/2022
Parameter	Units		
<b>Paint Filter</b>			
Paint Filter	NA	Negative	
<b>Ignitability</b>			
Ignitability, Open Cup	°F	>212	
<b>Cyanide</b>			
Cyanide (Total)	mg/kg	0.17 U	
<b>Sulfide</b>			
Sulfide (Total)	mg/kg	57.4 U	
<b>Sulfate</b>			
Sulfate (Total)	mg/kg	118 U	
<b>pH</b>			
pH	SU	7.9	
<b>Extractable Organic Halogens</b>			
Extractable Organic Halogens	mg/kg	39.0 U	
<b>Phenolics</b>			
Phenolics, total recoverable	mg/kg	3.6	
<b>Polychlorinated Biphenyls</b>			
Aroclor 1016	µg/kg	37.1 U	
Aroclor 1221	µg/kg	37.1 U	
Aroclor 1232	µg/kg	37.1 U	
Aroclor 1242	µg/kg	37.1 U	
Aroclor 1248	µg/kg	37.1 U	
Aroclor 1254	µg/kg	37.1 U	
Aroclor 1260	µg/kg	37.1 U	
<b>Herbicides (Toxicity Characteristic Leaching Procedure)</b>			
2,4,5-TP (Silvex)	mg/L	0.00250 U	
2,4-D	mg/L	0.00250 U	
<b>Metals (Toxicity Characteristic Leaching Procedure)</b>			
Arsenic	mg/L	0.500 U	
Barium	mg/L	2.50	
Cadmium	mg/L	0.050 U	
Chromium	mg/L	0.100 U	
Lead	mg/L	0.500 U	
Selenium	mg/L	0.500 U	
Silver	mg/L	0.100 U	
Mercury	mg/L	0.0002 U	
<b>Pesticides (Toxicity Characteristic Leaching Procedure)</b>			
gamma-BHC (Lindane)	mg/L	0.00150 U	
Chlordane (technical)	mg/L	0.00100 U	
Endrin	mg/L	0.00100 U	
Heptachlor	mg/L	0.00010 U	
Heptachlor epoxide	mg/L	0.00010 U	
Methoxychlor	mg/L	0.00150 U	
Toxaphene	mg/L	0.0200 U	

**Table 2**  
**Soil Investigation-Derived Waste Results**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Sample ID:		IDW Soil 04142022
Sample Date:		4/14/2022
Parameter	Units	
<b>Semivolatile Organic Compounds (Toxicity Characteristic Leaching Procedure)</b>		
1,4-Dichlorobenzene	µg/L	100.0 U
2,4-Dinitrotoluene	µg/L	100.0 U
Hexachloro-1,3-butadiene	µg/L	100.0 U
Hexachlorobenzene	µg/L	100.0 U
Hexachloroethane	µg/L	100.0 U
2-methylphenol (o-Cresol)	µg/L	100.0 U
3&4-methylphenol (m&p Cresol)	µg/L	100.0 U
Nitrobenzene	µg/L	100.0 U
Pentachlorophenol	µg/L	500.0 U
Pyridine	µg/L	500.0 U
2,4,5-trichlorophenol	µg/L	500.0 U
2,4,6-trichlorophenol	µg/L	100.0 U
<b>Volatile Organic Compounds (Toxicity Characteristic Leaching Procedure)</b>		
Benzene	µg/L	50.0 U
2-butanone (MEK)	µg/L	1,000 U
Carbon tetrachloride	µg/L	50.0 U
Chlorobenzene	µg/L	50.0 U
Chloroform	µg/L	200 U
1,2-dichloroethane	µg/L	50.0 U
1,1-dichloroethene	µg/L	50.0 U
Tetrachloroethene	µg/L	50.0 U
Trichloroethene	µg/L	50.0 U
Vinyl chloride	µg/L	50.0 U

**Notes:**

**Bold - compound was detected**

°F - degrees Fahrenheit

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

SU - standard units

U - compound was not detected

µg/L - micrograms per liter

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
Sample Point:			GB-09A	GB-09B	GB-09C	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-19C	GB-40A	GB-40B	GB-40C	
Sample Interval (feet bgs):			3-4	4-5	2-3	0.5-1.5	0.5-1.5	1-2	0.5-1.5	2.5-3.5	1-2	1-2D	1-2	1-2	0.5-1.5	
Sample Date:			4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022
Notes:												Duplicate				
Parameter	Units	PAL <sup>1</sup>														
<b>Metals</b>																
Antimony	mg/kg	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Arsenic	mg/kg	12.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Copper	mg/kg	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Lead	mg/kg	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Zinc	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
<b>Polychlorinated Biphenyls</b>																
Aroclor 1016	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1221	mg/kg	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1232	mg/kg	0.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1242	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1248	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1254	mg/kg	0.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1260	mg/kg	0.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
<b>Polycyclic Aromatic Hydrocarbons</b>																
Acenaphthene	mg/kg	360	<b>0.2290</b>	0.0016 U	<b>0.0210</b>	0.0016 U	<b>0.0060</b>	<b>0.0349</b>	<b>0.1600</b>	0.0015 U	<b>14.60 J</b>	<b>0.0267 R</b>	<b>0.0367</b>	0.0071 U	0.0015 U	
Acenaphthylene	mg/kg	4180	<b>0.0667</b>	0.0016 U	<b>0.0171</b>	0.0016 U	0.0016 U	0.0016 U	<b>0.0358</b>	0.0015 U	<b>1.400 J</b>	<b>0.0118 R</b>	<b>0.0054</b>	0.0071 U	0.0015 U	
Anthracene	mg/kg	1800	<b>0.6600</b>	<b>0.0128</b>	<b>0.0688</b>	<b>0.0046</b>	<b>0.0089</b>	<b>0.1030</b>	<b>0.4700</b>	0.0017 U	<b>28.40 J</b>	<b>0.0686 R</b>	<b>0.1110</b>	<b>0.0280</b>	<b>0.0063</b>	
Benzo(a)anthracene	mg/kg	1.1	<b>1.350</b>	<b>0.0577</b>	<b>0.2010</b>	<b>0.0127</b>	<b>0.0199</b>	<b>0.3880</b>	<b>1.270</b>	<b>0.0114</b>	<b>37.00 J</b>	<b>0.1960 R</b>	<b>0.3240</b>	<b>0.1130</b>	<b>0.0259</b>	
Benzo(a)pyrene	mg/kg	0.11	<b>1.070</b>	<b>0.0516</b>	<b>0.1770</b>	<b>0.0115</b>	<b>0.0173</b>	<b>0.3230</b>	<b>1.020</b>	<b>0.0087</b>	<b>27.10 J</b>	<b>0.1710 R</b>	<b>0.2800</b>	<b>0.0875</b>	<b>0.0193</b>	
Benzo(b)fluoranthene	mg/kg	1.1	<b>1.700</b>	<b>0.0835</b>	<b>0.2700</b>	<b>0.0205</b>	<b>0.0330</b>	<b>0.6490</b>	<b>1.790</b>	<b>0.0163</b>	<b>51.80 J</b>	<b>0.3090 R</b>	<b>0.4420</b>	<b>0.1620</b>	<b>0.0403</b>	
Benzo(g,h,i)perylene	mg/kg	1720	<b>0.5500</b>	<b>0.0322</b>	<b>0.1210</b>	<b>0.0092</b>	<b>0.0108</b>	<b>0.1940</b>	<b>0.6440</b>	<b>0.0051</b>	<b>12.90 J</b>	<b>0.0970 R</b>	<b>0.1450</b>	<b>0.0545</b>	<b>0.0125</b>	
Benzo(k)fluoranthene	mg/kg	11	<b>0.5160</b>	<b>0.0318</b>	<b>0.0888</b>	<b>0.0060</b>	<b>0.0075</b>	<b>0.1520</b>	<b>0.6630</b>	<b>0.0050</b>	<b>10.40 J</b>	<b>0.0665 R</b>	<b>0.1390</b>	<b>0.0506</b>	<b>0.0124</b>	
Chrysene	mg/kg	110	<b>1.200</b>	<b>0.0579</b>	<b>0.1910</b>	<b>0.0120</b>	<b>0.0190</b>	<b>0.3970</b>	<b>1.290</b>	<b>0.0105</b>	<b>31.00 J</b>	<b>0.1800 R</b>	<b>0.3350</b>	<b>0.1090</b>	<b>0.0268</b>	
Dibenzo(a,h)anthracene	mg/kg	0.11	<b>0.1240</b>	<b>0.0067</b>	<b>0.0244</b>	0.0018 U	0.0018 U	<b>0.0464</b>	<b>0.1620</b>	0.0017 U	<b>3.480 J</b>	<b>0.0236 R</b>	<b>0.0355</b>	0.0082 U	0.0018 U	
Fluoranthene	mg/kg	240	<b>3.130</b>	<b>0.1420</b>	<b>0.4560</b>	<b>0.0291</b>	<b>0.0478</b>	<b>1.120</b>	<b>2.930</b>	<b>0.0281</b>	<b>117.0 J</b>	<b>0.4060 R</b>	<b>0.7280</b>	<b>0.2370</b>	<b>0.0586</b>	
Fluorene	mg/kg	240	<b>0.2040</b>	0.0017 U	<b>0.0193</b>	0.0016 U	<b>0.0069</b>	<b>0.0344</b>	<b>0.1390</b>	0.0016 U	<b>13.60 J</b>	<b>0.0227 R</b>	<b>0.0312</b>	0.0075 U	0.0016 U	
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	<b>0.5030</b>	<b>0.0292</b>	<b>0.1040</b>	<b>0.0072</b>	<b>0.0092</b>	<b>0.1750</b>	<b>0.5990</b>	<b>0.0044</b>	<b>12.10 J</b>	<b>0.0872 R</b>	<b>0.1330</b>	<b>0.0415</b>	<b>0.0109</b>	
Naphthalene	mg/kg	3.8	<b>0.0944</b>	0.0018 U	<b>0.0060</b>	0.0018 U	0.0018 U	0.0018 U	<b>0.0114</b>	0.0017 U	<b>13.90 J</b>	<b>0.0095 R</b>	0.0016 U	0.0082 U	0.0017 U	
Phenanthrene	mg/kg	2170	<b>2.220</b>	<b>0.0535</b>	<b>0.2530</b>	<b>0.0174</b>	<b>0.0338</b>	<b>0.5360</b>	<b>1.480</b>	<b>0.0140</b>	<b>135.0 J</b>	<b>0.2930 R</b>	<b>0.3950</b>	<b>0.0791</b>	<b>0.0280</b>	
Pyrene	mg/kg	180	<b>2.710</b>	<b>0.1110</b>	<b>0.3820</b>	<b>0.0280</b>	<b>0.0459</b>	<b>0.8420</b>	<b>2.120</b>	<b>0.0272</b>	<b>92.20 J</b>	<b>0.3870 R</b>	<b>0.6270</b>	<b>0.2770</b>	<b>0.0589</b>	
<b>Total Petroleum Hydrocarbons</b>																
Gasoline Range Organics	mg/kg	385	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Diesel Range Organics	mg/kg	4150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Oil Range Organics	mg/kg	124000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-09A	GB-09B	GB-09C	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-19C	GB-40A	GB-40B	GB-40C
			Sample Interval (feet bgs):	3-4	4-5	2-3	0.5-1.5	0.5-1.5	1-2	0.5-1.5	2.5-3.5	1-2	1-2D	1-2	1-2	0.5-1.5
			Sample Date:	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022
			Notes:										Duplicate			
Parameter	Units	PAL <sup>1</sup>														
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	mg/kg	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	mg/kg	810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	mg/kg	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	mg/kg	0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	mg/kg	3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	mg/kg	23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloropropene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichlorobenzene	mg/kg	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	mg/kg	0.0051	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trimethylbenzene	mg/kg	34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	mg/kg	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	mg/kg	0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromoethane	mg/kg	0.036	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	mg/kg	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	mg/kg	0.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	mg/kg	1.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	mg/kg	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	mg/kg	148	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichloropropane	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	mg/kg	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dioxane	mg/kg	0.235	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1-Methylnapthalene	mg/kg	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,2-Dichloropropane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone	mg/kg	2700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chloroethyl vinyl ether	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Hexanone	mg/kg	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Methylnapthalene	mg/kg	7.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	mg/kg	3300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	mg/kg	6100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetonitrile	mg/kg	0.206	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrolein	mg/kg	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrylonitrile	mg/kg	0.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromobenzene	mg/kg	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromochloromethane	mg/kg	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	mg/kg	0.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromoform	mg/kg	19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromomethane	mg/kg	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	mg/kg	77	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	mg/kg	0.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	mg/kg	28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-09A	GB-09B	GB-09C	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-19C	GB-40A	GB-40B	GB-40C
			Sample Interval (feet bgs):	3-4	4-5	2-3	0.5-1.5	0.5-1.5	1-2	0.5-1.5	2.5-3.5	1-2	1-2D	1-2	1-2	0.5-1.5
			Sample Date:	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022
			Notes:										Duplicate			
Parameter	Units	PAL <sup>1</sup>														
<b>Volatile Organic Compounds (continued)</b>																
Chloroethane	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	mg/kg	0.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloromethane	mg/kg	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexane	mg/kg	650	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexanone	mg/kg	2800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibromochloromethane	mg/kg	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	mg/kg	7400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	mg/kg	1.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Diisopropyl ether	mg/kg	4.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl ether	mg/kg	1600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl tertiary-butyl ether	mg/kg	0.106	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iodomethane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene	mg/kg	190	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
m/p-Xylene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl acetate	mg/kg	7800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tertiary-butyl ether	mg/kg	47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylcyclohexane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene bromide	mg/kg	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	mg/kg	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Butylbenzene	mg/kg	390	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Heptane	mg/kg	2.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Hexane	mg/kg	61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	mg/kg	380	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	mg/kg	3.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	mg/kg	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	mg/kg	1100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	mg/kg	600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Amyl methyl ether	mg/kg	0.0828	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butanol	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	mg/kg	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrahydrofuran	mg/kg	1800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	mg/kg	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	mg/kg	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl acetate	mg/kg	91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	mg/kg	0.059	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes, Total	mg/kg	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

<b>Group Name:</b>	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
<b>Sample Point:</b>	GB-09A	GB-09B	GB-09C	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-19C	GB-19C	GB-40A	GB-40B	GB-40C
<b>Sample Interval (feet bgs):</b>	3-4	4-5	2-3	0.5-1.5	0.5-1.5	1-2	0.5-1.5	2.5-3.5	1-2	1-2D	1-2	1-2	1-2	0.5-1.5
<b>Sample Date:</b>	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022
<b>Notes:</b>										Duplicate				
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>												

Notes:  
<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

- Bold - compound was detected**
- Highlighted - concentration exceeds screening level
- bgs - below ground surface
- GFC - Goodfellow Federal Complex
- J - estimated value
- mg/kg - milligrams per kilogram
- NE - not established
- NS - not sampled
- R - qualified as rejected at the reporting limit
- U - compound was not detected
- UJ - qualified as estimated at the reporting limit

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
Sample Point:			GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-45C	GB-50A	GB-50B	GB-50C	GB-62A	GB-62B	GB-62C
Sample Interval (feet bgs):			3.5-4.5	2.5-3.5	1-2	1-2	0.5-1.5	0.5-1.5D	1.5-2.5	1-2	1.5-2.5	1-2	2.5-3.5	1-2
Sample Date:			4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/11/2022	4/11/2022	4/11/2022
Notes:								Duplicate						
Parameter	Units	PAL <sup>1</sup>												
<b>Metals</b>														
Antimony	mg/kg	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Arsenic	mg/kg	12.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper	mg/kg	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	mg/kg	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Polychlorinated Biphenyls</b>														
Aroclor 1016	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1221	mg/kg	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1232	mg/kg	0.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1242	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1248	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1254	mg/kg	0.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1260	mg/kg	0.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Polycyclic Aromatic Hydrocarbons</b>														
Acenaphthene	mg/kg	360	0.0208	0.0972	0.0472	0.0014 U	0.0072 U	0.0072 UJ	0.1010	0.0138	0.0015 U	0.0015 U	0.0014 U	0.0015 U
Acenaphthylene	mg/kg	4180	0.0140	0.0174	0.0065	0.0014 U	0.0683 J	0.0072 U	0.0160	0.0274	0.0015 U	0.0015 U	0.0014 U	0.0015 U
Anthracene	mg/kg	1800	0.0820	0.2020	0.1160	0.0121	0.1330 J	0.0238 J	0.2770	0.0673	0.0017 U	0.0016 U	0.0016 U	0.0017 U
Benzo(a)anthracene	mg/kg	1.1	0.2060	0.4040	0.2920	0.0927	0.5130 J	0.1590 J	1.080	0.3280	0.0068	0.0018 U	0.0049	0.0059
Benzo(a)pyrene	mg/kg	0.11	0.1660	0.3150	0.2360	0.0910	0.4740 J	0.1630 J	0.8690	0.2630	0.0054	0.0014 U	0.0019 U	0.0014 U
Benzo(b)fluoranthene	mg/kg	1.1	0.2830	0.4770	0.4240	0.1690	0.7690 J	0.3180 J	1.710	0.4210	0.0107	0.0019 U	0.0079	0.0110
Benzo(g,h,i)perylene	mg/kg	1720	0.1310	0.2200	0.1240	0.0585	0.2590 J	0.1330 J	0.4110	0.1150	0.0018 U	0.0018 U	0.0017 U	0.0046
Benzo(k)fluoranthene	mg/kg	11	0.1340	0.1590	0.1190	0.0749	0.3490 J	0.1360 J	0.4280	0.1140	0.0022 U	0.0022 U	0.0022 U	0.0041
Chrysene	mg/kg	110	0.2050	0.4190	0.2760	0.0998	0.4400 J	0.1930 J	1.290	0.3190	0.0072	0.0019 U	0.0057	0.0056
Dibenzo(a,h)anthracene	mg/kg	0.11	0.0280	0.0463	0.0303	0.0153	0.0654 J	0.0247 J	0.1070	0.0291	0.0017 U	0.0017 U	0.0017 U	0.0017 U
Fluoranthene	mg/kg	240	0.4520	0.7910	0.6310	0.1410	0.8890 J	0.3630 J	2.790	0.6740	0.0169	0.0053	0.0157	0.0123
Fluorene	mg/kg	240	0.0227	0.1540	0.0412	0.0015 U	0.0076 U	0.0076 U	0.1150	0.0146	0.0016 U	0.0015 U	0.0015 U	0.0016 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	0.1060	0.1620	0.1100	0.0515	0.2310 J	0.0978 J	0.3990	0.1130	0.0017 U	0.0017 U	0.0017 U	0.0040
Naphthalene	mg/kg	3.8	0.0049	0.0284	0.0182	0.0183	0.0083 U	0.0083 U	0.0167	0.0016 U	0.0017 U	0.0017 U	0.0017 U	0.0017 U
Phenanthrene	mg/kg	2170	0.2450	0.5130	0.4720	0.0380	0.2030 J	0.1340 J	1.590	0.2310	0.0075	0.0057	0.0090	0.0083
Pyrene	mg/kg	180	0.4660	0.5570	0.5870	0.1650	0.9070 J	0.3570 J	2.190	0.5460	0.0129	0.0047	0.0140	0.0132
<b>Total Petroleum Hydrocarbons</b>														
Gasoline Range Organics	mg/kg	385	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Diesel Range Organics	mg/kg	4150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oil Range Organics	mg/kg	124000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-45C	GB-50A	GB-50B	GB-50C	GB-62A	GB-62B	GB-62C
			Sample Interval (feet bgs):	3.5-4.5	2.5-3.5	1-2	1-2	0.5-1.5	0.5-1.5D	1.5-2.5	1-2	1.5-2.5	1-2	2.5-3.5	1-2
			Sample Date:	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/11/2022	4/11/2022	4/11/2022
			Notes:						Duplicate						
Parameter	Units	PAL <sup>1</sup>													
<b>Volatile Organic Compounds</b>															
1,1,1,2-Tetrachloroethane	mg/kg	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	mg/kg	810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	mg/kg	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	mg/kg	0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	mg/kg	3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	mg/kg	23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloropropene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichlorobenzene	mg/kg	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	mg/kg	0.0051	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trimethylbenzene	mg/kg	34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	mg/kg	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	mg/kg	0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromoethane	mg/kg	0.036	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	mg/kg	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	mg/kg	0.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	mg/kg	1.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	mg/kg	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	mg/kg	148	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichloropropane	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	mg/kg	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dioxane	mg/kg	0.235	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1-Methylnaphthalene	mg/kg	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,2-Dichloropropane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone	mg/kg	2700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chloroethyl vinyl ether	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Hexanone	mg/kg	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	mg/kg	7.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	mg/kg	3300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	mg/kg	6100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetonitrile	mg/kg	0.206	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrolein	mg/kg	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrylonitrile	mg/kg	0.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromobenzene	mg/kg	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromochloromethane	mg/kg	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	mg/kg	0.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromoform	mg/kg	19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromomethane	mg/kg	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	mg/kg	77	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	mg/kg	0.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	mg/kg	28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS



**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-45C	GB-50A	GB-50B	GB-50C	GB-62A	GB-62B	GB-62C
			Sample Interval (feet bgs):	3.5-4.5	2.5-3.5	1-2	1-2	0.5-1.5	0.5-1.5D	1.5-2.5	1-2	1.5-2.5	1-2	2.5-3.5	1-2
			Sample Date:	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/11/2022	4/11/2022	4/11/2022
			Notes:						Duplicate						
Parameter	Units	PAL <sup>1</sup>													
<b>Volatile Organic Compounds (continued)</b>															
Chloroethane	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	mg/kg	0.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloromethane	mg/kg	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexane	mg/kg	650	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexanone	mg/kg	2800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibromochloromethane	mg/kg	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	mg/kg	7400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	mg/kg	1.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Diisopropyl ether	mg/kg	4.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl ether	mg/kg	1600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl tertiary-butyl ether	mg/kg	0.106	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iodomethane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene	mg/kg	190	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
m/p-Xylene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl acetate	mg/kg	7800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tertiary-butyl ether	mg/kg	47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylcyclohexane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene bromide	mg/kg	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	mg/kg	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Butylbenzene	mg/kg	390	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Heptane	mg/kg	2.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Hexane	mg/kg	61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	mg/kg	380	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	mg/kg	3.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	mg/kg	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	mg/kg	1100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	mg/kg	600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Amyl methyl ether	mg/kg	0.0828	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butanol	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	mg/kg	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrahydrofuran	mg/kg	1800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	mg/kg	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	mg/kg	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl acetate	mg/kg	91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	mg/kg	0.059	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes, Total	mg/kg	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

	<b>Group Name:</b>	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
	<b>Sample Point:</b>	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-45C	GB-50A	GB-50B	GB-50C	GB-62A	GB-62B	GB-62C
	<b>Sample Interval (feet bgs):</b>	3.5-4.5	2.5-3.5	1-2	1-2	0.5-1.5	0.5-1.5D	1.5-2.5	1-2	1.5-2.5	1-2	2.5-3.5	1-2
	<b>Sample Date:</b>	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/11/2022	4/11/2022	4/11/2022
	<b>Notes:</b>						Duplicate						
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>											

Notes:

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

R - qualified as rejected at the reporting limit

U - compound was not detected

UJ - qualified as estimated at the reporting limit

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-64A	GB-64B	GB-64C	GB-72	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	3-4	1.5-2.5	2.5-3.5	0.5-1.5	1-2	1.5-2.5	1-2
			Sample Date:	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:							
Parameter	Units	PAL <sup>1</sup>								
<b>Metals</b>										
Antimony	mg/kg	10	NS	NS	NS	0.37 U	NS	NS	NS	NS
Arsenic	mg/kg	12.3	<b>13.3</b>	<b>4.8</b>	<b>7.5</b>	<b>5.8</b>	NS	NS	NS	NS
Copper	mg/kg	310	NS	NS	NS	<b>19.2</b>	NS	NS	NS	NS
Lead	mg/kg	400	NS	NS	NS	<b>60.3</b>	NS	NS	NS	NS
Zinc	mg/kg	2300	NS	NS	NS	<b>106</b>	NS	NS	NS	NS
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	mg/kg	0.41	NS	NS	NS	0.0098 U	NS	NS	NS	NS
Aroclor 1221	mg/kg	0.20	NS	NS	NS	0.0094 U	NS	NS	NS	NS
Aroclor 1232	mg/kg	0.17	NS	NS	NS	0.0043 U	NS	NS	NS	NS
Aroclor 1242	mg/kg	0.23	NS	NS	NS	0.0095 U	NS	NS	NS	NS
Aroclor 1248	mg/kg	0.23	NS	NS	NS	0.0026 U	NS	NS	NS	NS
Aroclor 1254	mg/kg	0.12	NS	NS	NS	0.0037 U	NS	NS	NS	NS
Aroclor 1260	mg/kg	0.24	NS	NS	NS	0.0078 U	NS	NS	NS	NS
<b>Polycyclic Aromatic Hydrocarbons</b>										
Acenaphthene	mg/kg	360	NS	NS	NS	0.0728 U	<b>0.1350 J</b>	0.0015 U	0.0015 U	0.0015 U
Acenaphthylene	mg/kg	4180	NS	NS	NS	0.0728 U	<b>0.0208</b>	0.0015 U	0.0015 U	0.0015 U
Anthracene	mg/kg	1800	NS	NS	NS	<b>0.3350</b>	<b>0.1350 J</b>	0.0016 U	0.0017 U	0.0017 U
Benzo(a)anthracene	mg/kg	1.1	NS	NS	NS	<b>1.090</b>	<b>0.0809 J</b>	<b>0.0075</b>	0.0019 U	0.0019 U
Benzo(a)pyrene	mg/kg	0.11	NS	NS	NS	<b>0.8350</b>	<b>0.0406</b>	<b>0.0049</b>	0.0015 U	0.0015 U
Benzo(b)fluoranthene	mg/kg	1.1	NS	NS	NS	<b>1.520</b>	<b>0.0787 J</b>	<b>0.0086</b>	0.0020 U	0.0020 U
Benzo(g,h,i)perylene	mg/kg	1720	NS	NS	NS	<b>0.6460</b>	<b>0.0180</b>	0.0018 U	0.0018 U	0.0018 U
Benzo(k)fluoranthene	mg/kg	11	NS	NS	NS	<b>0.5830</b>	<b>0.0186</b>	0.0022 U	0.0023 U	0.0023 U
Chrysene	mg/kg	110	NS	NS	NS	<b>1.050</b>	<b>0.0702 J</b>	<b>0.0068</b>	0.0019 U	0.0019 U
Dibenzo(a,h)anthracene	mg/kg	0.11	NS	NS	NS	0.0840 U	<b>0.0049</b>	0.0017 U	0.0017 U	0.0017 U
Fluoranthene	mg/kg	240	NS	NS	NS	<b>2.770</b>	<b>0.3370</b>	<b>0.0209</b>	0.0030 U	0.0030 U
Fluorene	mg/kg	240	NS	NS	NS	0.0763 U	<b>0.1760</b>	0.0015 U	0.0016 U	0.0016 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	NS	NS	NS	<b>0.5390</b>	<b>0.0184</b>	0.0017 U	0.0017 U	0.0017 U
Naphthalene	mg/kg	3.8	NS	NS	NS	0.0834 U	<b>0.1760</b>	0.0017 U	0.0017 U	0.0017 U
Phenanthrene	mg/kg	2170	NS	NS	NS	<b>1.840</b>	<b>0.5320</b>	<b>0.0160</b>	0.0033 U	0.0033 U
Pyrene	mg/kg	180	NS	NS	NS	<b>1.980</b>	<b>0.2140</b>	<b>0.0166</b>	0.0022 U	0.0022 U
<b>Total Petroleum Hydrocarbons</b>										
Gasoline Range Organics	mg/kg	385	NS	NS	NS	0.065 U	NS	NS	NS	NS
Diesel Range Organics	mg/kg	4150	NS	NS	NS	<b>155</b>	NS	NS	NS	NS
Oil Range Organics	mg/kg	124000	NS	NS	NS	<b>360</b>	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-64A	GB-64B	GB-64C	GB-72	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	3-4	1.5-2.5	2.5-3.5	0.5-1.5	1-2	1.5-2.5	1-2
			Sample Date:	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:							
Parameter	Units	PAL <sup>1</sup>								
<b>Volatile Organic Compounds</b>										
1,1,1,2-Tetrachloroethane	mg/kg	2	NS	NS	NS	0.00120 U	NS	NS	NS	NS
1,1,1-Trichloroethane	mg/kg	810	NS	NS	NS	0.00090 U	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	mg/kg	0.6	NS	NS	NS	0.00120 U	NS	NS	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	NS	NS	NS	0.00600 U	NS	NS	NS	NS
1,1,2-Trichloroethane	mg/kg	0.15	NS	NS	NS	0.00075 U	NS	NS	NS	NS
1,1-Dichloroethane	mg/kg	3.6	NS	NS	NS	0.00047 U	NS	NS	NS	NS
1,1-Dichloroethene	mg/kg	23	NS	NS	NS	0.00077 U	NS	NS	NS	NS
1,1-Dichloropropene	mg/kg	NE	NS	NS	NS	0.00110 U	NS	NS	NS	NS
1,2,3-Trichlorobenzene	mg/kg	6.3	NS	NS	NS	0.00095 U	NS	NS	NS	NS
1,2,3-Trichloropropane	mg/kg	0.0051	NS	NS	NS	0.00260 U	NS	NS	NS	NS
1,2,3-Trimethylbenzene	mg/kg	34	NS	NS	NS	0.00240 U	NS	NS	NS	NS
1,2,4-Trichlorobenzene	mg/kg	5.8	NS	NS	NS	0.00095 U	NS	NS	NS	NS
1,2,4-Trimethylbenzene	mg/kg	30	NS	NS	NS	0.00080 U	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	mg/kg	0.01	NS	NS	NS	0.00220 U	NS	NS	NS	NS
1,2-Dibromoethane	mg/kg	0.036	NS	NS	NS	0.00064 U	NS	NS	NS	NS
1,2-Dichlorobenzene	mg/kg	180	NS	NS	NS	0.00075 U	NS	NS	NS	NS
1,2-Dichloroethane	mg/kg	0.46	NS	NS	NS	0.00048 U	NS	NS	NS	NS
1,2-Dichloroethene	mg/kg	16	NS	NS	NS	0.00130 U	NS	NS	NS	NS
1,2-Dichloropropane	mg/kg	1.6	NS	NS	NS	0.00120 U	NS	NS	NS	NS
1,3,5-Trimethylbenzene	mg/kg	27	NS	NS	NS	0.00075 U	NS	NS	NS	NS
1,3-Dichlorobenzene	mg/kg	148	NS	NS	NS	0.00086 U	NS	NS	NS	NS
1,3-Dichloropropane	mg/kg	160	NS	NS	NS	0.00083 U	NS	NS	NS	NS
1,4-Dichlorobenzene	mg/kg	2.6	NS	NS	NS	0.00097 U	NS	NS	NS	NS
1,4-Dioxane	mg/kg	0.235	NS	NS	NS	0.04830 UJ	NS	NS	NS	NS
1-Methylnapthalene	mg/kg	18	NS	NS	NS	0.00059 U	NS	NS	NS	NS
2,2-Dichloropropane	mg/kg	NE	NS	NS	NS	0.00057 U	NS	NS	NS	NS
2-Butanone	mg/kg	2700	NS	NS	NS	0.00410 U	NS	NS	NS	NS
2-Chloroethyl vinyl ether	mg/kg	NE	NS	NS	NS	0.00600 U	NS	NS	NS	NS
2-Chlorotoluene	mg/kg	160	NS	NS	NS	0.00087 U	NS	NS	NS	NS
2-Hexanone	mg/kg	20	NS	NS	NS	0.00300 U	NS	NS	NS	NS
2-Methylnapthalene	mg/kg	7.55	NS	NS	NS	0.00100 UJ	NS	NS	NS	NS
4-Chlorotoluene	mg/kg	160	NS	NS	NS	0.00072 U	NS	NS	NS	NS
4-Methyl-2-pentanone	mg/kg	3300	NS	NS	NS	0.00360 U	NS	NS	NS	NS
Acetone	mg/kg	6100	NS	NS	NS	0.01940 U	NS	NS	NS	NS
Acetonitrile	mg/kg	0.206	NS	NS	NS	0.03070 U	NS	NS	NS	NS
Acrolein	mg/kg	0.1	NS	NS	NS	0.09050 U	NS	NS	NS	NS
Acrylonitrile	mg/kg	0.25	NS	NS	NS	0.00380 U	NS	NS	NS	NS
Benzene	mg/kg	1.2	NS	NS	NS	0.00059 U	NS	NS	NS	NS
Bromobenzene	mg/kg	29	NS	NS	NS	0.00110 U	NS	NS	NS	NS
Bromochloromethane	mg/kg	15	NS	NS	NS	0.00072 U	NS	NS	NS	NS
Bromodichloromethane	mg/kg	0.29	NS	NS	NS	0.00072 U	NS	NS	NS	NS
Bromoform	mg/kg	19	NS	NS	NS	0.00069 U	NS	NS	NS	NS
Bromomethane	mg/kg	0.68	NS	NS	NS	0.00350 U	NS	NS	NS	NS
Carbon disulfide	mg/kg	77	NS	NS	NS	0.00077 U	NS	NS	NS	NS
Carbon tetrachloride	mg/kg	0.65	NS	NS	NS	0.00100 U	NS	NS	NS	NS
Chlorobenzene	mg/kg	28	NS	NS	NS	0.00075 U	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-64A	GB-64B	GB-64C	GB-72	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	3-4	1.5-2.5	2.5-3.5	0.5-1.5	1-2	1.5-2.5	1-2
			Sample Date:	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:							
Parameter	Units	PAL <sup>1</sup>								
<b>Volatile Organic Compounds (continued)</b>										
Chloroethane	mg/kg	1400	NS	NS	NS	0.00180 U	NS	NS	NS	NS
Chloroform	mg/kg	0.32	NS	NS	NS	0.00059 U	NS	NS	NS	NS
Chloromethane	mg/kg	11	NS	NS	NS	0.00096 U	NS	NS	NS	NS
cis-1,2-Dichloroethene	mg/kg	16	NS	NS	NS	0.00052 U	NS	NS	NS	NS
cis-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	0.00064 U	NS	NS	NS	NS
Cyclohexane	mg/kg	650	NS	NS	NS	0.00049 U	NS	NS	NS	NS
Cyclohexanone	mg/kg	2800	NS	NS	NS	0.01520 U	NS	NS	NS	NS
Dibromochloromethane	mg/kg	8.3	NS	NS	NS	0.00077 U	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	mg/kg	7400	NS	NS	NS	0.00100 U	NS	NS	NS	NS
Dichlorodifluoromethane	mg/kg	1.49	NS	NS	NS	0.00140 U	NS	NS	NS	NS
Diisopropyl ether	mg/kg	4.12	NS	NS	NS	0.00057 U	NS	NS	NS	NS
Ethyl ether	mg/kg	1600	NS	NS	NS	0.00067 U	NS	NS	NS	NS
Ethyl tertiary-butyl ether	mg/kg	0.106	NS	NS	NS	0.00035 U	NS	NS	NS	NS
Ethylbenzene	mg/kg	5.8	NS	NS	NS	0.00055 U	NS	NS	NS	NS
Hexachlorobutadiene	mg/kg	1.2	NS	NS	NS	0.00100 U	NS	NS	NS	NS
Iodomethane	mg/kg	NE	NS	NS	NS	0.00180 U	NS	NS	NS	NS
Isopropylbenzene	mg/kg	190	NS	NS	NS	0.00068 U	NS	NS	NS	NS
m/p-Xylene	mg/kg	NE	NS	NS	NS	0.00076 U	NS	NS	NS	NS
Methyl acetate	mg/kg	7800	NS	NS	NS	0.00130 U	NS	NS	NS	NS
Methyl tertiary-butyl ether	mg/kg	47	NS	NS	NS	0.00058 U	NS	NS	NS	NS
Methylcyclohexane	mg/kg	NE	NS	NS	NS	0.00074 U	NS	NS	NS	NS
Methylene bromide	mg/kg	2.4	NS	NS	NS	0.00072 U	NS	NS	NS	NS
Methylene chloride	mg/kg	35	NS	NS	NS	0.00330 U	NS	NS	NS	NS
n-Butylbenzene	mg/kg	390	NS	NS	NS	0.00098 U	NS	NS	NS	NS
n-Heptane	mg/kg	2.2	NS	NS	NS	0.00078 U	NS	NS	NS	NS
n-Hexane	mg/kg	61	NS	NS	NS	0.00540 U	NS	NS	NS	NS
n-Propylbenzene	mg/kg	380	NS	NS	NS	0.00083 U	NS	NS	NS	NS
Naphthalene	mg/kg	3.8	NS	NS	NS	0.00096 U	NS	NS	NS	NS
o-Xylene	mg/kg	65	NS	NS	NS	0.00045 U	NS	NS	NS	NS
p-Isopropyltoluene	mg/kg	1100	NS	NS	NS	0.00082 U	NS	NS	NS	NS
sec-Butylbenzene	mg/kg	780	NS	NS	NS	0.00088 U	NS	NS	NS	NS
Styrene	mg/kg	600	NS	NS	NS	0.00071 U	NS	NS	NS	NS
tert-Amyl methyl ether	mg/kg	0.0828	NS	NS	NS	0.00037 U	NS	NS	NS	NS
tert-Butanol	mg/kg	1400	NS	NS	NS	0.00510 U	NS	NS	NS	NS
tert-Butylbenzene	mg/kg	780	NS	NS	NS	0.00110 U	NS	NS	NS	NS
Tetrachloroethene	mg/kg	8.1	NS	NS	NS	0.00049 U	NS	NS	NS	NS
Tetrahydrofuran	mg/kg	1800	NS	NS	NS	0.00094 U	NS	NS	NS	NS
Toluene	mg/kg	490	NS	NS	NS	0.00042 U	NS	NS	NS	NS
trans-1,2-Dichloroethene	mg/kg	7	NS	NS	NS	0.00081 U	NS	NS	NS	NS
trans-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	0.00055 U	NS	NS	NS	NS
Trichloroethene	mg/kg	0.41	NS	NS	NS	0.00087 U	NS	NS	NS	NS
Trichlorofluoromethane	mg/kg	2300	NS	NS	NS	0.00074 U	NS	NS	NS	NS
Vinyl acetate	mg/kg	91	NS	NS	NS	0.00067 U	NS	NS	NS	NS
Vinyl chloride	mg/kg	0.059	NS	NS	NS	0.00080 U	NS	NS	NS	NS
Xylenes, Total	mg/kg	58	NS	NS	NS	0.00140 U	NS	NS	NS	NS

**Table 3**  
**Surface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

		<b>Group Name:</b>	GFC	GFC	GFC	GFC	GFC	GFC	GFC
		<b>Sample Point:</b>	GB-64A	GB-64B	GB-64C	GB-72	B-11AA	B-11AB	B-11AC
		<b>Sample Interval (feet bgs):</b>	3-4	1.5-2.5	2.5-3.5	0.5-1.5	1-2	1.5-2.5	1-2
		<b>Sample Date:</b>	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/14/2022
		<b>Notes:</b>							
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>							

Notes:

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

R - qualified as rejected at the reporting limit

U - compound was not detected

UJ - qualified as estimated at the reporting limit

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
Sample Point:			GB-09A	GB-09B	GB-09C	GB-13	GB-13	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-40	GB-40
Sample Interval (feet bgs):			5-6	9-10	5-6	7-8	11-12	5-6	2-3	5-6	5.5-6.5	4-5	2-3	15-16	19-20
Sample Date:			4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/11/2022	4/11/2022
Notes:															
Parameter	Units	PAL <sup>1</sup>													
<b>Metals</b>															
Antimony	mg/kg	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Arsenic	mg/kg	12.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Copper	mg/kg	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	mg/kg	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Zinc	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Polychlorinated Biphenyls</b>															
Aroclor 1016	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1221	mg/kg	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1232	mg/kg	0.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1242	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1248	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1254	mg/kg	0.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Aroclor 1260	mg/kg	0.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>Polycyclic Aromatic Hydrocarbons</b>															
Acenaphthene	mg/kg	360	<b>0.0159</b>	0.0015 U	<b>0.0128</b>	<b>0.0251</b>	0.0015 U	0.0015 U	0.0016 U	0.0015 U	<b>0.0399</b>	0.0015 U	<b>0.0344</b>	0.0014 U	0.0015 U
Acenaphthylene	mg/kg	4180	<b>0.0184</b>	0.0015 U	<b>0.0073</b>	<b>0.0554</b>	0.0015 U	0.0015 U	0.0016 U	0.0015 U	0.0014 U	0.0015 U	<b>0.0096</b>	0.0014 U	0.0015 U
Anthracene	mg/kg	1800	<b>0.0604</b>	0.0016 U	<b>0.0466</b>	<b>0.0961</b>	<b>0.0041</b>	0.0017 U	0.0017 U	0.0017 U	<b>0.0717</b>	0.0017 U	<b>0.0827</b>	0.0016 U	0.0016 U
Benzo(a)anthracene	mg/kg	1.1	<b>0.1090</b>	<b>0.0049</b>	<b>0.1510 J</b>	<b>0.3080</b>	0.0019 U	0.0019 U	0.0020 U	0.0019 U	<b>0.0892</b>	0.0019 U	<b>0.2740</b>	0.0018 U	0.0018 U
Benzo(a)pyrene	mg/kg	0.11	<b>0.0822</b>	<b>0.0052</b>	<b>0.1120 J</b>	<b>0.3170</b>	0.0015 U	0.0015 U	0.0015 U	0.0015 U	<b>0.0663</b>	0.0015 U	<b>0.2530</b>	0.0014 U	0.0014 U
Benzo(b)fluoranthene	mg/kg	1.1	<b>0.1240</b>	<b>0.0098</b>	<b>0.1870</b>	<b>0.5600</b>	0.0020 U	0.0020 U	0.0020 U	0.0020 U	<b>0.1110</b>	0.0020 U	<b>0.4590</b>	0.0018 U	0.0019 U
Benzo(g,h,i)perylene	mg/kg	1720	<b>0.0402</b>	0.0018 U	<b>0.0718 J</b>	<b>0.3370</b>	0.0018 U	0.0018 U	0.0019 U	0.0018 U	<b>0.0318</b>	0.0018 U	<b>0.1730</b>	0.0017 U	0.0018 U
Benzo(k)fluoranthene	mg/kg	11	<b>0.0325</b>	0.0022 U	<b>0.0599 J</b>	<b>0.1700</b>	0.0022 U	0.0023 U	0.0023 U	0.0023 U	<b>0.0305</b>	0.0022 U	<b>0.1130</b>	0.0021 U	0.0022 U
Chrysene	mg/kg	110	<b>0.0929</b>	<b>0.0056</b>	<b>0.1420 J</b>	<b>0.3160</b>	0.0019 U	0.0019 U	0.0020 U	0.0020 U	<b>0.0800</b>	0.0019 U	<b>0.2720</b>	0.0018 U	0.0019 U
Dibenzo(a,h)anthracene	mg/kg	0.11	<b>0.0110</b>	0.0017 U	<b>0.0163</b>	<b>0.0638</b>	0.0017 U	0.0018 U	0.0018 U	0.0018 U	<b>0.0083</b>	0.0017 U	<b>0.0395</b>	0.0016 U	0.0017 U
Fluoranthene	mg/kg	240	<b>0.2470</b>	<b>0.0106</b>	<b>0.3440</b>	<b>0.6610</b>	<b>0.0091</b>	0.0031 U	0.0031 U	<b>0.0110</b>	<b>0.2230</b>	0.0030 U	<b>0.5710</b>	0.0029 U	<b>0.0063</b>
Fluorene	mg/kg	240	<b>0.0221</b>	0.0015 U	<b>0.0104</b>	<b>0.0238</b>	0.0016 U	0.0016 U	0.0016 U	0.0016 U	<b>0.0391</b>	0.0016 U	<b>0.0277</b>	0.0015 U	0.0015 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	<b>0.0392</b>	0.0017 U	<b>0.0643 J</b>	<b>0.2450</b>	0.0017 U	0.0018 U	0.0018 U	0.0018 U	<b>0.0299</b>	0.0017 U	<b>0.1510</b>	0.0016 U	0.0017 U
Naphthalene	mg/kg	3.8	<b>0.0082</b>	0.0017 U	0.0018 U	<b>0.0067</b>	0.0017 U	0.0017 U	0.0018 U	0.0018 U	<b>0.0061</b>	0.0017 U	<b>0.0086</b>	0.0016 U	0.0017 U
Phenanthrene	mg/kg	2170	<b>0.2220</b>	<b>0.0056</b>	<b>0.1760</b>	<b>0.3560</b>	<b>0.0138</b>	0.0033 U	<b>0.0048</b>	<b>0.0127</b>	<b>0.2290</b>	0.0033 U	<b>0.3740</b>	<b>0.0039</b>	<b>0.0080</b>
Pyrene	mg/kg	180	<b>0.1940</b>	<b>0.0121</b>	<b>0.2690</b>	<b>0.6520</b>	<b>0.0075</b>	0.0022 U	0.0023 U	<b>0.0098</b>	<b>0.1830</b>	0.0022 U	<b>0.5510</b>	0.0021 U	<b>0.0056</b>
<b>Total Petroleum Hydrocarbons</b>															
Gasoline Range Organics	mg/kg	385	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Diesel Range Organics	mg/kg	4150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Oil Range Organics	mg/kg	124000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-09A	GB-09B	GB-09C	GB-13	GB-13	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-40	GB-40
			Sample Interval (feet bgs):	5-6	9-10	5-6	7-8	11-12	5-6	2-3	5-6	5.5-6.5	4-5	2-3	15-16	19-20
			Sample Date:	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/11/2022	4/11/2022
			Notes:													
Parameter	Units	PAL <sup>1</sup>														
Volatile Organic Compounds																
1,1,1,2-Tetrachloroethane	mg/kg	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	mg/kg	810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	mg/kg	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	mg/kg	0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	mg/kg	3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	mg/kg	23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloropropene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichlorobenzene	mg/kg	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	mg/kg	0.0051	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,3-Trimethylbenzene	mg/kg	34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	mg/kg	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	mg/kg	0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dibromoethane	mg/kg	0.036	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	mg/kg	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	mg/kg	0.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	mg/kg	1.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	mg/kg	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	mg/kg	148	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichloropropane	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	mg/kg	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dioxane	mg/kg	0.235	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1-Methylnapthalene	mg/kg	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2,2-Dichloropropane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Butanone	mg/kg	2700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chloroethyl vinyl ether	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Hexanone	mg/kg	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
2-Methylnapthalene	mg/kg	7.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	mg/kg	3300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetone	mg/kg	6100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acetonitrile	mg/kg	0.206	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrolein	mg/kg	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Acrylonitrile	mg/kg	0.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Benzene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromobenzene	mg/kg	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromochloromethane	mg/kg	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromodichloromethane	mg/kg	0.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromoform	mg/kg	19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bromomethane	mg/kg	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon disulfide	mg/kg	77	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	mg/kg	0.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	mg/kg	28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS



**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
			Sample Point:	GB-09A	GB-09B	GB-09C	GB-13	GB-13	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-40	GB-40
			Sample Interval (feet bgs):	5-6	9-10	5-6	7-8	11-12	5-6	2-3	5-6	5.5-6.5	4-5	2-3	15-16	19-20
			Sample Date:	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/11/2022	4/11/2022
			Notes:													
Parameter	Units	PAL <sup>1</sup>														
Volatile Organic Compounds (continued)																
Chloroethane	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	mg/kg	0.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloromethane	mg/kg	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexane	mg/kg	650	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Cyclohexanone	mg/kg	2800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dibromochloromethane	mg/kg	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	mg/kg	7400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	mg/kg	1.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Diisopropyl ether	mg/kg	4.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl ether	mg/kg	1600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl tertiary-butyl ether	mg/kg	0.106	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethylbenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Iodomethane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Isopropylbenzene	mg/kg	190	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
m/p-Xylene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl acetate	mg/kg	7800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methyl tertiary-butyl ether	mg/kg	47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylcyclohexane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene bromide	mg/kg	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Methylene chloride	mg/kg	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Butylbenzene	mg/kg	390	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Heptane	mg/kg	2.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Hexane	mg/kg	61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
n-Propylbenzene	mg/kg	380	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Naphthalene	mg/kg	3.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
o-Xylene	mg/kg	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	mg/kg	1100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Styrene	mg/kg	600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Amyl methyl ether	mg/kg	0.0828	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butanol	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	mg/kg	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrahydrofuran	mg/kg	1800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	mg/kg	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	mg/kg	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloroethene	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl acetate	mg/kg	91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	mg/kg	0.059	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes, Total	mg/kg	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

<b>Group Name:</b>	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
<b>Sample Point:</b>	GB-09A	GB-09B	GB-09C	GB-13	GB-13	GB-13A	GB-13B	GB-13C	GB-19A	GB-19B	GB-19C	GB-40	GB-40	
<b>Sample Interval (feet bgs):</b>	5-6	9-10	5-6	7-8	11-12	5-6	2-3	5-6	5.5-6.5	4-5	2-3	15-16	19-20	
<b>Sample Date:</b>	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/12/2022	4/11/2022	4/11/2022	
<b>Notes:</b>														
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>												

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

PAL - project action level

U - compound was not detected

UJ - qualified as estimated at the reporting limit

UR - qualified as rejected at the reporting limit

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
Sample Point:			GB-40A	GB-40B	GB-40C	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-50A	GB-50B	GB-50C	GB-59	GB-59	
Sample Interval (feet bgs):			3-4	5-6	5.5-6.5	5-6	5-6	3-4	3-4	2.5-3.5	2.5-3.5	2.5-3.5	4-5	12-13	12-13D	
Sample Date:			4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	
Notes:															Duplicate	
Parameter	Units	PAL <sup>1</sup>														
<b>Metals</b>																
Antimony	mg/kg	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Arsenic	mg/kg	12.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Copper	mg/kg	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Lead	mg/kg	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Zinc	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
<b>Polychlorinated Biphenyls</b>																
Aroclor 1016	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1221	mg/kg	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1232	mg/kg	0.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1242	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1248	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1254	mg/kg	0.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Aroclor 1260	mg/kg	0.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
<b>Polycyclic Aromatic Hydrocarbons</b>																
Acenaphthene	mg/kg	360	<b>0.0126</b>	0.0016 U	0.0015 U	<b>0.0341 J</b>	<b>0.6440</b>	<b>0.0067 J</b>	0.0015 U	0.0016 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	NS	NS
Acenaphthylene	mg/kg	4180	0.0015 U	0.0016 U	0.0015 U	<b>0.0071 J</b>	<b>0.0049</b>	0.0015 U	0.0015 U	0.0016 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	NS	NS
Anthracene	mg/kg	1800	<b>0.0146</b>	0.0018 U	0.0017 U	<b>0.0987 J</b>	<b>0.5550</b>	<b>0.0221 J</b>	0.0017 U	0.0018 U	0.0016 U	0.0017 U	0.0017 U	0.0017 U	NS	NS
Benzo(a)anthracene	mg/kg	1.1	<b>0.0178</b>	<b>0.0165</b>	0.0019 U	<b>0.1490 J</b>	<b>0.9830</b>	<b>0.0593 J</b>	0.0020 U	0.0020 U	<b>0.0062</b>	0.0019 U	<b>0.0066</b>	NS	NS	
Benzo(a)pyrene	mg/kg	0.11	<b>0.0097</b>	0.0016 U	0.0015 U	<b>0.1090 J</b>	<b>0.7690</b>	<b>0.0495 J</b>	0.0015 U	0.0015 U	<b>0.0050</b>	0.0015 U	0.0015 U	NS	NS	
Benzo(b)fluoranthene	mg/kg	1.1	<b>0.0167</b>	<b>0.0215</b>	<b>0.0063</b>	<b>0.1640 J</b>	<b>1.280</b>	<b>0.0798 J</b>	0.0020 U	0.0020 U	<b>0.0106</b>	0.0019 U	<b>0.0135</b>	NS	NS	
Benzo(g,h,i)perylene	mg/kg	1720	<b>0.0074</b>	0.0019 U	0.0018 U	<b>0.0759 J</b>	<b>0.7250</b>	<b>0.0277 J</b>	0.0019 U	0.0019 U	0.0018 U	0.0018 U	<b>0.0044</b>	NS	NS	
Benzo(k)fluoranthene	mg/kg	11	<b>0.0073</b>	<b>0.0111</b>	0.0023 U	<b>0.0697 J</b>	<b>0.5050</b>	<b>0.0227 J</b>	0.0023 U	0.0024 U	0.0022 U	0.0022 U	<b>0.0042</b>	NS	NS	
Chrysene	mg/kg	110	<b>0.0154</b>	<b>0.0217</b>	<b>0.0043</b>	<b>0.1510 J</b>	<b>0.9480</b>	<b>0.0536 J</b>	0.0020 U	0.0020 U	<b>0.0067</b>	0.0019 U	<b>0.0097</b>	NS	NS	
Dibenzo(a,h)anthracene	mg/kg	0.11	0.0017 U	0.0019 U	0.0017 U	<b>0.0155 J</b>	<b>0.1770</b>	<b>0.0069 J</b>	0.0018 U	0.0018 U	0.0017 U	0.0017 U	0.0018 U	NS	NS	
Fluoranthene	mg/kg	240	<b>0.0778</b>	<b>0.0430</b>	<b>0.0106</b>	<b>0.3940</b>	<b>2.340</b>	<b>0.1270 J</b>	0.0031 U	0.0032 U	<b>0.0155</b>	<b>0.0045</b>	<b>0.0282</b>	NS	NS	
Fluorene	mg/kg	240	<b>0.0108</b>	0.0017 U	0.0016 U	<b>0.0606 J</b>	<b>0.6890</b>	<b>0.0082 J</b>	0.0016 U	0.0017 U	0.0016 U	0.0016 U	0.0016 U	NS	NS	
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	<b>0.0053</b>	0.0019 U	0.0017 U	<b>0.0614 J</b>	<b>0.5830</b>	<b>0.0247</b>	0.0018 U	0.0018 U	0.0017 U	0.0017 U	0.0018 U	NS	NS	
Naphthalene	mg/kg	3.8	0.0017 U	0.0018 U	0.0017 U	<b>0.0124</b>	<b>0.0523</b>	0.0017 U	0.0018 U	0.0018 U	0.0017 U	0.0017 U	0.0017 U	NS	NS	
Phenanthrene	mg/kg	2170	<b>0.0711</b>	0.0035 U	<b>0.0072</b>	<b>0.2290</b>	<b>2.110</b>	<b>0.0992 J</b>	0.0034 U	<b>0.0047</b>	<b>0.0112</b>	0.0033 U	<b>0.0117</b>	NS	NS	
Pyrene	mg/kg	180	<b>0.0699</b>	<b>0.0549</b>	<b>0.0097</b>	<b>0.3570</b>	<b>1.840</b>	<b>0.1290 J</b>	0.0022 U	0.0023 U	<b>0.0130</b>	0.0022 U	<b>0.0192</b>	NS	NS	
<b>Total Petroleum Hydrocarbons</b>																
Gasoline Range Organics	mg/kg	385	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.059 U	0.086 U	
Diesel Range Organics	mg/kg	4150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.2 U	4.8 U	
Oil Range Organics	mg/kg	124000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.2 U	4.8 U	

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
Sample Point:			GB-40A	GB-40B	GB-40C	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-50A	GB-50B	GB-50C	GB-59	GB-59
Sample Interval (feet bgs):			3-4	5-6	5.5-6.5	5-6	5-6	3-4	3-4	2.5-3.5	2.5-3.5	2.5-3.5	4-5	12-13	12-13D
Sample Date:			4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022
Notes:															Duplicate
Parameter	Units	PAL <sup>1</sup>													
<b>Volatile Organic Compounds</b>															
1,1,1,2-Tetrachloroethane	mg/kg	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00110 U	0.00160 U
1,1,1-Trichloroethane	mg/kg	810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00081 U	0.00120 U
1,1,2,2-Tetrachloroethane	mg/kg	0.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00110 U	0.00160 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00540 U	0.00790 U
1,1,2-Trichloroethane	mg/kg	0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00069 U	0.00100 U
1,1-Dichloroethane	mg/kg	3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00042 U	0.00062 U
1,1-Dichloroethene	mg/kg	23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00100 U
1,1-Dichloropropene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00098 U	0.00140 U
1,2,3-Trichlorobenzene	mg/kg	6.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00087 U	0.00130 U
1,2,3-Trichloropropane	mg/kg	0.0051	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00230 U	0.00340 U
1,2,3-Trimethylbenzene	mg/kg	34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00220 U	0.00320 U
1,2,4-Trichlorobenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00087 U	0.00130 U
1,2,4-Trimethylbenzene	mg/kg	30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00073 U	0.00110 U
1,2-Dibromo-3-chloropropane	mg/kg	0.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00200 U	0.00290 U
1,2-Dibromoethane	mg/kg	0.036	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00058 U	0.00085 U
1,2-Dichlorobenzene	mg/kg	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00068 U	0.00099 U
1,2-Dichloroethane	mg/kg	0.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00044 U	0.00063 U
1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00120 U	0.00180 U
1,2-Dichloropropane	mg/kg	1.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00110 U	0.00150 U
1,3,5-Trimethylbenzene	mg/kg	27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00068 U	0.00099 U
1,3-Dichlorobenzene	mg/kg	148	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00078 U	0.00110 U
1,3-Dichloropropane	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00075 U	0.00110 U
1,4-Dichlorobenzene	mg/kg	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00088 U	0.00130 U
1,4-Dioxane	mg/kg	0.235	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.04390 UJ	0.06380 UJ
1-Methylnapthalene	mg/kg	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00054 U	0.00079 U
2,2-Dichloropropane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00052 U	0.00075 U
2-Butanone	mg/kg	2700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00370 U	0.00540 U
2-Chloroethyl vinyl ether	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00540 U	0.00790 U
2-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00079 U	0.00120 U
2-Hexanone	mg/kg	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00270 U	0.00390 U
2-Methylnapthalene	mg/kg	7.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00095 UJ	0.00140 UJ
4-Chlorotoluene	mg/kg	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00095 U
4-Methyl-2-pentanone	mg/kg	3300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00330 U	0.00480 U
Acetone	mg/kg	6100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.01760 U	0.02570 U
Acetonitrile	mg/kg	0.206	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.02790 U	0.04060 U
Acrolein	mg/kg	0.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.08230 U	0.12000 U
Acrylonitrile	mg/kg	0.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00340 U	0.00500 U
Benzene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00054 U	0.00078 U
Bromobenzene	mg/kg	29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00100 U	0.00150 U
Bromochloromethane	mg/kg	15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00095 U
Bromodichloromethane	mg/kg	0.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00095 U
Bromoform	mg/kg	19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00063 U	0.00091 U
Bromomethane	mg/kg	0.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00320 U	0.00470 U
Carbon disulfide	mg/kg	77	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00100 U
Carbon tetrachloride	mg/kg	0.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00093 U	0.00140 U
Chlorobenzene	mg/kg	28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00068 U	0.00099 U

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC		
			Sample Point:	GB-40A	GB-40B	GB-40C	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-50A	GB-50B	GB-50C	GB-59	GB-59	
			Sample Interval (feet bgs):	3-4	5-6	5.5-6.5	5-6	5-6	3-4	3-4	2.5-3.5	2.5-3.5	2.5-3.5	4-5	12-13	12-13D	
			Sample Date:	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	
			Notes:													Duplicate	
Parameter	Units	PAL <sup>1</sup>															
<b>Volatile Organic Compounds (continued)</b>																	
Chloroethane	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00160 U	0.00240 U
Chloroform	mg/kg	0.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00054 U	0.00078 U
Chloromethane	mg/kg	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00087 U	0.00130 U
cis-1,2-Dichloroethene	mg/kg	16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00047 U	0.00068 U
cis-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00058 U	0.00084 U
Cyclohexane	mg/kg	650	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00044 U	0.00064 U
Cyclohexanone	mg/kg	2800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.01380 U	0.02010 U
Dibromochloromethane	mg/kg	8.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00100 U
trans-1,4-Dichloro-2-butene	mg/kg	7400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00091 U	0.00130 U
Dichlorodifluoromethane	mg/kg	1.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00130 U	0.00190 U
Diisopropyl ether	mg/kg	4.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00052 U	0.00076 U
Ethyl ether	mg/kg	1600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00089 U
Ethyl tertiary-butyl ether	mg/kg	0.106	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00032 U	0.00046 U
Ethylbenzene	mg/kg	5.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00050 U	0.00073 U
Hexachlorobutadiene	mg/kg	1.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00093 U	0.00130 U
Iodomethane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00160 U	0.00240 U
Isopropylbenzene	mg/kg	190	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00062 U	0.00090 U
m/p-Xylene	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00069 U	0.00100 U
Methyl acetate	mg/kg	7800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00120 U	0.00170 U
Methyl tertiary-butyl ether	mg/kg	47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00052 U	0.00076 U
Methylcyclohexane	mg/kg	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00067 U	0.00097 U
Methylene bromide	mg/kg	2.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00095 U
Methylene chloride	mg/kg	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00300 U	0.00430 U
n-Butylbenzene	mg/kg	390	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00089 U	0.00130 U
n-Heptane	mg/kg	2.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00071 U	0.00100 U
n-Hexane	mg/kg	61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00490 U	0.00720 U
n-Propylbenzene	mg/kg	380	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00075 U	0.00110 U
Naphthalene	mg/kg	3.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00087 U	0.00130 U
o-Xylene	mg/kg	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00041 U	0.00059 U
p-Isopropyltoluene	mg/kg	1100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00075 U	0.00110 U
sec-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00080 U	0.00120 U
Styrene	mg/kg	600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00064 U	0.00093 U
tert-Amyl methyl ether	mg/kg	0.0828	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00034 U	0.00049 U
tert-Butanol	mg/kg	1400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00470 U	0.00680 U
tert-Butylbenzene	mg/kg	780	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00096 U	0.00140 U
Tetrachloroethene	mg/kg	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00045 U	0.00065 U
Tetrahydrofuran	mg/kg	1800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00085 U	0.00120 U
Toluene	mg/kg	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00038 U	0.00056 U
trans-1,2-Dichloroethene	mg/kg	7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00074 U	0.00110 U
trans-1,3-Dichloropropene	mg/kg	0.224	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00050 U	0.00072 U
Trichloroethene	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00079 U	0.00110 U
Trichlorofluoromethane	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00067 U	0.00097 U
Vinyl acetate	mg/kg	91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00089 U
Vinyl chloride	mg/kg	0.059	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00072 U	0.00110 U
Xylenes, Total	mg/kg	58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00120 U	0.00180 U

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
Sample Point:	GB-40A	GB-40B	GB-40C	GB-44A	GB-44B	GB-45A	GB-45B	GB-45C	GB-50A	GB-50B	GB-50C	GB-59	GB-59	
Sample Interval (feet bgs):	3-4	5-6	5.5-6.5	5-6	5-6	3-4	3-4	2.5-3.5	2.5-3.5	2.5-3.5	4-5	12-13	12-13D	
Sample Date:	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022	4/12/2022	4/12/2022	
Notes:													Duplicate	
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>												

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

PAL - project action level

U - compound was not detected

UJ - qualified as estimated at the reporting limit

UR - qualified as rejected at the reporting limit

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
Sample Point:			GB-59	GB-62A	GB-62B	GB-62C	GB-64	GB-64	GB-64	GB-64A	GB-64B	GB-64C	GB-72	GB-72	GB-72	
Sample Interval (feet bgs):			14-15	3-4	5-6	3-4	9-10	9-10D	13-14	5-6	7.5-8.5	4-5	4-5	8-9	8-9D	
Sample Date:			4/12/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/14/2022	4/14/2022	4/14/2022	
Notes:								Duplicate							Duplicate	
Parameter	Units	PAL <sup>1</sup>														
<b>Metals</b>																
Antimony	mg/kg	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.33 U	0.31 U	0.38 U
Arsenic	mg/kg	12.3	NS	NS	NS	NS	<b>9.2 J</b>	<b>15.6 J</b>	<b>2.1</b>	<b>10.5</b>	<b>3.7</b>	<b>11.4</b>	<b>3.8</b>	<b>6.1 J</b>	<b>3.6 J</b>	
Copper	mg/kg	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<b>23.0</b>	<b>17.9 J</b>	<b>12.7 J</b>
Lead	mg/kg	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<b>46.5</b>	<b>30.9 J</b>	<b>20.8 J</b>
Zinc	mg/kg	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<b>60.3</b>	<b>59.2 J</b>	<b>42.4 J</b>
<b>Polychlorinated Biphenyls</b>																
Aroclor 1016	mg/kg	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0096 U	0.0098 U	0.0100 U
Aroclor 1221	mg/kg	0.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0093 U	0.0094 U	0.0096 U
Aroclor 1232	mg/kg	0.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0042 U	0.0043 U	0.0044 U
Aroclor 1242	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0094 U	0.0095 U	0.0097 U
Aroclor 1248	mg/kg	0.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0026 U	0.0026 U	0.0027 U
Aroclor 1254	mg/kg	0.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0036 U	0.0037 U	0.0038 U
Aroclor 1260	mg/kg	0.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0076 U	0.0078 U	0.0079 U
<b>Polycyclic Aromatic Hydrocarbons</b>																
Acenaphthene	mg/kg	360	NS	0.0015 U	0.0015 U	0.0015 U	NS	NS	NS	NS	NS	NS	NS	0.0287 U	0.0030 U	0.0030 U
Acenaphthylene	mg/kg	4180	NS	0.0015 U	0.0015 U	0.0015 U	NS	NS	NS	NS	NS	NS	NS	0.0287 U	0.0030 U	0.0030 U
Anthracene	mg/kg	1800	NS	0.0017 U	<b>0.0045</b>	0.0016 U	NS	NS	NS	NS	NS	NS	<b>0.1640</b>	<b>0.0206 J</b>	0.0034 UJ	
Benzo(a)anthracene	mg/kg	1.1	NS	0.0019 U	<b>0.0207</b>	0.0018 U	NS	NS	NS	NS	NS	NS	<b>0.4520</b>	<b>0.0564 J</b>	0.0038 UJ	
Benzo(a)pyrene	mg/kg	0.11	NS	0.0014 U	<b>0.0162</b>	0.0014 U	NS	NS	NS	NS	NS	NS	<b>0.3400</b>	<b>0.0482</b>	0.0029 U	
Benzo(b)fluoranthene	mg/kg	1.1	NS	0.0019 U	<b>0.0344</b>	0.0019 U	NS	NS	NS	NS	NS	NS	<b>0.5840</b>	<b>0.0710 J</b>	0.0039 UJ	
Benzo(g,h,i)perylene	mg/kg	1720	NS	0.0018 U	<b>0.0121</b>	0.0017 U	NS	NS	NS	NS	NS	NS	<b>0.2390</b>	<b>0.0313 J</b>	0.0036 UJ	
Benzo(k)fluoranthene	mg/kg	11	NS	0.0022 U	<b>0.0159</b>	0.0022 U	NS	NS	NS	NS	NS	NS	<b>0.1420</b>	<b>0.0252 J</b>	0.0045 UJ	
Chrysene	mg/kg	110	NS	0.0019 U	<b>0.0250</b>	0.0019 U	NS	NS	NS	NS	NS	NS	<b>0.4160</b>	<b>0.0501 J</b>	0.0039 UJ	
Dibenzo(a,h)anthracene	mg/kg	0.11	NS	0.0017 U	0.0017 U	0.0017 U	NS	NS	NS	NS	NS	NS	0.0332 U	0.0034 U	0.0035 U	
Fluoranthene	mg/kg	240	NS	0.0030 U	<b>0.0561</b>	0.0029 U	NS	NS	NS	NS	NS	NS	<b>1.150</b>	<b>0.1300 J</b>	<b>0.0116 J</b>	
Fluorene	mg/kg	240	NS	0.0016 U	0.0015 U	0.0015 U	NS	NS	NS	NS	NS	NS	0.0301 U	0.0031 U	0.0032 U	
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	NS	0.0017 U	<b>0.0101</b>	0.0017 U	NS	NS	NS	NS	NS	NS	<b>0.2100</b>	<b>0.0276 J</b>	0.0035 UJ	
Naphthalene	mg/kg	3.8	NS	0.0017 U	0.0017 U	0.0017 U	NS	NS	NS	NS	NS	NS	<b>0.1090</b>	0.0034 U	0.0035 U	
Phenanthrene	mg/kg	2170	NS	0.0033 U	<b>0.0240</b>	0.0032 U	NS	NS	NS	NS	NS	NS	<b>0.9300</b>	<b>0.0842 J</b>	0.0066 UJ	
Pyrene	mg/kg	180	NS	0.0021 U	<b>0.0506</b>	0.0021 U	NS	NS	NS	NS	NS	NS	<b>0.8490</b>	<b>0.1070 J</b>	<b>0.0093 J</b>	
<b>Total Petroleum Hydrocarbons</b>																
Gasoline Range Organics	mg/kg	385	0.056 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.055 U	0.059 U	0.066 U
Diesel Range Organics	mg/kg	4150	5.3 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<b>134</b>	1.7 U	1.7 U
Oil Range Organics	mg/kg	124000	5.3 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<b>199</b>	1.7 U	1.7 U

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC		
			Sample Point:	GB-59	GB-62A	GB-62B	GB-62C	GB-64	GB-64	GB-64	GB-64A	GB-64B	GB-64C	GB-72	GB-72	GB-72	
			Sample Interval (feet bgs):	14-15	3-4	5-6	3-4	9-10	9-10D	13-14	5-6	7.5-8.5	4-5	4-5	8-9	8-9D	
			Sample Date:	4/12/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/14/2022	4/14/2022	4/14/2022	
			Notes:						Duplicate							Duplicate	
Parameter	Units	PAL <sup>1</sup>															
<b>Volatile Organic Compounds</b>																	
1,1,1,2-Tetrachloroethane	mg/kg	2	0.00100 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00100 U	0.00110 U	0.00120 U
1,1,1-Trichloroethane	mg/kg	810	0.00077 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00076 U	0.00081 U	0.00090 U
1,1,2,2-Tetrachloroethane	mg/kg	0.6	0.00100 UR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00100 U	0.00110 U	0.00120 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	0.00510 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00510 U	0.00540 U	0.00600 U
1,1,2-Trichloroethane	mg/kg	0.15	0.00065 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00064 U	0.00068 U	0.00076 U
1,1-Dichloroethane	mg/kg	3.6	0.00040 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00040 U	0.00042 U	0.00047 U
1,1-Dichloroethene	mg/kg	23	0.00066 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00069 U	0.00077 U
1,1-Dichloropropene	mg/kg	NE	0.00092 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00091 U	0.00097 U	0.00110 U
1,2,3-Trichlorobenzene	mg/kg	6.3	0.00082 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00081 U	0.00086 U	0.00096 U
1,2,3-Trichloropropane	mg/kg	0.0051	0.00220 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00220 U	0.00230 U	0.00260 U
1,2,3-Trimethylbenzene	mg/kg	34	0.00210 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00200 U	0.00220 U	0.00240 U
1,2,4-Trichlorobenzene	mg/kg	5.8	0.00082 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00081 U	0.00086 U	0.00096 U
1,2,4-Trimethylbenzene	mg/kg	30	0.00069 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00068 U	0.00072 U	0.00081 U
1,2-Dibromo-3-chloropropane	mg/kg	0.01	0.00190 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00190 U	0.00200 U	0.00220 U
1,2-Dibromoethane	mg/kg	0.036	0.00055 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00054 U	0.00058 U	0.00065 U
1,2-Dichlorobenzene	mg/kg	180	0.00064 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00063 U	0.00067 U	0.00076 U
1,2-Dichloroethane	mg/kg	0.46	0.00041 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00041 U	0.00043 U	0.00048 U
1,2-Dichloroethene	mg/kg	16	0.00110 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00110 U	0.00120 U	0.00130 U
1,2-Dichloropropane	mg/kg	1.6	0.00100 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00099 U	0.00110 U	0.00120 U
1,3,5-Trimethylbenzene	mg/kg	27	0.00064 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00064 U	0.00068 U	0.00076 U
1,3-Dichlorobenzene	mg/kg	148	0.00074 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00073 U	0.00078 U	0.00087 U
1,3-Dichloropropane	mg/kg	160	0.00071 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00075 U	0.00084 U
1,4-Dichlorobenzene	mg/kg	2.6	0.00083 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00082 U	0.00087 U	0.00098 U
1,4-Dioxane	mg/kg	0.235	0.04130 UJ	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.04090 UJ	0.04350 UJ	0.04870 UJ
1-Methylnapthalene	mg/kg	18	0.00051 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00050 U	0.00054 U	0.00060 U
2,2-Dichloropropane	mg/kg	NE	0.00049 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00048 U	0.00051 U	0.00057 U
2-Butanone	mg/kg	2700	0.00350 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00350 U	0.00370 U	0.00410 U
2-Chloroethyl vinyl ether	mg/kg	NE	0.00510 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00510 U	0.00540 U	0.00600 U
2-Chlorotoluene	mg/kg	160	0.00075 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00074 U	0.00079 U	0.00088 U
2-Hexanone	mg/kg	20	0.00260 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00250 U	0.00270 U	0.00300 U
2-Methylnapthalene	mg/kg	7.55	0.00090 UJ	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00089 UJ	0.00095 UJ	0.00110 UJ
4-Chlorotoluene	mg/kg	160	0.00062 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00065 U	0.00073 U
4-Methyl-2-pentanone	mg/kg	3300	0.00310 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00310 U	0.00330 U	0.00370 U
Acetone	mg/kg	6100	0.01660 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.01640 U	<b>0.02240</b>	0.01960 U
Acetonitrile	mg/kg	0.206	0.02630 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.02610 U	0.02770 U	0.03100 U
Acrolein	mg/kg	0.1	0.07760 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.07680 U	0.08150 U	0.09140 U
Acrylonitrile	mg/kg	0.25	0.00330 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00320 U	0.00340 U	0.00380 U
Benzene	mg/kg	1.2	0.00051 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00050 U	0.00053 U	0.00060 U
Bromobenzene	mg/kg	29	0.00096 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00095 U	0.00100 U	0.00110 U
Bromochloromethane	mg/kg	15	0.00062 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00065 U	0.00073 U
Bromodichloromethane	mg/kg	0.29	0.00062 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00065 U	0.00073 U
Bromoform	mg/kg	19	0.00059 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00058 U	0.00062 U	0.00069 U
Bromomethane	mg/kg	0.68	0.00300 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00300 U	0.00320 U	0.00360 U
Carbon disulfide	mg/kg	77	0.00066 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00065 U	0.00069 U	0.00078 U
Carbon tetrachloride	mg/kg	0.65	0.00088 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00087 U	0.00092 U	0.00100 U
Chlorobenzene	mg/kg	28	0.00064 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00064 U	0.00068 U	0.00076 U



**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Group Name:			GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	
Sample Point:			GB-59	GB-62A	GB-62B	GB-62C	GB-64	GB-64	GB-64	GB-64A	GB-64B	GB-64C	GB-72	GB-72	
Sample Interval (feet bgs):			14-15	3-4	5-6	3-4	9-10	9-10D	13-14	5-6	7.5-8.5	4-5	4-5	8-9	
Sample Date:			4/12/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/14/2022	4/14/2022	
Notes:								Duplicate						Duplicate	
Parameter	Units	PAL <sup>1</sup>													
<b>Volatile Organic Compounds (continued)</b>															
Chloroethane	mg/kg	1400	0.00150 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00150 U	0.00160 U	0.00180 U
Chloroform	mg/kg	0.32	0.00051 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00050 U	0.00053 U	0.00060 U
Chloromethane	mg/kg	11	0.00082 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00081 U	0.00086 U	0.00096 U
cis-1,2-Dichloroethene	mg/kg	16	0.00044 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00044 U	0.00046 U	0.00052 U
cis-1,3-Dichloropropene	mg/kg	0.224	0.00054 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00054 U	0.00057 U	0.00064 U
Cyclohexane	mg/kg	650	0.00042 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00041 U	0.00044 U	0.00049 U
Cyclohexanone	mg/kg	2800	0.01300 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.01290 U	0.01370 U	0.01530 U
Dibromochloromethane	mg/kg	8.3	0.00066 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00066 U	0.00070 U	0.00078 U
trans-1,4-Dichloro-2-butene	mg/kg	7400	0.00086 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00085 U	0.00090 U	0.00100 U
Dichlorodifluoromethane	mg/kg	1.49	0.00120 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00120 U	0.00130 U	0.00140 U
Diisopropyl ether	mg/kg	4.12	0.00049 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00049 U	0.00052 U	0.00058 U
Ethyl ether	mg/kg	1600	0.00057 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00057 U	0.00060 U	0.00068 U
Ethyl tertiary-butyl ether	mg/kg	0.106	0.00030 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00029 U	0.00031 U	0.00035 U
Ethylbenzene	mg/kg	5.8	0.00047 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00047 U	0.00050 U	0.00056 U
Hexachlorobutadiene	mg/kg	1.2	0.00087 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00086 U	0.00092 U	0.00100 U
Iodomethane	mg/kg	NE	0.00150 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00150 U	0.00160 U	0.00180 U
Isopropylbenzene	mg/kg	190	0.00058 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00058 U	0.00061 U	0.00069 U
m/p-Xylene	mg/kg	NE	0.00065 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00064 U	0.00068 U	0.00076 U
Methyl acetate	mg/kg	7800	0.00110 UR	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00110 U	0.00120 U	0.00130 U
Methyl tertiary-butyl ether	mg/kg	47	0.00049 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00049 U	0.00052 U	0.00058 U
Methylcyclohexane	mg/kg	NE	0.00063 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00062 U	0.00066 U	0.00074 U
Methylene bromide	mg/kg	2.4	0.00062 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00061 U	0.00065 U	0.00073 U
Methylene chloride	mg/kg	35	0.00280 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00280 U	0.00300 U	0.00330 U
n-Butylbenzene	mg/kg	390	0.00084 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00083 U	0.00089 U	0.00099 U
n-Heptane	mg/kg	2.2	0.00067 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00066 U	0.00070 U	0.00079 U
n-Hexane	mg/kg	61	0.00460 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00460 U	0.00490 U	0.00550 U
n-Propylbenzene	mg/kg	380	0.00071 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00074 U	0.00083 U
Naphthalene	mg/kg	3.8	0.00082 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00082 U	0.00087 U	0.00097 U
o-Xylene	mg/kg	65	0.00038 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00038 U	0.00040 U	0.00045 U
p-Isopropyltoluene	mg/kg	1100	0.00071 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00070 U	0.00074 U	0.00083 U
sec-Butylbenzene	mg/kg	780	0.00075 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00074 U	0.00079 U	0.00088 U
Styrene	mg/kg	600	0.00060 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00060 U	0.00064 U	0.00071 U
tert-Amyl methyl ether	mg/kg	0.0828	0.00032 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00031 U	0.00033 U	0.00037 U
tert-Butanol	mg/kg	1400	0.00440 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00440 U	0.00460 U	0.00520 U
tert-Butylbenzene	mg/kg	780	0.00091 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00090 U	0.00095 U	0.00110 U
Tetrachloroethene	mg/kg	8.1	0.00042 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00042 U	0.00045 U	0.00050 U
Tetrahydrofuran	mg/kg	1800	0.00080 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00080 U	0.00084 U	0.00095 U
Toluene	mg/kg	490	0.00036 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00036 U	0.00038 U	0.00043 U
trans-1,2-Dichloroethene	mg/kg	7	0.00070 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00069 U	0.00073 U	0.00082 U
trans-1,3-Dichloropropene	mg/kg	0.224	0.00047 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00046 U	0.00049 U	0.00055 U
Trichloroethene	mg/kg	0.41	0.00074 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00074 U	0.00078 U	0.00088 U
Trichlorofluoromethane	mg/kg	2300	0.00063 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00062 U	0.00066 U	0.00074 U
Vinyl acetate	mg/kg	91	0.00058 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00057 U	0.00061 U	0.00068 U
Vinyl chloride	mg/kg	0.059	0.00068 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00068 U	0.00072 U	0.00080 U
Xylenes, Total	mg/kg	58	0.00120 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.00120 U	0.00120 U	0.00140 U

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

<b>Group Name:</b>	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC	GFC
<b>Sample Point:</b>	GB-59	GB-62A	GB-62B	GB-62C	GB-64	GB-64	GB-64	GB-64A	GB-64B	GB-64C	GB-72	GB-72	GB-72	GB-72
<b>Sample Interval (feet bgs):</b>	14-15	3-4	5-6	3-4	9-10	9-10D	13-14	5-6	7.5-8.5	4-5	4-5	8-9	8-9D	
<b>Sample Date:</b>	4/12/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/11/2022	4/14/2022	4/14/2022	4/14/2022	
<b>Notes:</b>						Duplicate							Duplicate	
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>												

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

PAL - project action level

U - compound was not detected

UJ - qualified as estimated at the reporting limit

UR - qualified as rejected at the reporting limit

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-72	DPTS-2	DPTS-2	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	12-13	9-10	13-14	4-5	4-5	4-5
			Sample Date:	4/14/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:						
Parameter	Units	PAL <sup>1</sup>							
<b>Metals</b>									
Antimony	mg/kg	10	0.33 U	NS	NS	NS	NS	NS	NS
Arsenic	mg/kg	12.3	<b>1.9</b>	NS	NS	NS	NS	NS	NS
Copper	mg/kg	310	<b>9.4</b>	NS	NS	NS	NS	NS	NS
Lead	mg/kg	400	<b>7.7</b>	NS	NS	NS	NS	NS	NS
Zinc	mg/kg	2300	<b>29.2</b>	NS	NS	NS	NS	NS	NS
<b>Polychlorinated Biphenyls</b>									
Aroclor 1016	mg/kg	0.41	0.0099 U	NS	NS	NS	NS	NS	NS
Aroclor 1221	mg/kg	0.20	0.0095 U	NS	NS	NS	NS	NS	NS
Aroclor 1232	mg/kg	0.17	0.0043 U	NS	NS	NS	NS	NS	NS
Aroclor 1242	mg/kg	0.23	0.0096 U	NS	NS	NS	NS	NS	NS
Aroclor 1248	mg/kg	0.23	0.0026 U	NS	NS	NS	NS	NS	NS
Aroclor 1254	mg/kg	0.12	0.0037 U	NS	NS	NS	NS	NS	NS
Aroclor 1260	mg/kg	0.24	0.0078 U	NS	NS	NS	NS	NS	NS
<b>Polycyclic Aromatic Hydrocarbons</b>									
Acenaphthene	mg/kg	360	0.0030 U	0.0015 U	0.0015 U	<b>0.0064</b>	0.0015 U	0.0015 U	0.0015 U
Acenaphthylene	mg/kg	4180	0.0030 U	0.0015 U	0.0015 U	0.0016 U	0.0015 U	0.0015 U	0.0015 U
Anthracene	mg/kg	1800	0.0033 U	0.0017 U	0.0017 U	<b>0.0074</b>	0.0017 U	0.0017 U	0.0017 U
Benzo(a)anthracene	mg/kg	1.1	<b>0.0112</b>	0.0019 U	0.0019 U	0.0020 U	0.0019 U	0.0019 U	0.0019 U
Benzo(a)pyrene	mg/kg	0.11	0.0029 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U	0.0015 U
Benzo(b)fluoranthene	mg/kg	1.1	<b>0.0127</b>	0.0019 U	0.0020 U	0.0020 U	0.0020 U	<b>0.0084</b>	0.0018 U
Benzo(g,h,i)perylene	mg/kg	1720	0.0036 U	0.0018 U	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U
Benzo(k)fluoranthene	mg/kg	11	0.0045 U	0.0022 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U
Chrysene	mg/kg	110	<b>0.0102</b>	0.0019 U	0.0020 U	0.0020 U	0.0019 U	<b>0.0061</b>	0.0018 U
Dibenzo(a,h)anthracene	mg/kg	0.11	0.0034 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Fluoranthene	mg/kg	240	<b>0.0280</b>	0.0030 U	0.0031 U	<b>0.0177</b>	<b>0.0052</b>	<b>0.0154</b>	0.0016 U
Fluorene	mg/kg	240	0.0031 U	0.0016 U	0.0016 U	<b>0.0088</b>	0.0016 U	0.0016 U	0.0016 U
Indeno(1,2,3-cd)pyrene	mg/kg	1.1	0.0034 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
Naphthalene	mg/kg	3.8	0.0034 U	0.0017 U	0.0018 U	<b>0.0054</b>	0.0017 U	0.0017 U	0.0017 U
Phenanthrene	mg/kg	2170	<b>0.0247</b>	0.0033 U	0.0034 U	<b>0.0291</b>	<b>0.0058</b>	<b>0.0048</b>	0.0018 U
Pyrene	mg/kg	180	<b>0.0227</b>	0.0022 U	0.0022 U	<b>0.0107</b>	0.0022 U	<b>0.0106</b>	0.0018 U
<b>Total Petroleum Hydrocarbons</b>									
Gasoline Range Organics	mg/kg	385	0.055 U	NS	NS	NS	NS	NS	NS
Diesel Range Organics	mg/kg	4150	1.7 U	NS	NS	NS	NS	NS	NS
Oil Range Organics	mg/kg	124000	1.7 U	NS	NS	NS	NS	NS	NS

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-72	DPTS-2	DPTS-2	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	12-13	9-10	13-14	4-5	4-5	4-5
			Sample Date:	4/14/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:						
Parameter	Units	PAL <sup>1</sup>							
<b>Volatile Organic Compounds</b>									
1,1,1,2-Tetrachloroethane	mg/kg	2	0.00100 U	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	mg/kg	810	0.00075 U	NS	NS	NS	NS	NS	NS
1,1,2,2-Tetrachloroethane	mg/kg	0.6	0.00100 U	NS	NS	NS	NS	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	670	0.00500 U	NS	NS	NS	NS	NS	NS
1,1,2-Trichloroethane	mg/kg	0.15	0.00063 U	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	mg/kg	3.6	0.00039 U	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	mg/kg	23	0.00064 U	NS	NS	NS	NS	NS	NS
1,1-Dichloropropene	mg/kg	NE	0.00090 U	NS	NS	NS	NS	NS	NS
1,2,3-Trichlorobenzene	mg/kg	6.3	0.00080 U	NS	NS	NS	NS	NS	NS
1,2,3-Trichloropropane	mg/kg	0.0051	0.00220 U	NS	NS	NS	NS	NS	NS
1,2,3-Trimethylbenzene	mg/kg	34	0.00200 U	NS	NS	NS	NS	NS	NS
1,2,4-Trichlorobenzene	mg/kg	5.8	0.00080 U	NS	NS	NS	NS	NS	NS
1,2,4-Trimethylbenzene	mg/kg	30	0.00067 U	NS	NS	NS	NS	NS	NS
1,2-Dibromo-3-chloropropane	mg/kg	0.01	0.00180 U	NS	NS	NS	NS	NS	NS
1,2-Dibromoethane	mg/kg	0.036	0.00054 U	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	mg/kg	180	0.00063 U	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	mg/kg	0.46	0.00040 U	NS	NS	NS	NS	NS	NS
1,2-Dichloroethene	mg/kg	16	0.00110 U	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	mg/kg	1.6	0.00098 U	NS	NS	NS	NS	NS	NS
1,3,5-Trimethylbenzene	mg/kg	27	0.00063 U	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	mg/kg	148	0.00072 U	NS	NS	NS	NS	NS	NS
1,3-Dichloropropane	mg/kg	160	0.00070 U	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	mg/kg	2.6	0.00082 U	NS	NS	NS	NS	NS	NS
1,4-Dioxane	mg/kg	0.235	0.04060 UJ	NS	NS	NS	NS	NS	NS
1-Methylnaphthalene	mg/kg	18	0.00050 U	NS	NS	NS	NS	NS	NS
2,2-Dichloropropane	mg/kg	NE	0.00048 U	NS	NS	NS	NS	NS	NS
2-Butanone	mg/kg	2700	0.00340 U	NS	NS	NS	NS	NS	NS
2-Chloroethyl vinyl ether	mg/kg	NE	0.00500 U	NS	NS	NS	NS	NS	NS
2-Chlorotoluene	mg/kg	160	0.00073 U	NS	NS	NS	NS	NS	NS
2-Hexanone	mg/kg	20	0.00250 U	NS	NS	NS	NS	NS	NS
2-Methylnaphthalene	mg/kg	7.55	0.00088 UJ	NS	NS	NS	NS	NS	NS
4-Chlorotoluene	mg/kg	160	0.00060 U	NS	NS	NS	NS	NS	NS
4-Methyl-2-pentanone	mg/kg	3300	0.00300 U	NS	NS	NS	NS	NS	NS
Acetone	mg/kg	6100	0.01630 U	NS	NS	NS	NS	NS	NS
Acetonitrile	mg/kg	0.206	0.02580 U	NS	NS	NS	NS	NS	NS
Acrolein	mg/kg	0.1	0.07610 U	NS	NS	NS	NS	NS	NS
Acrylonitrile	mg/kg	0.25	0.00320 U	NS	NS	NS	NS	NS	NS
Benzene	mg/kg	1.2	0.00050 U	NS	NS	NS	NS	NS	NS
Bromobenzene	mg/kg	29	0.00094 U	NS	NS	NS	NS	NS	NS
Bromochloromethane	mg/kg	15	0.00060 U	NS	NS	NS	NS	NS	NS
Bromodichloromethane	mg/kg	0.29	0.00060 U	NS	NS	NS	NS	NS	NS
Bromoform	mg/kg	19	0.00058 U	NS	NS	NS	NS	NS	NS
Bromomethane	mg/kg	0.68	0.00300 U	NS	NS	NS	NS	NS	NS
Carbon disulfide	mg/kg	77	0.00065 U	NS	NS	NS	NS	NS	NS
Carbon tetrachloride	mg/kg	0.65	0.00086 U	NS	NS	NS	NS	NS	NS
Chlorobenzene	mg/kg	28	0.00063 U	NS	NS	NS	NS	NS	NS

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-72	DPTS-2	DPTS-2	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	12-13	9-10	13-14	4-5	4-5	4-5
			Sample Date:	4/14/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:						
Parameter	Units	PAL <sup>1</sup>							
<b>Volatile Organic Compounds (continued)</b>									
Chloroethane	mg/kg	1400	0.00150 U	NS	NS	NS	NS	NS	NS
Chloroform	mg/kg	0.32	0.00050 U	NS	NS	NS	NS	NS	NS
Chloromethane	mg/kg	11	0.00080 U	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	mg/kg	16	0.00043 U	NS	NS	NS	NS	NS	NS
cis-1,3-Dichloropropene	mg/kg	0.224	0.00053 U	NS	NS	NS	NS	NS	NS
Cyclohexane	mg/kg	650	0.00041 U	NS	NS	NS	NS	NS	NS
Cyclohexanone	mg/kg	2800	0.01280 U	NS	NS	NS	NS	NS	NS
Dibromochloromethane	mg/kg	8.3	0.00065 U	NS	NS	NS	NS	NS	NS
trans-1,4-Dichloro-2-butene	mg/kg	7400	0.00084 UJ	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	mg/kg	1.49	0.00120 U	NS	NS	NS	NS	NS	NS
Diisopropyl ether	mg/kg	4.12	0.00048 U	NS	NS	NS	NS	NS	NS
Ethyl ether	mg/kg	1600	0.00056 U	NS	NS	NS	NS	NS	NS
Ethyl tertiary-butyl ether	mg/kg	0.106	0.00029 U	NS	NS	NS	NS	NS	NS
Ethylbenzene	mg/kg	5.8	0.00046 U	NS	NS	NS	NS	NS	NS
Hexachlorobutadiene	mg/kg	1.2	0.00086 U	NS	NS	NS	NS	NS	NS
Iodomethane	mg/kg	NE	0.00150 U	NS	NS	NS	NS	NS	NS
Isopropylbenzene	mg/kg	190	0.00057 U	NS	NS	NS	NS	NS	NS
m/p-Xylene	mg/kg	NE	0.00064 U	NS	NS	NS	NS	NS	NS
Methyl acetate	mg/kg	7800	0.00110 U	NS	NS	NS	NS	NS	NS
Methyl tertiary-butyl ether	mg/kg	47	0.00048 U	NS	NS	NS	NS	NS	NS
Methylcyclohexane	mg/kg	NE	0.00062 U	NS	NS	NS	NS	NS	NS
Methylene bromide	mg/kg	2.4	0.00060 U	NS	NS	NS	NS	NS	NS
Methylene chloride	mg/kg	35	0.00280 U	NS	NS	NS	NS	NS	NS
n-Butylbenzene	mg/kg	390	0.00083 U	NS	NS	NS	NS	NS	NS
n-Heptane	mg/kg	2.2	0.00065 U	NS	NS	NS	NS	NS	NS
n-Hexane	mg/kg	61	0.00460 U	NS	NS	NS	NS	NS	NS
n-Propylbenzene	mg/kg	380	0.00069 U	NS	NS	NS	NS	NS	NS
Naphthalene	mg/kg	3.8	0.00081 U	NS	NS	NS	NS	NS	NS
o-Xylene	mg/kg	65	0.00038 U	NS	NS	NS	NS	NS	NS
p-Isopropyltoluene	mg/kg	1100	0.00069 U	NS	NS	NS	NS	NS	NS
sec-Butylbenzene	mg/kg	780	0.00074 U	NS	NS	NS	NS	NS	NS
Styrene	mg/kg	600	0.00059 U	NS	NS	NS	NS	NS	NS
tert-Amyl methyl ether	mg/kg	0.0828	0.00031 U	NS	NS	NS	NS	NS	NS
tert-Butanol	mg/kg	1400	0.00430 U	NS	NS	NS	NS	NS	NS
tert-Butylbenzene	mg/kg	780	0.00089 U	NS	NS	NS	NS	NS	NS
Tetrachloroethene	mg/kg	8.1	0.00042 U	NS	NS	NS	NS	NS	NS
Tetrahydrofuran	mg/kg	1800	0.00079 U	NS	NS	NS	NS	NS	NS
Toluene	mg/kg	490	0.00035 U	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	mg/kg	7	0.00068 U	NS	NS	NS	NS	NS	NS
trans-1,3-Dichloropropene	mg/kg	0.224	0.00046 U	NS	NS	NS	NS	NS	NS
Trichloroethene	mg/kg	0.41	0.00073 U	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	mg/kg	2300	0.00062 U	NS	NS	NS	NS	NS	NS
Vinyl acetate	mg/kg	91	0.00057 U	NS	NS	NS	NS	NS	NS
Vinyl chloride	mg/kg	0.059	0.00067 U	NS	NS	NS	NS	NS	NS
Xylenes, Total	mg/kg	58	0.00110 U	NS	NS	NS	NS	NS	NS

**Table 4**  
**Subsurface Soil Sample Results (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Group Name:	GFC	GFC	GFC	GFC	GFC	GFC
			Sample Point:	GB-72	DPTS-2	DPTS-2	B-11AA	B-11AB	B-11AC
			Sample Interval (feet bgs):	12-13	9-10	13-14	4-5	4-5	4-5
			Sample Date:	4/14/2022	4/12/2022	4/12/2022	4/14/2022	4/14/2022	4/14/2022
			Notes:						
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>							

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

bgs - below ground surface

GFC - Goodfellow Federal Complex

J - estimated value

mg/kg - milligrams per kilogram

NE - not established

NS - not sampled

PAL - project action level

U - compound was not detected

UJ - qualified as estimated at the reporting limit

UR - qualified as rejected at the reporting limit

**Table 5**  
**Frequency of Detections in Surface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Parent Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Metals</b>								
Antimony	1	0 / 1	NA	NA	NA	NA	10	0 / 1
Arsenic	4	4 / 4	4.8	GB-72/0.5-1.5	13.3	GB-64A/3-4	12.3	1 / 4
Copper	1	1 / 1	19.2	GB-72/0.5-1.5	19.2	GB-72/0.5-1.5	310	0 / 1
Lead	1	1 / 1	60.3	GB-72/0.5-1.5	60	GB-72/0.5-1.5	400	0 / 1
Zinc	1	1 / 1	106.0	GB-72/0.5-1.5	106	GB-72/0.5-1.5	2300	0 / 1
<b>Polychlorinated Biphenyls</b>								
Aroclor 1016	1	0 / 1	NA	NA	NA	NA	0.41	0 / 1
Aroclor 1221	1	0 / 1	NA	NA	NA	NA	0.20	0 / 1
Aroclor 1232	1	0 / 1	NA	NA	NA	NA	0.17	0 / 1
Aroclor 1242	1	0 / 1	NA	NA	NA	NA	0.23	0 / 1
Aroclor 1248	1	0 / 1	NA	NA	NA	NA	0.23	0 / 1
Aroclor 1254	1	0 / 1	NA	NA	NA	NA	0.12	0 / 1
Aroclor 1260	1	0 / 1	NA	NA	NA	NA	0.24	0 / 1
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	27	13 / 27	0.0060	GB-13B/0.5-1.5	14.60 J	GB-19C/1-2	360	0 / 27
Acenaphthylene	27	12 / 27	0.0054	GB-40A/1-2	1.400 J	GB-19C/1-2	4180	0 / 27
Anthracene	27	20 / 27	0.0046	GB-13A/0.5-1.5	28.40 J	GB-19C/1-2	1800	0 / 27
Benzo(a)anthracene	27	25 / 27	0.0049	GB-62B/2.5-3.5	37.00 J	GB-19C/1-2	1.1	3 / 27
Benzo(a)pyrene	27	23 / 27	0.0049	B-11AB/1.5-2.5	27.10 J	GB-19C/1-2	0.11	13 / 27
Benzo(b)fluoranthene	27	25 / 27	0.0079	GB-62B/2.5-3.5	51.80 J	GB-19C/1-2	1.1	5 / 27
Benzo(g,h,i)perylene	27	22 / 27	0.0046	GB-62C/1-2	12.90 J	GB-19C/1-2	1720	0 / 27
Benzo(k)fluoranthene	27	22 / 27	0.0041	GB-62C/1-2	10.40 J	GB-19C/1-2	11	0 / 27
Chrysene	27	25 / 27	0.0056	GB-62C/1-2	31.00 J	GB-19C/1-2	110	0 / 27
Dibenzo(a,h)anthracene	27	15 / 27	0.0049	B-11AA/1-2	3.480 J	GB-19C/1-2	0.11	3 / 27
Fluoranthene	27	26 / 27	0.0053	GB-62A/1-2	117.0 J	GB-19C/1-2	240	0 / 27
Fluorene	27	13 / 27	0.0069	GB-13B/0.5-1.5	13.60 J	GB-19C/1-2	240	0 / 27
Indeno(1,2,3-cd)pyrene	27	22 / 27	0.0040	GB-62C/1-2	12.10 J	GB-19C/1-2	1.1	1 / 27
Naphthalene	27	10 / 27	0.0049	GB-44A/3.5-4.5	13.90 J	GB-19C/1-2	3.8	1 / 27
Phenanthrene	27	26 / 27	0.0057	GB-62A/1-2	135.0 J	GB-19C/1-2	2170	0 / 27
Pyrene	27	26 / 27	0.0047	GB-62A/1-2	92.20 J	GB-19C/1-2	180	0 / 27

**Table 5**  
**Frequency of Detections in Surface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Parent Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Total Petroleum Hydrocarbons</b>								
Gasoline Range Organics	1	0 / 1	NA	NA	NA	NA	385	0 / 1
Diesel Range Organics	1	1 / 1	155	GB-72/0.5-1.5	155	GB-72/0.5-1.5	4150	0 / 1
Oil Range Organics	1	1 / 1	360	GB-72/0.5-1.5	360	GB-72/0.5-1.5	124000	0 / 1
<b>Volatile Organic Compounds</b>								
1,1,1,2-Tetrachloroethane	1	0 / 1	NA	NA	NA	NA	2	0 / 1
1,1,1-Trichloroethane	1	0 / 1	NA	NA	NA	NA	810	0 / 1
1,1,2,2-Tetrachloroethane	1	0 / 1	NA	NA	NA	NA	0.6	0 / 1
1,1,2-Trichloro-1,2,2-trifluoroethane	1	0 / 1	NA	NA	NA	NA	670	0 / 1
1,1,2-Trichloroethane	1	0 / 1	NA	NA	NA	NA	0.15	0 / 1
1,1-Dichloroethane	1	0 / 1	NA	NA	NA	NA	3.6	0 / 1
1,1-Dichloroethene	1	0 / 1	NA	NA	NA	NA	23	0 / 1
1,1-Dichloropropene	1	0 / 1	NA	NA	NA	NA	NE	0 / 1
1,2,3-Trichlorobenzene	1	0 / 1	NA	NA	NA	NA	6.3	0 / 1
1,2,3-Trichloropropane	1	0 / 1	NA	NA	NA	NA	0.0051	0 / 1
1,2,3-Trimethylbenzene	1	0 / 1	NA	NA	NA	NA	34	0 / 1
1,2,4-Trichlorobenzene	1	0 / 1	NA	NA	NA	NA	5.8	0 / 1
1,2,4-Trimethylbenzene	1	0 / 1	NA	NA	NA	NA	30	0 / 1
1,2-Dibromo-3-chloropropane	1	0 / 1	NA	NA	NA	NA	0.01	0 / 1
1,2-Dibromoethane	1	0 / 1	NA	NA	NA	NA	0.036	0 / 1
1,2-Dichlorobenzene	1	0 / 1	NA	NA	NA	NA	180	0 / 1
1,2-Dichloroethane	1	0 / 1	NA	NA	NA	NA	0.46	0 / 1
1,2-Dichloroethene	1	0 / 1	NA	NA	NA	NA	16	0 / 1
1,2-Dichloropropane	1	0 / 1	NA	NA	NA	NA	1.6	0 / 1
1,3,5-Trimethylbenzene	1	0 / 1	NA	NA	NA	NA	27	0 / 1
1,3-Dichlorobenzene	1	0 / 1	NA	NA	NA	NA	148	0 / 1
1,3-Dichloropropane	1	0 / 1	NA	NA	NA	NA	160	0 / 1
1,4-Dichlorobenzene	1	0 / 1	NA	NA	NA	NA	2.6	0 / 1
2,2-Dichloropropane	1	0 / 1	NA	NA	NA	NA	NE	0 / 1
2-Butanone	1	0 / 1	NA	NA	NA	NA	2700	0 / 1
2-Chlorotoluene	1	0 / 1	NA	NA	NA	NA	160	0 / 1
2-Hexanone	1	0 / 1	NA	NA	NA	NA	20	0 / 1
4-Chlorotoluene	1	0 / 1	NA	NA	NA	NA	160	0 / 1
4-Methyl-2-pentanone	1	0 / 1	NA	NA	NA	NA	3300	0 / 1



**Table 5**  
**Frequency of Detections in Surface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Parent Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Volatile Organic Compounds (continued)</b>								
Acetone	1	0 / 1	NA	NA	NA	NA	6100	0 / 1
Acrolein	1	0 / 1	NA	NA	NA	NA	0.1	0 / 1
Acrylonitrile	1	0 / 1	NA	NA	NA	NA	0.25	0 / 1
Benzene	1	0 / 1	NA	NA	NA	NA	1.2	0 / 1
Bromobenzene	1	0 / 1	NA	NA	NA	NA	29	0 / 1
Bromochloromethane	1	0 / 1	NA	NA	NA	NA	15	0 / 1
Bromodichloromethane	1	0 / 1	NA	NA	NA	NA	0.29	0 / 1
Bromoform	1	0 / 1	NA	NA	NA	NA	19	0 / 1
Bromomethane	1	0 / 1	NA	NA	NA	NA	0.68	0 / 1
Carbon disulfide	1	0 / 1	NA	NA	NA	NA	77	0 / 1
Carbon tetrachloride	1	0 / 1	NA	NA	NA	NA	0.65	0 / 1
Chlorobenzene	1	0 / 1	NA	NA	NA	NA	28	0 / 1
Chloroethane	1	0 / 1	NA	NA	NA	NA	1400	0 / 1
Chloroform	1	0 / 1	NA	NA	NA	NA	0.32	0 / 1
Chloromethane	1	0 / 1	NA	NA	NA	NA	11	0 / 1
cis-1,2-Dichloroethene	1	0 / 1	NA	NA	NA	NA	16	0 / 1
cis-1,3-Dichloropropene	1	0 / 1	NA	NA	NA	NA	0.224	0 / 1
Cyclohexanone	1	0 / 1	NA	NA	NA	NA	2800	0 / 1
Dibromochloromethane	1	0 / 1	NA	NA	NA	NA	8.3	0 / 1
Ethyl ether	1	0 / 1	NA	NA	NA	NA	1600	0 / 1
Ethylbenzene	1	0 / 1	NA	NA	NA	NA	5.8	0 / 1
Hexachlorobutadiene	1	0 / 1	NA	NA	NA	NA	1.2	0 / 1
Iodomethane	1	0 / 1	NA	NA	NA	NA	NE	0 / 1
Isopropylbenzene	1	0 / 1	NA	NA	NA	NA	190	0 / 1
m/p-Xylene	1	0 / 1	NA	NA	NA	NA	NE	0 / 1
Methyl acetate	1	0 / 1	NA	NA	NA	NA	7800	0 / 1
Methyl tertiary-butyl ether	1	0 / 1	NA	NA	NA	NA	47	0 / 1
Methylene bromide	1	0 / 1	NA	NA	NA	NA	2.4	0 / 1
Methylene chloride	1	0 / 1	NA	NA	NA	NA	35	0 / 1
n-Butylbenzene	1	0 / 1	NA	NA	NA	NA	390	0 / 1
n-Heptane	1	0 / 1	NA	NA	NA	NA	2.2	0 / 1
n-Hexane	1	0 / 1	NA	NA	NA	NA	61	0 / 1
n-Propylbenzene	1	0 / 1	NA	NA	NA	NA	380	0 / 1

**Table 5**  
**Frequency of Detections in Surface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Parent Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Volatile Organic Compounds (continued)</b>								
Naphthalene	1	0 / 1	NA	NA	NA	NA	3.8	0 / 1
o-Xylene	1	0 / 1	NA	NA	NA	NA	65	0 / 1
p-Isopropyltoluene	1	0 / 1	NA	NA	NA	NA	1100	0 / 1
sec-Butylbenzene	1	0 / 1	NA	NA	NA	NA	780	0 / 1
Styrene	1	0 / 1	NA	NA	NA	NA	600	0 / 1
tert-Butylbenzene	1	0 / 1	NA	NA	NA	NA	780	0 / 1
Tetrachloroethene	1	0 / 1	NA	NA	NA	NA	8.1	0 / 1
Tetrahydrofuran	1	0 / 1	NA	NA	NA	NA	1800	0 / 1
Toluene	1	0 / 1	NA	NA	NA	NA	490	0 / 1
trans-1,2-Dichloroethene	1	0 / 1	NA	NA	NA	NA	7	0 / 1
trans-1,3-Dichloropropene	1	0 / 1	NA	NA	NA	NA	0.224	0 / 1
Trichloroethene	1	0 / 1	NA	NA	NA	NA	0.41	0 / 1
Trichlorofluoromethane	1	0 / 1	NA	NA	NA	NA	2300	0 / 1
Vinyl acetate	1	0 / 1	NA	NA	NA	NA	91	0 / 1
Vinyl chloride	1	0 / 1	NA	NA	NA	NA	0.059	0 / 1
Xylenes, Total	1	0 / 1	NA	NA	NA	NA	58	0 / 1

**Notes:**

<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

J - estimated value

mg/kg - milligrams per kilogram

NA - not applicable

PAL - project action level

**Table 6**  
**Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Metals</b>								
Antimony	3	0 / 3	NA	NA	NA	NA	10	0 / 3
Arsenic	8	8 / 8	1.9	GB-72/12-13	15.6	GB-64/9-10D	12.3	1 / 8
Copper	3	3 / 3	9.4	GB-72/12-13	23.0	GB-72/4-5	310	3 / 3
Lead	3	3 / 3	7.7	GB-72/12-13	46.5	GB-72/4-5	400	3 / 3
Zinc	3	3 / 3	29.2	GB-72/12-13	60.3	GB-72/4-5	2300	3 / 3
<b>Polychlorinated Biphenyls</b>								
Aroclor 1016	3	0 / 3	NA	NA	NA	NA	0.41	0 / 3
Aroclor 1221	3	0 / 3	NA	NA	NA	NA	0.20	0 / 3
Aroclor 1232	3	0 / 3	NA	NA	NA	NA	0.17	0 / 3
Aroclor 1242	3	0 / 3	NA	NA	NA	NA	0.23	0 / 3
Aroclor 1248	3	0 / 3	NA	NA	NA	NA	0.23	0 / 3
Aroclor 1254	3	0 / 3	NA	NA	NA	NA	0.12	0 / 3
Aroclor 1260	3	0 / 3	NA	NA	NA	NA	0.24	0 / 3
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	35	10 / 35	0.0064	B-11AA/4-5	0.6440	GB-44B/5-6	360	0 / 35
Acenaphthylene	35	6 / 35	0.0049	GB-44B/5-6	0.0554	GB-13/7-8	4180	0 / 35
Anthracene	35	14 / 35	0.0041	GB-13/11-12	0.5550	GB-44B/5-6	1800	0 / 35
Benzo(a)anthracene	35	17 / 35	0.0049	GB-09B/9-10	0.9830	GB-44B/5-6	1.1	0 / 35
Benzo(a)pyrene	35	14 / 35	0.0050	GB-50A2.5-3.5	0.7690	GB-44B/5-6	0.11	5 / 35
Benzo(b)fluoranthene	35	19 / 35	0.0063	GB-40C/5.5-6.5	1.280	GB-44B/5-6	1.1	1 / 35
Benzo(g,h,i)perylene	35	13 / 35	0.0044	GB-50C/4-5	0.7250	GB-44B/5-6	1720	0 / 35
Benzo(k)fluoranthene	35	14 / 35	0.0042	GB-50C/4-5	0.5050	GB-44B/5-6	11	0 / 35
Chrysene	35	19 / 35	0.0043	GB-40C/5.5-6.5	0.9480	GB-44B/5-6	110	0 / 35
Dibenzo(a,h)anthracene	35	8 / 35	0.0069	GB-45A/3-4	0.1770	GB-44B/5-6	0.11	1 / 35
Fluoranthene	35	24 / 35	0.0045	GB-50B/2.5-3.5	2.240	GB-44B/5-6	240	0 / 35
Fluorene	35	10 / 35	0.0082	GB-45A/3-4	0.6890	GB-44B/5-6	240	0 / 35
Indeno(1,2,3-cd)pyrene	35	12 / 35	0.0053	GB-40A/3-4	0.5380	GB-44B/5-6	1.1	0 / 35
Naphthalene	35	8 / 35	0.0054	B-11AA/4-5	0.1090	GB-72/4-5	3.8	0 / 35
Phenanthrene	35	26 / 35	0.0039	GB-40/15-16	2.110	GB-44B/5-6	2170	0 / 35
Pyrene	35	23 / 35	0.0056	GB-40/19-20	1.840	GB-44B/5-6	180	0 / 35

**Table 6**  
**Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Total Petroleum Hydrocarbons</b>								
Gasoline Range Organics	5	0 / 5	NA	NA	NA	NA	385	0 / 5
Diesel Range Organics	5	1 / 5	134	GB-72/4-5	134	GB-72/4-5	4150	0 / 5
Oil Range Organics	5	1 / 5	199	GB-72/4-5	199	GB-72/4-5	124000	0 / 5
<b>Volatile Organic Compounds</b>								
1,1,1,2-Tetrachloroethane	5	0 / 5	NA	NA	NA	NA	2	0 / 5
1,1,1-Trichloroethane	5	0 / 5	NA	NA	NA	NA	810	0 / 5
1,1,2,2-Tetrachloroethane	5	0 / 5	NA	NA	NA	NA	0.6	0 / 5
1,1,2-Trichloro-1,2,2-trifluoroethane	5	0 / 5	NA	NA	NA	NA	670	0 / 5
1,1,2-Trichloroethane	5	0 / 5	NA	NA	NA	NA	0.15	0 / 5
1,1-Dichloroethane	5	0 / 5	NA	NA	NA	NA	3.6	0 / 5
1,1-Dichloroethene	5	0 / 5	NA	NA	NA	NA	23	0 / 5
1,1-Dichloropropene	5	0 / 5	NA	NA	NA	NA	NE	0 / 5
1,2,3-Trichlorobenzene	5	0 / 5	NA	NA	NA	NA	6.3	0 / 5
1,2,3-Trichloropropane	5	0 / 5	NA	NA	NA	NA	0.0051	0 / 5
1,2,3-Trimethylbenzene	5	0 / 5	NA	NA	NA	NA	34	0 / 5
1,2,4-Trichlorobenzene	5	0 / 5	NA	NA	NA	NA	5.8	0 / 5
1,2,4-Trimethylbenzene	5	0 / 5	NA	NA	NA	NA	30	0 / 5
1,2-Dibromo-3-chloropropane	5	0 / 5	NA	NA	NA	NA	0.01	0 / 5
1,2-Dibromoethane	5	0 / 5	NA	NA	NA	NA	0.036	0 / 5
1,2-Dichlorobenzene	5	0 / 5	NA	NA	NA	NA	180	0 / 5
1,2-Dichloroethane	5	0 / 5	NA	NA	NA	NA	0.46	0 / 5
1,2-Dichloroethene	5	0 / 5	NA	NA	NA	NA	16	0 / 5
1,2-Dichloropropane	5	0 / 5	NA	NA	NA	NA	1.6	0 / 5
1,3,5-Trimethylbenzene	5	0 / 5	NA	NA	NA	NA	27	0 / 5
1,3-Dichlorobenzene	5	0 / 5	NA	NA	NA	NA	148	0 / 5
1,3-Dichloropropane	5	0 / 5	NA	NA	NA	NA	160	0 / 5
1,4-Dichlorobenzene	5	0 / 5	NA	NA	NA	NA	2.6	0 / 5
2,2-Dichloropropane	5	0 / 5	NA	NA	NA	NA	NE	0 / 5
2-Butanone	5	0 / 5	NA	NA	NA	NA	2700	0 / 5
2-Chlorotoluene	5	0 / 5	NA	NA	NA	NA	160	0 / 5
2-Hexanone	5	0 / 5	NA	NA	NA	NA	20	0 / 5
4-Chlorotoluene	5	0 / 5	NA	NA	NA	NA	160	0 / 5
4-Methyl-2-pentanone	5	0 / 5	NA	NA	NA	NA	3300	0 / 5

**Table 6**  
**Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Volatile Organic Compounds (continued)</b>								
Acetone	5	1 / 5	0.0224	GB-72/8-9	0.0224	GB-72/8-9	6100	0 / 5
Acrolein	5	0 / 5	NA	NA	NA	NA	0.1	0 / 5
Acrylonitrile	5	0 / 5	NA	NA	NA	NA	0.25	0 / 5
Benzene	5	0 / 5	NA	NA	NA	NA	1.2	0 / 5
Bromobenzene	5	0 / 5	NA	NA	NA	NA	29	0 / 5
Bromochloromethane	5	0 / 5	NA	NA	NA	NA	15	0 / 5
Bromodichloromethane	5	0 / 5	NA	NA	NA	NA	0.29	0 / 5
Bromoform	5	0 / 5	NA	NA	NA	NA	19	0 / 5
Bromomethane	5	0 / 5	NA	NA	NA	NA	0.68	0 / 5
Carbon disulfide	5	0 / 5	NA	NA	NA	NA	77	0 / 5
Carbon tetrachloride	5	0 / 5	NA	NA	NA	NA	0.65	0 / 5
Chlorobenzene	5	0 / 5	NA	NA	NA	NA	28	0 / 5
Chloroethane	5	0 / 5	NA	NA	NA	NA	1400	0 / 5
Chloroform	5	0 / 5	NA	NA	NA	NA	0.32	0 / 5
Chloromethane	5	0 / 5	NA	NA	NA	NA	11	0 / 5
cis-1,2-Dichloroethene	5	0 / 5	NA	NA	NA	NA	16	0 / 5
cis-1,3-Dichloropropene	5	0 / 5	NA	NA	NA	NA	0.224	0 / 5
Cyclohexanone	5	0 / 5	NA	NA	NA	NA	2800	0 / 5
Dibromochloromethane	5	0 / 5	NA	NA	NA	NA	8.3	0 / 5
Ethyl ether	5	0 / 5	NA	NA	NA	NA	1600	0 / 5
Ethylbenzene	5	0 / 5	NA	NA	NA	NA	5.8	0 / 5
Hexachlorobutadiene	5	0 / 5	NA	NA	NA	NA	1.2	0 / 5
Iodomethane	5	0 / 5	NA	NA	NA	NA	NE	0 / 5
Isopropylbenzene	5	0 / 5	NA	NA	NA	NA	190	0 / 5
m/p-Xylene	5	0 / 5	NA	NA	NA	NA	NE	0 / 5
Methyl acetate	5	0 / 5	NA	NA	NA	NA	7800	0 / 5
Methyl tertiary-butyl ether	5	0 / 5	NA	NA	NA	NA	47	0 / 5
Methylene bromide	5	0 / 5	NA	NA	NA	NA	2.4	0 / 5
Methylene chloride	5	0 / 5	NA	NA	NA	NA	35	0 / 5
n-Butylbenzene	5	0 / 5	NA	NA	NA	NA	390	0 / 5
n-Heptane	5	0 / 5	NA	NA	NA	NA	2.2	0 / 5
n-Hexane	5	0 / 5	NA	NA	NA	NA	61	0 / 5
n-Propylbenzene	5	0 / 5	NA	NA	NA	NA	380	0 / 5

**Table 6**  
**Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
<b>Volatile Organic Compounds (continued)</b>								
Naphthalene	5	0 / 5	NA	NA	NA	NA	3.8	0 / 5
o-Xylene	5	0 / 5	NA	NA	NA	NA	65	0 / 5
p-Isopropyltoluene	5	0 / 5	NA	NA	NA	NA	1100	0 / 5
sec-Butylbenzene	5	0 / 5	NA	NA	NA	NA	780	0 / 5
Styrene	5	0 / 5	NA	NA	NA	NA	600	0 / 5
tert-Butylbenzene	5	0 / 5	NA	NA	NA	NA	780	0 / 5
Tetrachloroethene	5	0 / 5	NA	NA	NA	NA	8.1	0 / 5
Tetrahydrofuran	5	0 / 5	NA	NA	NA	NA	1800	0 / 5
Toluene	5	0 / 5	NA	NA	NA	NA	490	0 / 5
trans-1,2-Dichloroethene	5	0 / 5	NA	NA	NA	NA	7	0 / 5
trans-1,3-Dichloropropene	5	0 / 5	NA	NA	NA	NA	0.224	0 / 5
Trichloroethene	5	0 / 5	NA	NA	NA	NA	0.41	0 / 5
Trichlorofluoromethane	5	0 / 5	NA	NA	NA	NA	2300	0 / 5
Vinyl acetate	5	0 / 5	NA	NA	NA	NA	91	0 / 5
Vinyl chloride	5	0 / 5	NA	NA	NA	NA	0.059	0 / 5
Xylenes, Total	5	0 / 5	NA	NA	NA	NA	58	0 / 5

**Table 6**  
**Frequency of Detections in Subsurface Soil Samples (Metals, PCBs, PAHs, TPH, and VOCs)**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

Parameter	Number of Samples	Frequency of Detections	Minimum Detected Concentration (mg/kg)	Location of Minimum Detection	Maximum Detected Concentration (mg/kg)	Location of Maximum Detection	PAL <sup>1</sup> (mg/kg)	Frequency of PAL Exceedances
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**Notes:**  
<sup>1</sup> For source of PALs, see Table 1 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).  
 mg/kg - milligrams per kilogram  
 NA - not applicable  
 PAL - project action level

**Table 7**  
**Equipment Rinsate and Trip Blank Sample Results**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Sample Point:	ERB04112022	ERB04122022	ERB0414/2022	Trip Blank	Trip Blank-001	Trip Blank-002
			Sample Date:	4/11/2022	4/12/2022	4/14/2022	4/12/2022	4/14/2022	4/14/2022
			Notes:	-	-	-	-	-	-
Parameter	Units	PAL <sup>1</sup>							
<b>Metals</b>									
Arsenic	mg/L	10	0.00014 U	NS	NS	NS	NS	NS	NS
<b>Polycyclic Aromatic Hydrocarbons</b>									
Acenaphthene	mg/L	1610	0.000045 U	0.000045 U	0.000047 U	NS	NS	NS	NS
Acenaphthylene	mg/L	2060	0.000031 U	0.000031 U	0.000033 U	NS	NS	NS	NS
Anthracene	mg/L	2290	0.000062 U	0.000062 U	0.000065 U	NS	NS	NS	NS
Benzo(a)anthracene	mg/L	0.133	<b>0.000110</b>	0.000034 U	0.000035 U	NS	NS	NS	NS
Benzo(a)pyrene	mg/L	0.2	0.000067 U	0.000067 UJ	0.000071 U	NS	NS	NS	NS
Benzo(b)fluoranthene	mg/L	7.65	<b>0.000170</b>	0.000048 U	0.000051 U	NS	NS	NS	NS
Benzo(g,h,i)perylene	mg/L	218000	0.000039 U	0.000039 U	0.000040 U	NS	NS	NS	NS
Benzo(k)fluoranthene	mg/L	937	0.000040 U	0.000040 U	0.000042 U	NS	NS	NS	NS
Chrysene	mg/L	81.7	<b>0.000093</b>	0.000039 U	0.000041 U	NS	NS	NS	NS
Dibenzo(a,h)anthracene	mg/L	985	0.000048 U	0.000048 U	0.000050 U	NS	NS	NS	NS
Fluoranthene	mg/L	14200	0.000180 U	0.000180 U	0.000190 U	NS	NS	NS	NS
Fluorene	mg/L	3010	0.000063 U	0.000063 U	0.000066 U	NS	NS	NS	NS
Indeno(1,2,3-cd)pyrene	mg/L	596	0.000046 U	0.000046 U	0.000048 U	NS	NS	NS	NS
Naphthalene	mg/L	0.1	0.000073 U	0.000073 U	0.000076 U	NS	NS	NS	NS
Phenanthrene	mg/L	1190	0.000380 U	0.000380 U	0.000390 U	NS	NS	NS	NS
Pyrene	mg/L	17300	<b>0.000180</b>	0.000070 U	0.000074 U	NS	NS	NS	NS
<b>Total Petroleum Hydrocarbons</b>									
Gasoline Range Organics	mg/L	18.1	NS	0.0626 U	NS	0.0626 U	0.0626 U	0.0626 U	0.0626 U
Diesel Range Organics	mg/L	34.3	NS	0.23 U	NS	NS	NS	NS	NS
Oil Range Organics	mg/L	31.8	NS	0.23 U	NS	NS	NS	NS	NS
<b>Volatile Organic Compounds</b>									
1,1,1,2-Tetrachloroethane	mg/L	0.00699	NS	0.000084 U	NS	0.000084 U	0.000084 U	0.000084 U	0.000084 U
1,1,1-Trichloroethane	mg/L	1.13	NS	0.000110 U	NS	0.000110 U	0.000110 U	0.000110 U	0.000110 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	NS	0.000150 U	NS	0.000150 U	0.000150 U	0.000150 U	0.000150 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	1.0	NS	0.000190 U	NS	0.000190 U	0.000190 U	0.000190 U	0.000190 U
1,1,2-Trichloroethane	mg/L	0.00105	NS	0.000140 U	NS	0.000140 U	0.000140 U	0.000140 U	0.000140 U
1,1-Dichloroethane	mg/L	0.0114	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
1,1-Dichloroethene	mg/L	0.0276	NS	0.000220 U	NS	0.000220 U	0.000220 U	0.000220 U	0.000220 U
1,1-Dichloropropene	mg/L	NE	NS	0.000140 U	NS	0.000140 U	0.000140 U	0.000140 U	0.000140 U
1,2,3-Trichlorobenzene	mg/L	NE	NS	0.000930 U	NS	0.000930 U	0.000930 U	0.000930 U	0.000930 U
1,2,3-Trichloropropane	mg/L	0.00411	NS	0.000410 U	NS	0.000410 U	0.000410 U	0.000410 U	0.000410 U
1,2,3-Trimethylbenzene	mg/L	0.0794	NS	0.000930 U	NS	0.000930 U	0.000930 U	0.000930 U	0.000930 U
1,2,4-Trichlorobenzene	mg/L	0.00752	NS	0.000730 U	NS	0.000730 U	0.000730 U	0.000730 U	0.000730 U
1,2,4-Trimethylbenzene	mg/L	0.0475	NS	0.000320 U	NS	0.000320 U	0.000320 U	0.000320 U	0.000320 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	NS	0.000780 U	NS	0.000780 U	0.000780 U	0.000780 U	0.000780 U
1,2-Dibromoethane	mg/L	0.004	NS	0.000200 U	NS	0.000200 U	0.000200 U	0.000200 U	0.000200 U
1,2-Dichlorobenzene	mg/L	0.5	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
1,2-Dichloroethane	mg/L	0.00355	NS	0.000210 U	NS	0.000210 U	0.000210 U	0.000210 U	0.000210 U
1,2-Dichloroethene	mg/L	70	NS	0.000220 U	NS	0.000220 U	0.000220 U	0.000220 U	0.000220 U
1,2-Dichloropropane	mg/L	0.00577	NS	0.000140 U	NS	0.000140 U	0.000140 U	0.000140 U	0.000140 U



**Table 7**  
**Equipment Rinsate and Trip Blank Sample Results**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

		Sample Point:	ERB04112022	ERB04122022	ERB04142022	Trip Blank	Trip Blank-001	Trip Blank-002
		Sample Date:	4/11/2022	4/12/2022	4/14/2022	4/12/2022	4/14/2022	4/14/2022
		Notes:	-	-	-	-	-	-
Parameter	Units	PAL <sup>1</sup>						
<b>Volatile Organic Compounds (continued)</b>								
1,3,5-Trimethylbenzene	mg/L	0.0333	NS	0.000090 U	NS	0.000090 U	0.000090 U	0.000090 U
1,3-Dichlorobenzene	mg/L	43.6	NS	0.000130 U	NS	0.000130 U	0.000130 U	0.000130 U
1,3-Dichloropropane	mg/L	NE	NS	0.000100 U	NS	0.000100 U	0.000100 U	0.000100 U
1,4-Dichlorobenzene	mg/L	0.00488	NS	0.000130 U	NS	0.000130 U	0.000130 U	0.000130 U
1,4-Dioxane	mg/L	0.00046	NS	0.004400 U	NS	0.004400 U	0.004400 U	0.004400 U
1-Methylnaphthalene	mg/L	0.0011	NS	0.002600 U	NS	0.002600 U	0.002600 U	0.002600 U
2,2-Dichloropropane	mg/L	NE	NS	0.000160 U	NS	0.000160 U	0.000160 U	0.000160 U
2-Butanone	mg/L	354	NS	0.000980 U	NS	0.000980 U	0.000980 U	0.000980 U
2-Chloroethyl vinyl ether	mg/L	NE	NS	0.001800 U	NS	0.001800 U	0.001800 U	0.001800 U
2-Chlorotoluene	mg/L	17.1	NS	0.000110 U	NS	0.000110 U	0.000110 U	0.000110 U
2-Hexanone	mg/L	1.46	NS	0.001100 U	NS	0.001100 U	0.001100 U	0.001100 U
2-Methylnaphthalene	mg/L	0.0036	NS	0.002700 U	NS	0.002700 U	0.002700 U	0.002700 U
4-Chlorotoluene	mg/L	0.0666	NS	0.000150 U	NS	0.000150 U	0.000150 U	0.000150 U
4-Methyl-2-pentanone	mg/L	94.9	NS	0.000740 U	NS	0.000740 U	0.000740 U	0.000740 U
Acetone	mg/L	3370	NS	0.002500 U	NS	0.002500 U	0.002500 U	0.002500 U
Acetonitrile	mg/L	6.82	NS	0.001100 U	NS	0.001100 U	0.001100 U	0.001100 U
Acrolein	mg/L	0.04	NS	0.004000 U	NS	0.004000 U	0.004000 U	0.004000 U
Acrylonitrile	mg/L	0.0117	NS	0.001400 U	NS	0.001400 U	0.001400 U	0.001400 U
Benzene	mg/L	0.00246	NS	0.000140 U	NS	0.000140 U	0.000140 U	0.000140 U
Bromobenzene	mg/L	0.125	NS	0.000088 U	NS	0.000088 U	0.000088 U	0.000088 U
Bromochloromethane	mg/L	0.106	NS	0.000200 U	NS	0.000200 U	0.000200 U	0.000200 U
Bromodichloromethane	mg/L	0.004	NS	0.000160 U	NS	0.000160 U	0.000160 U	0.000160 U
Bromoform	mg/L	0.214	NS	0.000680 U	NS	0.000680 U	0.000680 U	0.000680 U
Bromomethane	mg/L	0.106	NS	0.000460 U	NS	0.000460 U	0.000460 U	0.000460 U
Carbon disulfide	mg/L	0.177	NS	0.000980 U	NS	0.000980 U	0.000980 U	0.000980 U
Carbon tetrachloride	mg/L	0.004	NS	0.000170 U	NS	0.000170 U	0.000170 U	0.000170 U
Chlorobenzene	mg/L	0.0702	NS	0.000089 U	NS	0.000089 U	0.000089 U	0.000089 U
Chloroethane	mg/L	3.13	NS	0.000370 U	NS	0.000370 U	0.000370 U	0.000370 U
Chloroform	mg/L	0.004	NS	<b>0.007100 J+</b>	NS	0.000220 U	0.000220 U	0.000220 U
Chloromethane	mg/L	0.0331	NS	0.000280 U	NS	0.000280 U	0.000280 U	0.000280 U
cis-1,2-Dichloroethene	mg/L	70	NS	0.000130 U	NS	0.000130 U	0.000130 U	0.000130 U
cis-1,3-Dichloropropene	mg/L	0.596	NS	0.000078 U	NS	0.000078 U	0.000078 U	0.000078 U
Cyclohexane	mg/L	1.3	NS	0.000240 U	NS	0.000240 U	0.000240 U	0.000240 U
Cyclohexanone	mg/L	404	NS	0.003300 U	NS	0.003300 U	0.003300 U	0.003300 U
Dibromochloromethane	mg/L	0.0199	NS	0.000300 U	NS	0.000300 U	0.000300 U	0.000300 U
trans-Dichloro-2-butene	mg/L	0.000013	NS	0.000710 U	NS	0.000710 U	0.000710 U	0.000710 U
Dichlorodifluoromethane	mg/L	0.004	NS	0.000200 U	NS	0.000200 U	0.000200 U	0.000200 U
Diisopropyl Ether	mg/L	0.351	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U
Ethyl ether	mg/L	NE	NS	0.000230 U	NS	0.000230 U	0.000230 U	0.000230 U
Ethyl tertiary-butyl ether	mg/L	0.07	NS	0.000170 U	NS	0.000170 U	0.000170 U	0.000170 U
Ethylbenzene	mg/L	0.00609	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U
Hexachlorobutadiene	mg/L	0.01	NS	0.000420 U	NS	0.000420 U	0.000420 U	0.000420 U
Idomethane	mg/L	NE	NS	0.004400 U	NS	0.004400 U	0.004400 U	0.004400 U
Isopropylbenzene	mg/L	0.179	NS	0.000097 U	NS	0.000097 U	0.000097 U	0.000097 U
m/p-Xylene	mg/L	NE	NS	0.000220 U	NS	0.000220 U	0.000220 U	0.000220 U
Methyl Acetate	mg/L	2	NS	0.000870 U	NS	0.000870 U	0.000870 U	0.000870 U

**Table 7**  
**Equipment Rinsate and Trip Blank Sample Results**  
*Goodfellow Federal Complex*  
*St. Louis, Missouri*

			Sample Point:	ERB04112022	ERB04122022	ERB0414/2022	Trip Blank	Trip Blank-001	Trip Blank-002
			Sample Date:	4/11/2022	4/12/2022	4/14/2022	4/12/2022	4/14/2022	4/14/2022
			Notes:	-	-	-	-	-	-
Parameter	Units	PAL <sup>1</sup>							
<b>Volatile Organic Compounds (continued)</b>									
Methyl tertiary-butyl ether	mg/L	0.664	NS	0.000130 U	NS	0.000130 U	0.000130 U	0.000130 U	0.000130 U
Methylcyclohexane	mg/L	NE	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
Methylene bromide	mg/L	0.00083	NS	0.000110 U	NS	0.000110 U	0.000110 U	0.000110 U	0.000110 U
Methylene chloride	mg/L	0.685	NS	0.000390 U	NS	0.000390 U	0.000390 U	0.000390 U	0.000390 U
n-Butylbenzene	mg/L	8.76	NS	0.000820 U	NS	0.000820 U	0.000820 U	0.000820 U	0.000820 U
n-heptane	mg/L	0.01	NS	0.000150 U	NS	0.000150 U	0.000150 U	0.000150 U	0.000150 U
n-Hexane	mg/L	0.01	NS	0.002600 U	NS	0.002600 U	0.002600 U	0.002600 U	0.002600 U
n-Propylbenzene	mg/L	0.452	NS	0.000220 U	NS	0.000220 U	0.000220 U	0.000220 U	0.000220 U
Naphthalene	mg/L	0.01	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
o-Xylene	mg/L	0.0873	NS	0.000082 U	NS	0.000082 U	0.000082 U	0.000082 U	0.000082 U
p-Isopropyltoluene	mg/L	98.5	NS	0.000130 U	NS	0.000130 U	0.000130 U	0.000130 U	0.000130 U
sec-Butylbenzene	mg/L	6.23	NS	0.000110 U	NS	0.000110 U	0.000110 U	0.000110 U	0.000110 U
Styrene	mg/L	1.65	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
tert-Amyl methyl ether	mg/L	0.00063	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
tert-Butanol	mg/L	0.15	NS	0.002300 U	NS	0.002300 U	0.002300 U	0.002300 U	0.002300 U
tert-Butylbenzene	mg/L	9.43	NS	0.000120 U	NS	0.000120 U	0.000120 U	0.000120 U	0.000120 U
Tetrachloroethene	mg/L	0.00972	NS	0.000330 U	NS	0.000330 U	0.000330 U	0.000330 U	0.000330 U
Tetrahydrofuran	mg/L	109	NS	0.002800 U	NS	0.002800 U	0.002800 U	0.002800 U	0.002800 U
Toluene	mg/L	3.16	NS	0.000250 U	NS	0.000250 U	0.000250 U	0.000250 U	0.000250 U
trans-1,2-Dichloroethene	mg/L	100	NS	0.000100 U	NS	0.000100 U	0.000100 U	0.000100 U	0.000100 U
trans-1,3-Dichloropropene	mg/L	0.596	NS	0.000180 U	NS	0.000180 U	0.000180 U	0.000180 U	0.000180 U
Trichloroethene	mg/L	0.004	NS	0.000210 U	NS	0.000210 U	0.000210 U	0.000210 U	0.000210 U
Trichlorofluoromethane	mg/L	5.36	NS	0.000160 U	NS	0.000160 U	0.000160 U	0.000160 U	0.000160 U
Vinyl acetate	mg/L	0.041	NS	0.001400 U	NS	0.001400 U	0.001400 U	0.001400 U	0.001400 U
Vinyl chloride	mg/L	0.004	NS	0.000170 U	NS	0.000170 U	0.000170 U	0.000170 U	0.000170 U
Xylenes, Total	mg/L	10	NS	0.000280 U	NS	0.000280 U	0.000280 U	0.000280 U	0.000280 U

**Notes:**

<sup>1</sup> For source of PALs, see Table 2 in the *Final Quality Assurance Project Plan, Goodfellow Federal Complex, St. Louis, Missouri* (Etegra, 2021).

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

J+ - estimated value, biased high

mg/L - milligrams per liter

NA - not analyzed

NE - not established

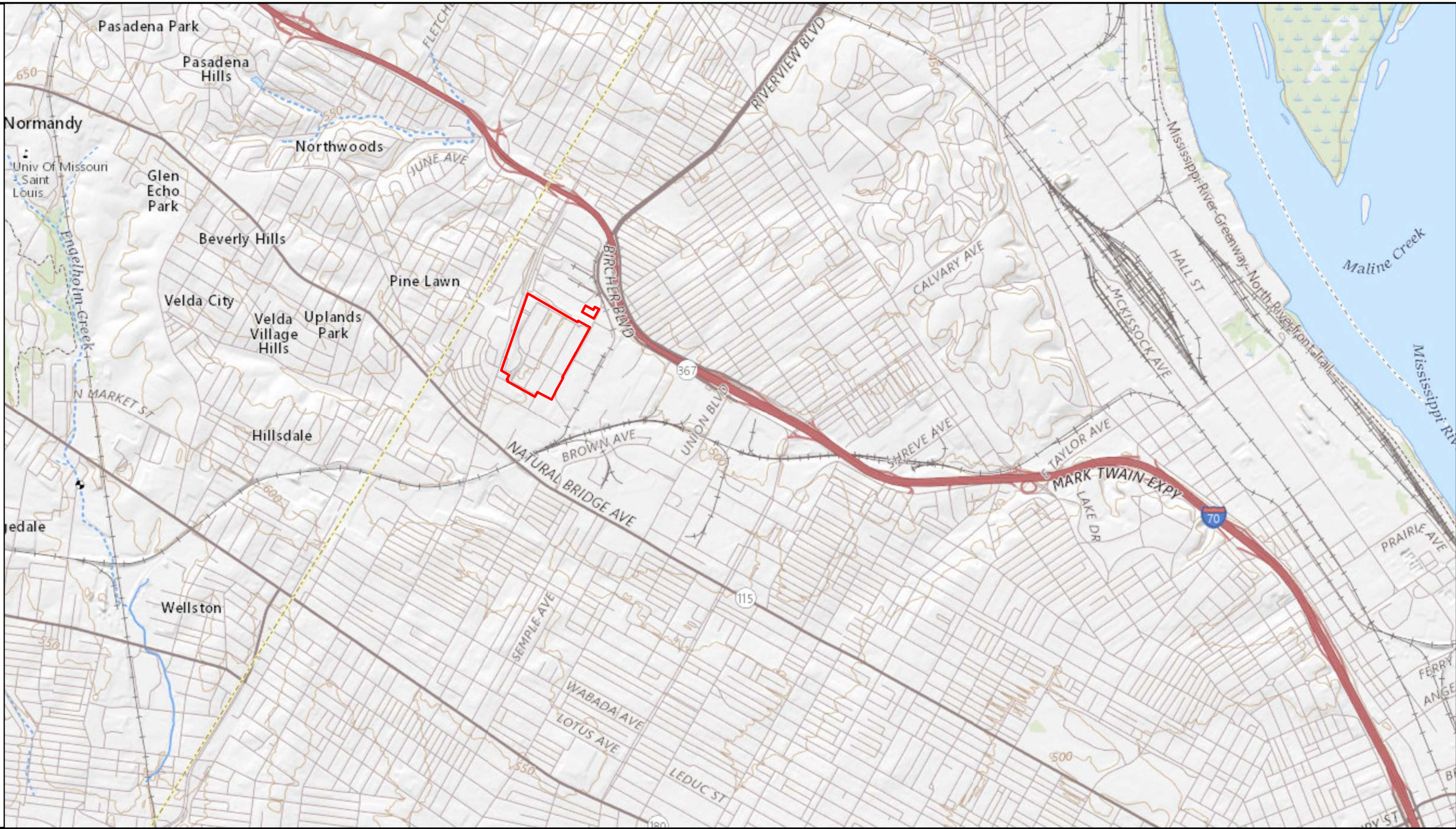
PAL - project action limit

U - compound was not detected

UJ - qualified as estimated at the reporting limit

## FIGURES

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Service Layer Credits: USGS The National Map; USGS The National Map; 3DEP Elevation Program; Geographic Names Information System; National Hydrography Dataset; National Land Cover Database; National Structures Dataset; and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau Tiger Line data; USFS Road Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information; U.S. Coastal Relief Model. Data refreshed June, 2020.



Site Boundary

Notes:  
Site is approximately 66 acres.

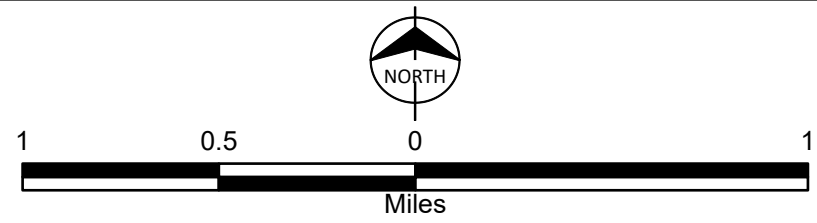
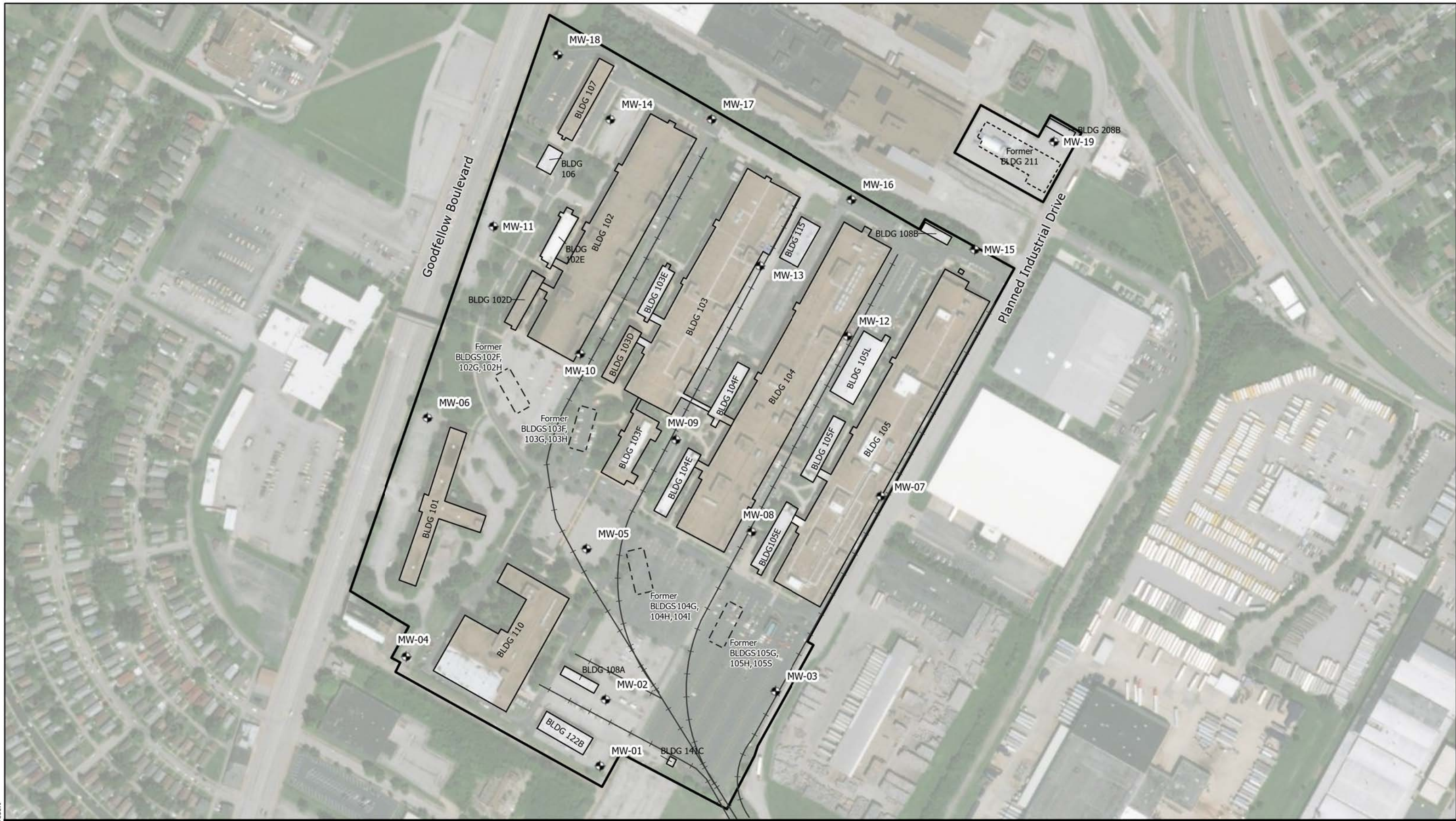


Figure 1  
Area Location Map  
Goodfellow Federal Complex  
St. Louis, Missouri

Path: \\bmc\dfs\clients\USGS\133835\_GoodfellowRI\Studies\Geospatial\DataFiles\ArcDocs\Analytical Figures.aprx irradiator 11/15/2021  
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- Legend
- Monitoring Well
  - Former Railroad Track
  - Former Powder Storage Bunkers (102G, 103G, 104H, and 105H)
  - Site Boundary

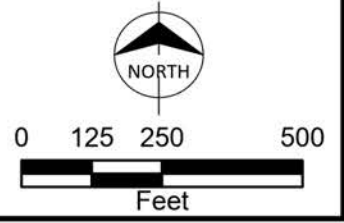
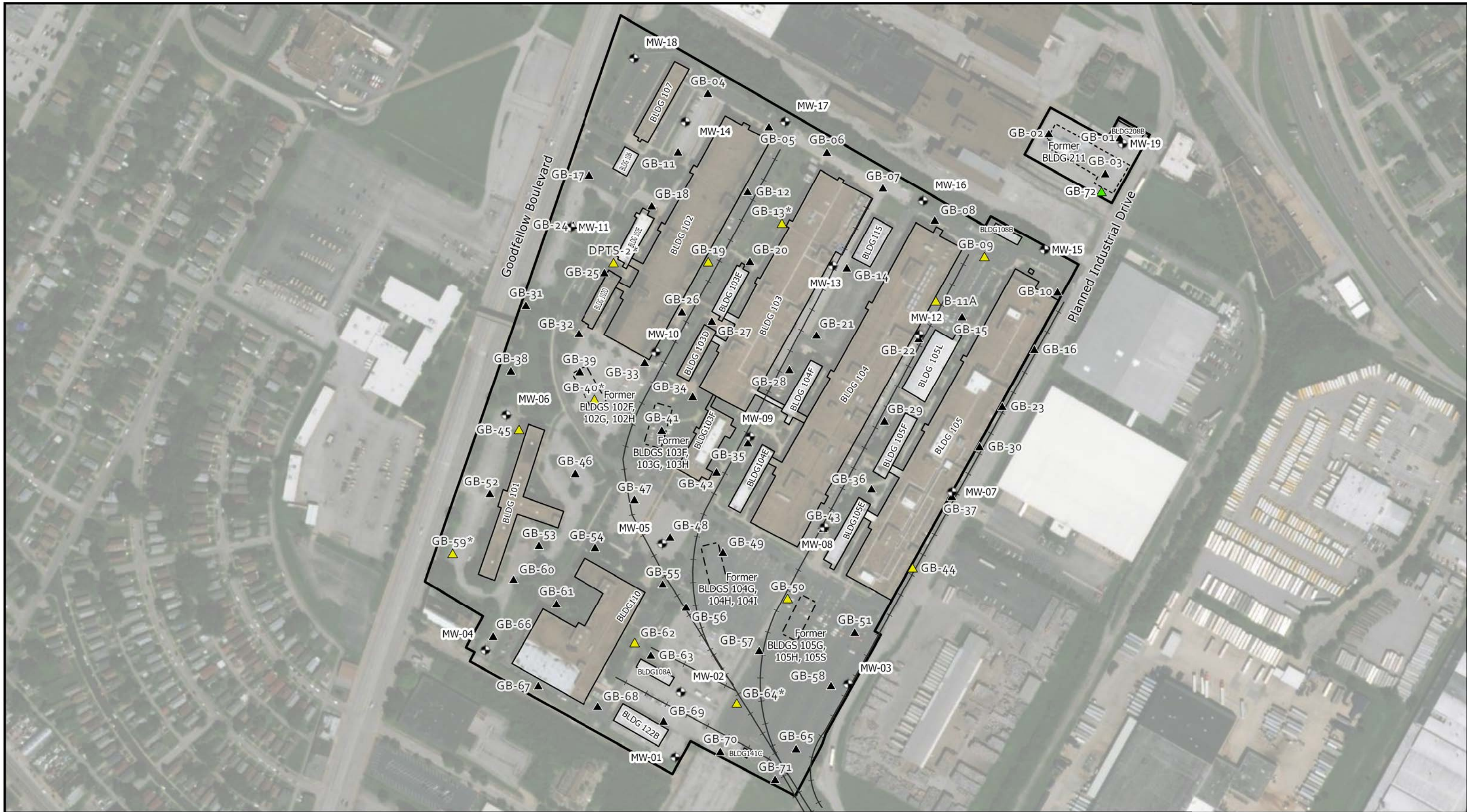


Figure 2  
Site Location Map  
Goodfellow Federal Complex  
St. Louis, Missouri

Path: C:\Users\verbrown\OneDrive - Burns & McDonnell\Documents\ArcGIS\Projects\Goodfellow\_SoilBoringLocations\_SoilBoringLocations\SoilBoringLocations\_ERB\_Exceedances.aprx erbrown 6/30/2022  
 Service Layer Credits: Maxar



**Legend**


- ▲ New Boring Location
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- ▲ Historical Boring Locations
- Monitoring Well
- +— Former Railroad Track
- Site Boundary
- Former Powder Storage Bunker

**Notes:**


1. \* Indicates soil borings where additional samples were collected at depth. Additional samples at GB-13 were collected at a depth 7-8' and 11-12' bgs. Additional samples at GB-40 were collected at a depth 15-16' and 19-20' bgs. Additional samples at DPST-2 were collected at a depth 9-10' and 13-14' bgs. Additional samples at GB-59 were collected at a depth 12-13' and 14-15 bgs. Additional samples at GB-64 were collected at a depth 9-10' and 13-14' bgs.
2. Step-out sample locations are illustrated on Figures 4 through 7.

**Key:**

bgs - below ground surface



NORTH

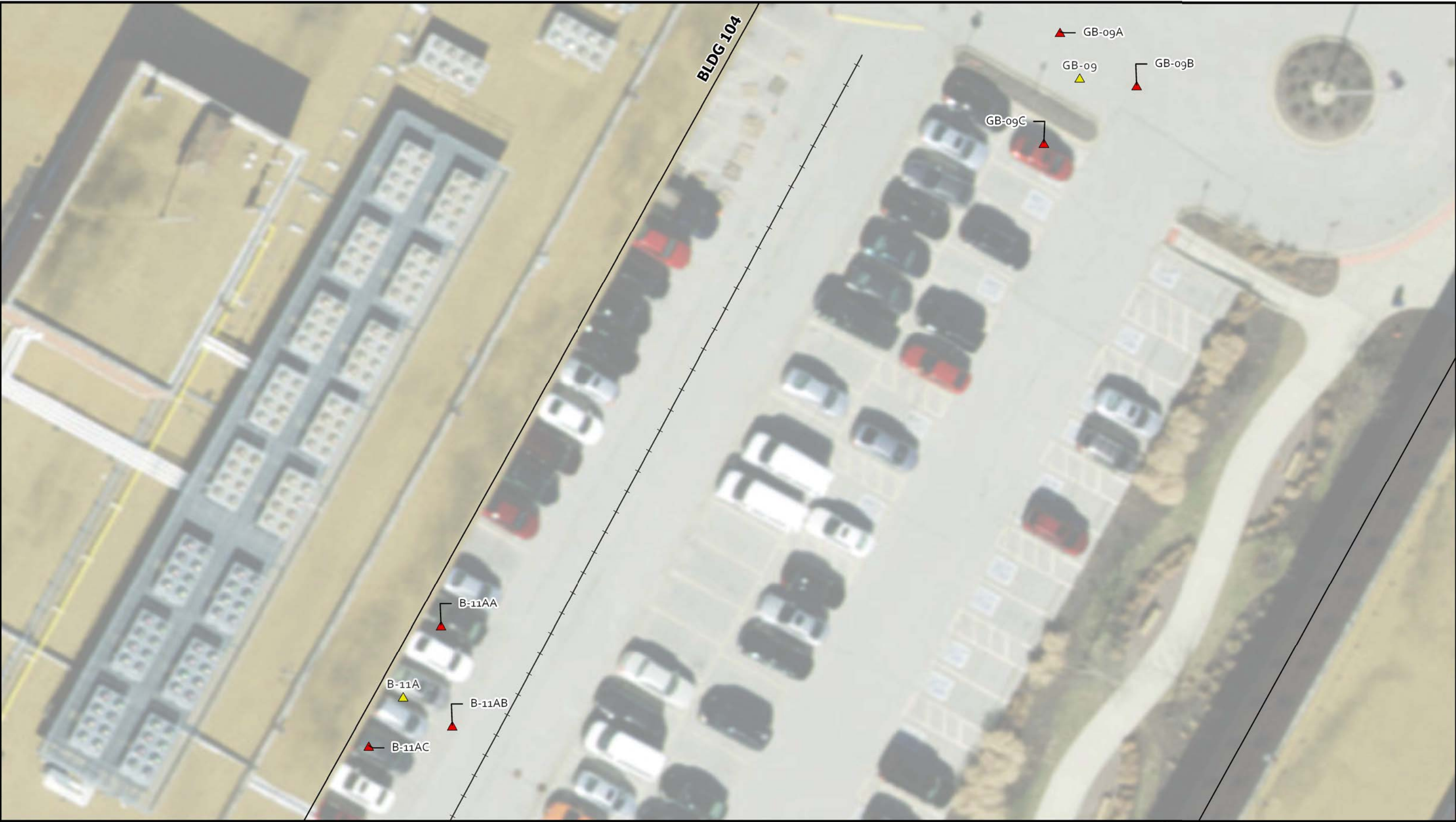


0 125 250 500  
Feet



**Figure 3**  
 Soil Boring Location Map  
 (Borings where Additional Sampling at Depth and/or Step-Out was Conducted)  
 Goodfellow Federal Complex  
 St. Louis, Missouri

Path: C:\Users\erbrown\OneDrive - Burns & McDonnell\Documents\ArcGIS\Projects\Goodfellow\_SoilBoringLocations\SoilBoringLocations\_ERB.aprx erbrown 6/8/2022  
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- Legend**
- ▲ Step-Out Locations
  - ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
  - +— Former Railroad Track

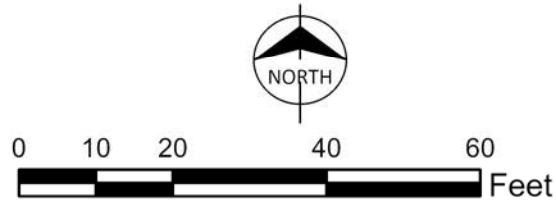


Figure 4  
Step-Out Locations for  
Borings GB-09 and B-11A  
Goodfellow Federal Complex  
St. Louis, Missouri

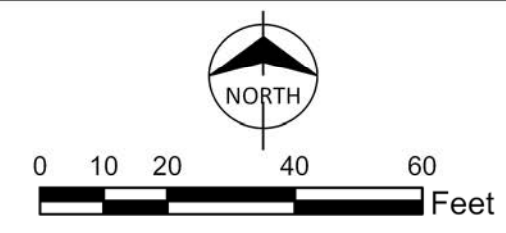
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**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- Former Railroad Track

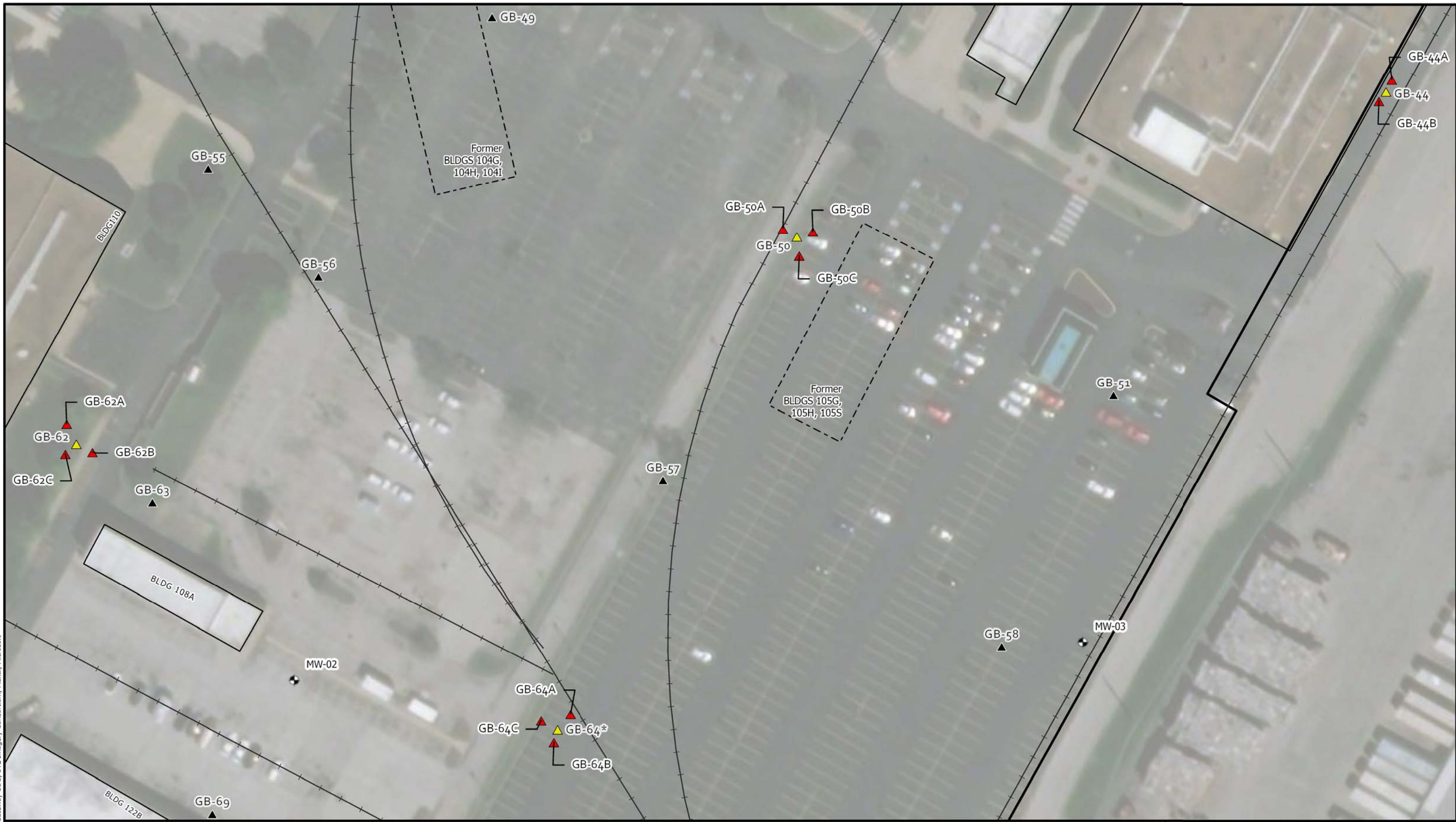
**Notes:**  
1. \* Additional samples at GB-13 were collected at a depth of 7-8' and 11-12' bgs.



**Figure 5**  
Step-Out Locations for Borings GB-13 and GB-19  
Goodfellow Federal Complex  
St. Louis, Missouri



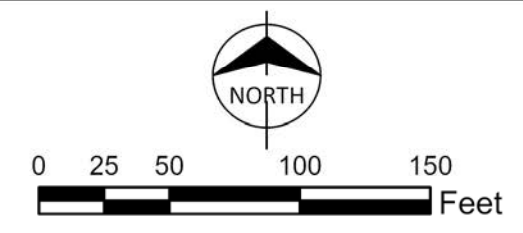
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**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- ▲ Historical Boring Locations
- Monitoring Well
- Former Railroad Track
- Building Outlines
- Former Powder Storage Bunker

**Notes:**  
 1. \* Additional samples at GB-64 were collected at a depth of 9-10' and 12-14' bgs.



**Figure 6**  
 Step-Out Locations for Borings GB-44, GB-50, GB-62, and GB-64  
 Goodfellow Federal Complex  
 St. Louis, Missouri

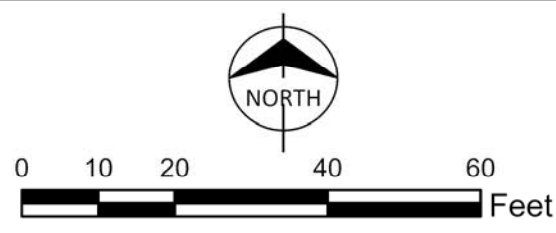
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**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- ⊕ Monitoring Well
- Former Powder Storage Bunker

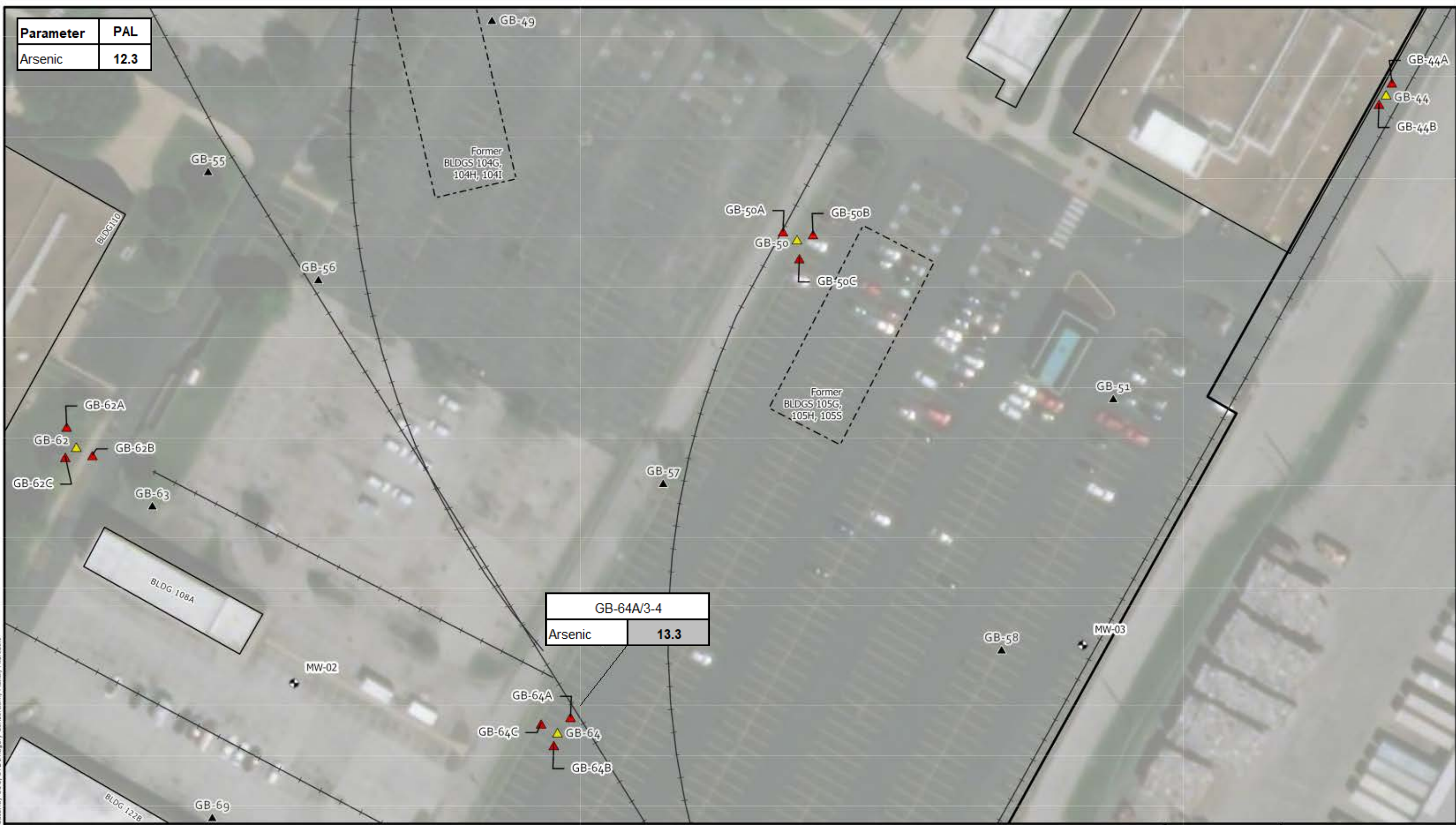
**Notes:**  
1. \* Additional samples at GB-40 were collected at a depth of 15-16' and 19-20' bgs.



**BURNS MCDONNELL**

Figure 7  
Step-Out Locations for GB-40  
and GB-45  
Goodfellow Federal Complex  
St. Louis, Missouri

Parameter	PAL
Arsenic	12.3



GB-64A/3-4	
Arsenic	13.3

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted; GB-64
- ▲ Historical Boring Locations
- Monitoring Well
- Former Railroad Track
- ▭ Building Outlines
- - - Former Powder Storage Bunker

- Notes:**
- All concentrations shown in milligrams per kilogram (mg/kg).
  - Highlighted values represent PAL exceedances.
  - Figure only shows the sample that had a PAL exceedance for arsenic in surface soil.
  - The highest result between field duplicate and parent sample are shown.

NORTH

0 25 50 100 150  
Feet

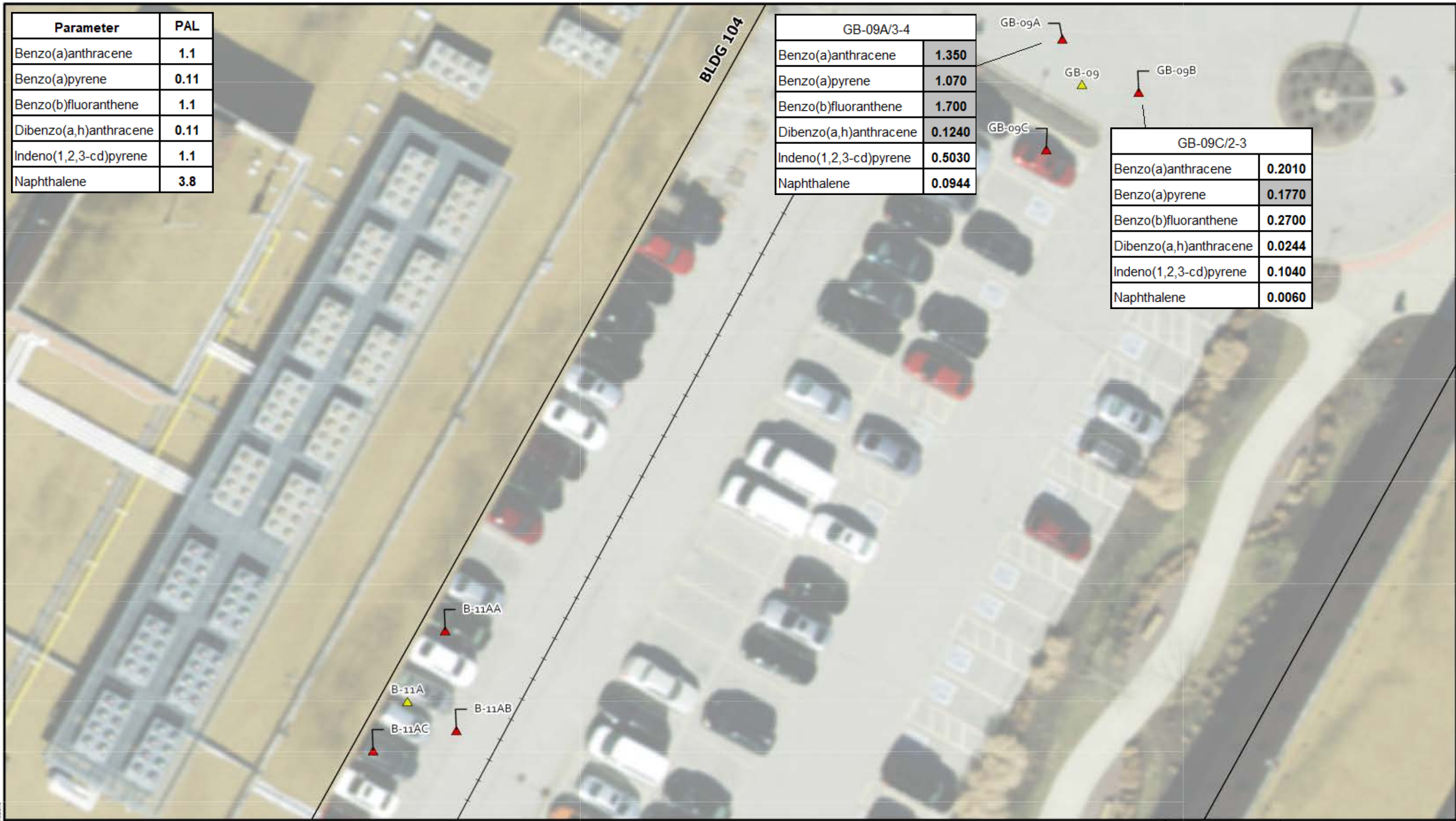
**BURNS  
MCDONNELL**

Figure 8  
Surface Soil Exceedances  
(Metals)  
Boring GB-64A  
Goodfellow Federal Complex  
St. Louis, Missouri

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8

GB-09A/3-4	
Benzo(a)anthracene	1.350
Benzo(a)pyrene	1.070
Benzo(b)fluoranthene	1.700
Dibenzo(a,h)anthracene	0.1240
Indeno(1,2,3-cd)pyrene	0.5030
Naphthalene	0.0944

GB-09C/2-3	
Benzo(a)anthracene	0.2010
Benzo(a)pyrene	0.1770
Benzo(b)fluoranthene	0.2700
Dibenzo(a,h)anthracene	0.0244
Indeno(1,2,3-cd)pyrene	0.1040
Naphthalene	0.0060



**Legend**

▲ Step-Out Locations

▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted; GB-64

— Former Railroad Track

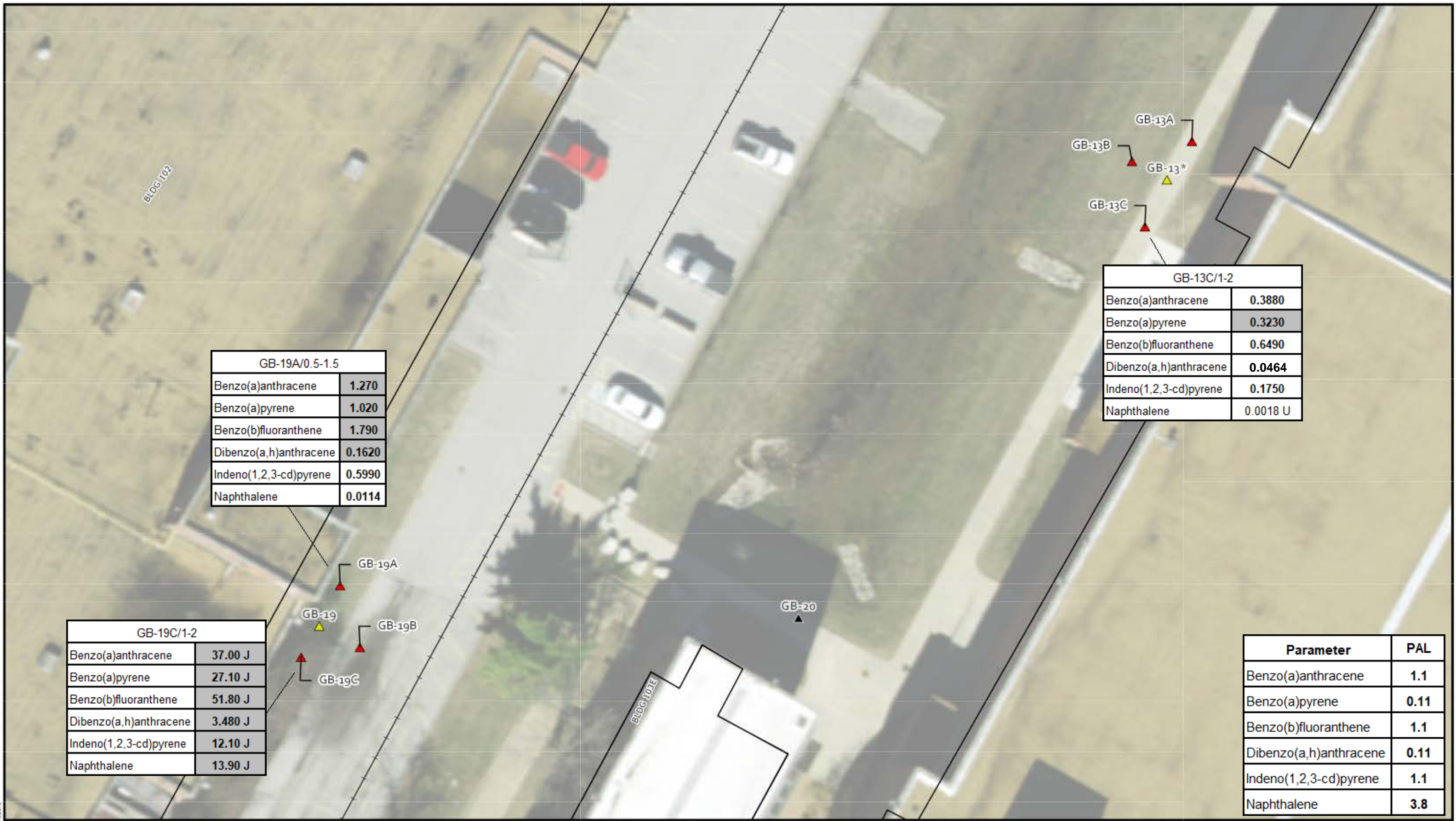
**Notes:**

1. All concentrations shown in milligrams per kilogram (mg/kg).
2. Highlighted values represent PAL exceedances.
3. Figure only shows the samples that had PAL exceedances for PAHs in surface soil.
4. The highest result between field duplicate and parent sample are shown.



Figure 9  
Surface Soil Exceedances  
(PAHs)  
Borings GB-09A and GB-09C  
Goodfellow Federal Complex  
St. Louis, Missouri

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GB-19A/0.5-1.5	
Benzo(a)anthracene	<b>1.270</b>
Benzo(a)pyrene	<b>1.020</b>
Benzo(b)fluoranthene	<b>1.790</b>
Dibenzo(a,h)anthracene	<b>0.1620</b>
Indeno(1,2,3-cd)pyrene	<b>0.5990</b>
Naphthalene	<b>0.0114</b>

GB-19C/1-2	
Benzo(a)anthracene	<b>37.00 J</b>
Benzo(a)pyrene	<b>27.10 J</b>
Benzo(b)fluoranthene	<b>51.80 J</b>
Dibenzo(a,h)anthracene	<b>3.480 J</b>
Indeno(1,2,3-cd)pyrene	<b>12.10 J</b>
Naphthalene	<b>13.90 J</b>

GB-13C/1-2	
Benzo(a)anthracene	<b>0.3880</b>
Benzo(a)pyrene	<b>0.3230</b>
Benzo(b)fluoranthene	<b>0.6490</b>
Dibenzo(a,h)anthracene	<b>0.0464</b>
Indeno(1,2,3-cd)pyrene	<b>0.1750</b>
Naphthalene	0.0018 U

Parameter	PAL
Benzo(a)anthracene	<b>1.1</b>
Benzo(a)pyrene	<b>0.11</b>
Benzo(b)fluoranthene	<b>1.1</b>
Dibenzo(a,h)anthracene	<b>0.11</b>
Indeno(1,2,3-cd)pyrene	<b>1.1</b>
Naphthalene	<b>3.8</b>

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted; GB-64
- Former Railroad Track
- U - compound was not detected
- J - estimated value

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Concentrations in bold indicate a positive detection.
- Highlighted values represent PAL exceedances.
- Figure only shows the samples that had PAL exceedances for PAHs in surface soil.
- The highest result between field duplicate and parent sample are shown.

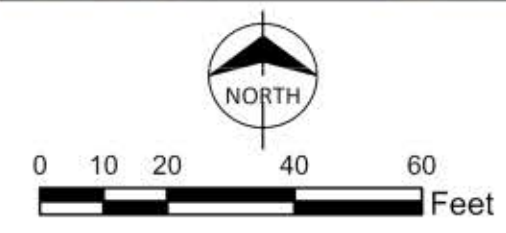


Figure 10  
 Surface Soil Exceedances (PAHs)  
 Borings GB-13C, GB-19A, GB-19C  
 Goodfellow Federal Complex  
 St. Louis, Missouri

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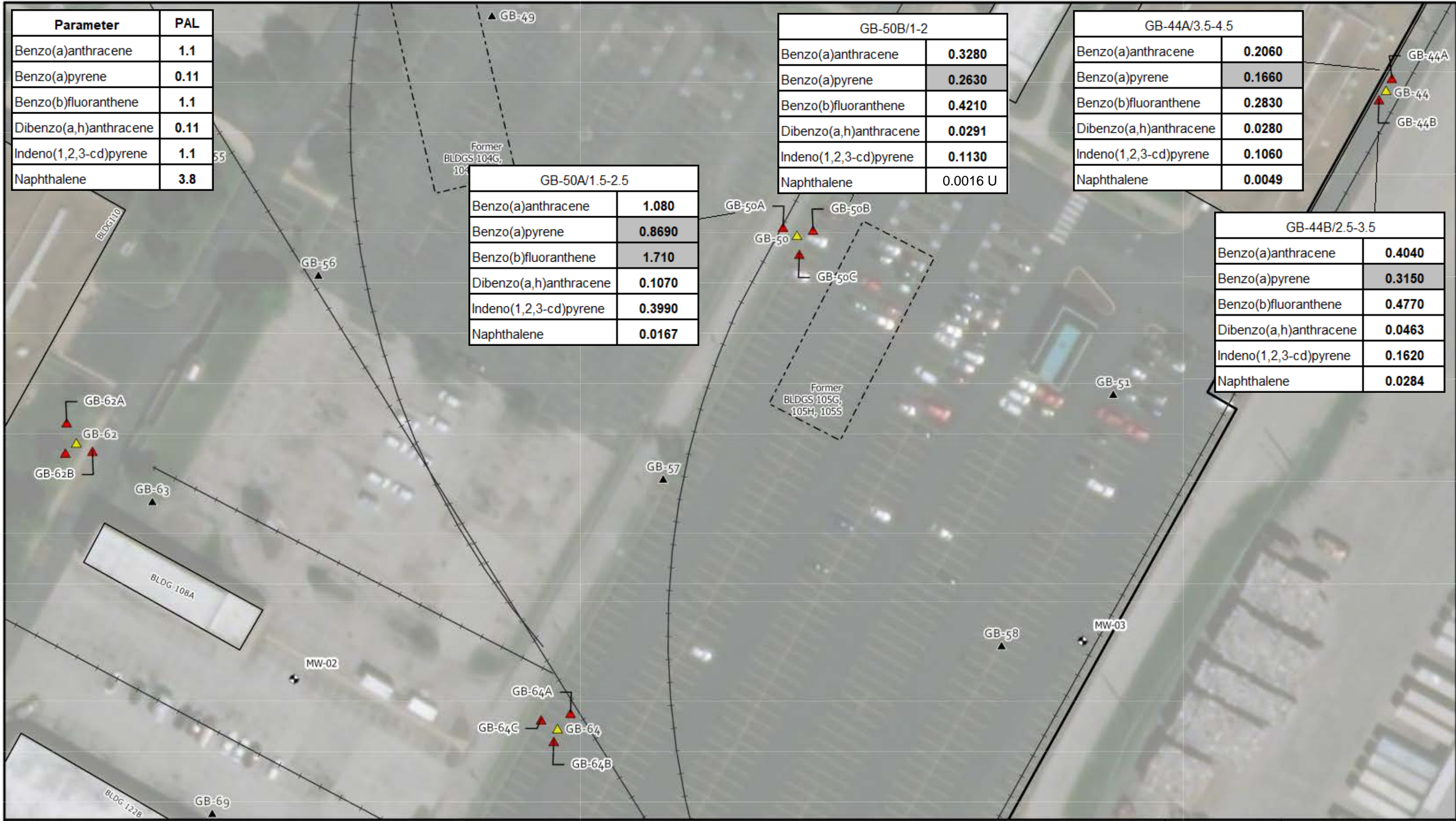
Parameter	PAL
Benzo(a)anthracene	<b>1.1</b>
Benzo(a)pyrene	<b>0.11</b>
Benzo(b)fluoranthene	<b>1.1</b>
Dibenzo(a,h)anthracene	<b>0.11</b>
Indeno(1,2,3-cd)pyrene	<b>1.1</b>
Naphthalene	<b>3.8</b>

GB-50B/1-2	
Benzo(a)anthracene	<b>0.3280</b>
Benzo(a)pyrene	<b>0.2630</b>
Benzo(b)fluoranthene	<b>0.4210</b>
Dibenzo(a,h)anthracene	<b>0.0291</b>
Indeno(1,2,3-cd)pyrene	<b>0.1130</b>
Naphthalene	0.0016 U

GB-44A/3.5-4.5	
Benzo(a)anthracene	<b>0.2060</b>
Benzo(a)pyrene	<b>0.1660</b>
Benzo(b)fluoranthene	<b>0.2830</b>
Dibenzo(a,h)anthracene	<b>0.0280</b>
Indeno(1,2,3-cd)pyrene	<b>0.1060</b>
Naphthalene	<b>0.0049</b>

GB-50A/1.5-2.5	
Benzo(a)anthracene	<b>1.080</b>
Benzo(a)pyrene	<b>0.8690</b>
Benzo(b)fluoranthene	<b>1.710</b>
Dibenzo(a,h)anthracene	<b>0.1070</b>
Indeno(1,2,3-cd)pyrene	<b>0.3990</b>
Naphthalene	<b>0.0167</b>

GB-44B/2.5-3.5	
Benzo(a)anthracene	<b>0.4040</b>
Benzo(a)pyrene	<b>0.3150</b>
Benzo(b)fluoranthene	<b>0.4770</b>
Dibenzo(a,h)anthracene	<b>0.0463</b>
Indeno(1,2,3-cd)pyrene	<b>0.1620</b>
Naphthalene	<b>0.0284</b>



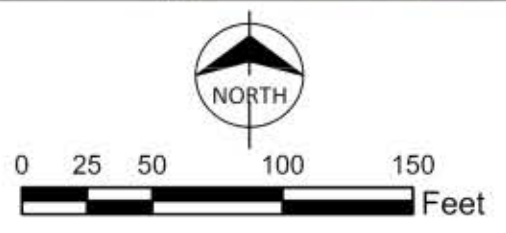
**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- ▲ Historical Boring Locations
- Monitoring Well
- Former Railroad Track
- Building Outlines
- Former Powder Storage Bunker

**Notes:**

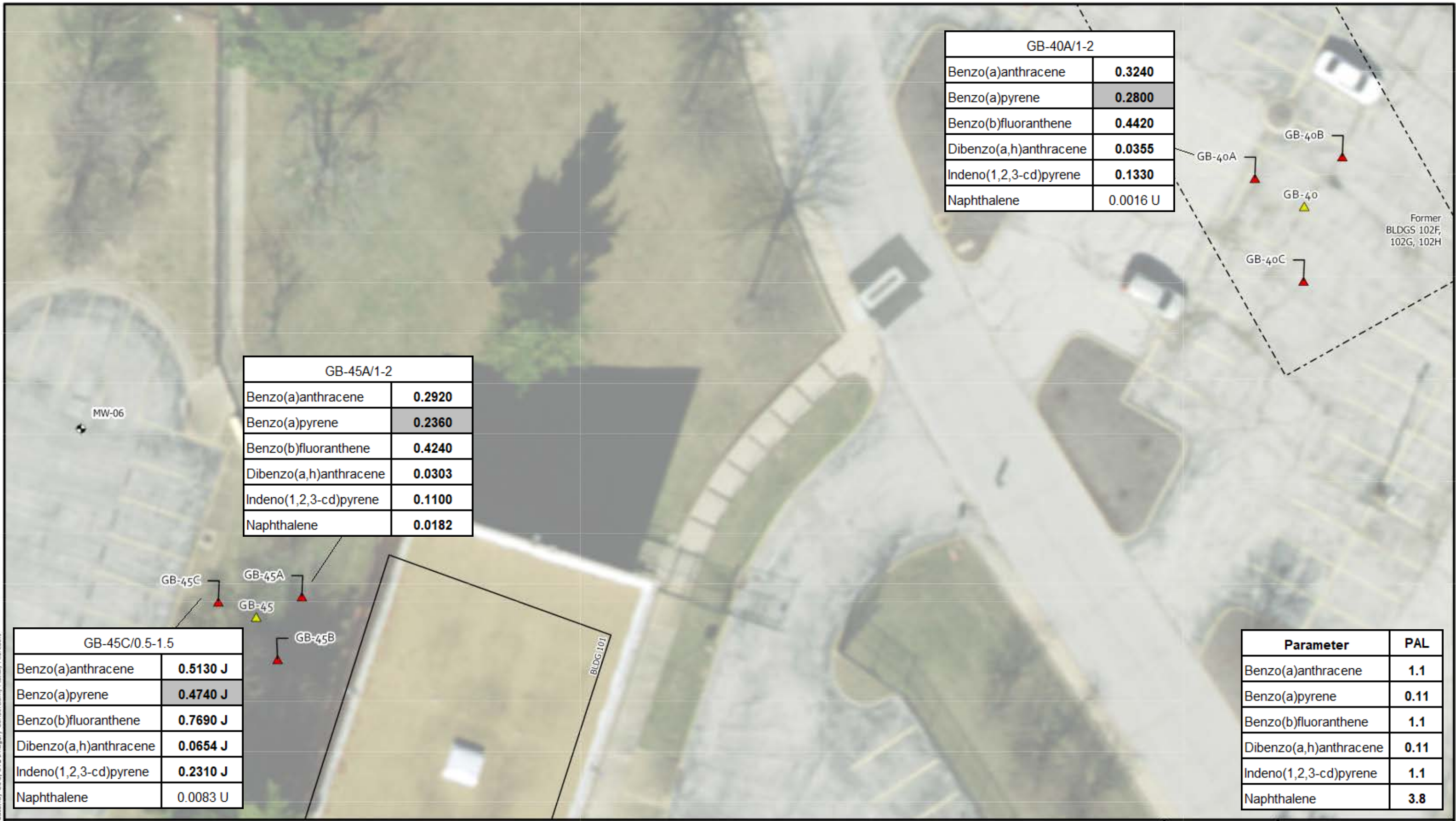
- All concentrations shown in milligrams per kilogram (mg/kg).
- Concentrations in bold indicate a positive detection.
- Highlighted values represent PAL exceedances.
- Figure only shows the samples that had PAL exceedances for PAHs in surface soil.
- The highest result between field duplicate and parent sample are shown.

U - compound was not detected



**Figure 11**  
 Surface Soil Exceedances (PAHs)  
 Boring GB-44A, GB-44B, GB-50A, and GB-50B  
 Goodfellow Federal Complex  
 St. Louis, Missouri

Path: C:\Users\erbrown\OneDrive - Burns & McDonnell\Documents\ArcGIS\Projects\Goodfellow\_SoilBoringLocations\_SoilBoringLocations\_ERB\_Exceedances.aprx erbrown 6/30/2022  
 Service Layer Credits: East-West Gateway COG, STL Imagery Consortium, Maxar, Microsoft



GB-40A/1-2	
Benzo(a)anthracene	<b>0.3240</b>
Benzo(a)pyrene	<b>0.2800</b>
Benzo(b)fluoranthene	<b>0.4420</b>
Dibenzo(a,h)anthracene	<b>0.0355</b>
Indeno(1,2,3-cd)pyrene	<b>0.1330</b>
Naphthalene	0.0016 U

GB-45A/1-2	
Benzo(a)anthracene	<b>0.2920</b>
Benzo(a)pyrene	<b>0.2360</b>
Benzo(b)fluoranthene	<b>0.4240</b>
Dibenzo(a,h)anthracene	<b>0.0303</b>
Indeno(1,2,3-cd)pyrene	<b>0.1100</b>
Naphthalene	<b>0.0182</b>

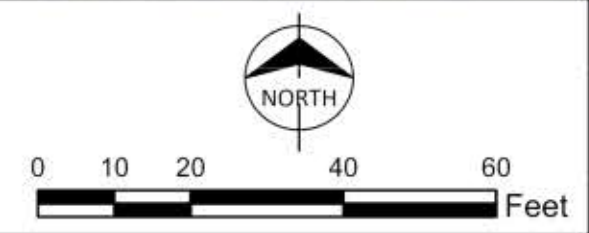
GB-45C/0.5-1.5	
Benzo(a)anthracene	<b>0.5130 J</b>
Benzo(a)pyrene	<b>0.4740 J</b>
Benzo(b)fluoranthene	<b>0.7690 J</b>
Dibenzo(a,h)anthracene	<b>0.0654 J</b>
Indeno(1,2,3-cd)pyrene	<b>0.2310 J</b>
Naphthalene	0.0083 U

Parameter	PAL
Benzo(a)anthracene	<b>1.1</b>
Benzo(a)pyrene	<b>0.11</b>
Benzo(b)fluoranthene	<b>1.1</b>
Dibenzo(a,h)anthracene	<b>0.11</b>
Indeno(1,2,3-cd)pyrene	<b>1.1</b>
Naphthalene	<b>3.8</b>

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- Monitoring Well
- Former Powder Storage Bunker
- J - estimated value
- U - compound was not detected

- Notes:**
- All concentrations shown in milligrams per kilogram (mg/kg).
  - Concentrations in bold indicate a positive detection.
  - Highlighted values represent PAL exceedances.
  - Figure only shows the samples that had PAL exceedances for PAHs in surface soil.
  - The highest result between field duplicate and parent sample are shown.



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Figure 12  
 Surface Soil Exceedances  
 (PAHs)  
 Borings GB-40A, GB-45A, and  
 GB-45C  
 Goodfellow Federal Complex  
 St. Louis, Missouri

Issued: 6/30/2022

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8



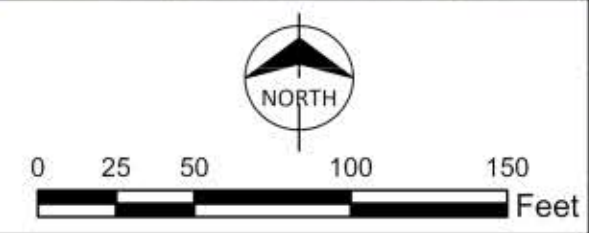
GB-72/0.5-1.5	
Benzo(a)anthracene	<b>1.090</b>
Benzo(a)pyrene	<b>0.8350</b>
Benzo(b)fluoranthene	<b>1.520</b>
Dibenzo(a,h)anthracene	0.0840 U
Indeno(1,2,3-cd)pyrene	<b>0.5390</b>
Naphthalene	0.0834 U

**Legend**

- ▲ New Boring Location
- ▲ Historical Boring Locations
- Monitoring Well
- U - compound was not detected

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Concentrations in bold indicate a positive detection.
- Highlighted values represent PAL exceedances.
- Figure only shows the sample that had PAL exceedances for PAHs in surface soil.
- The highest result between field duplicate and parent sample are shown.

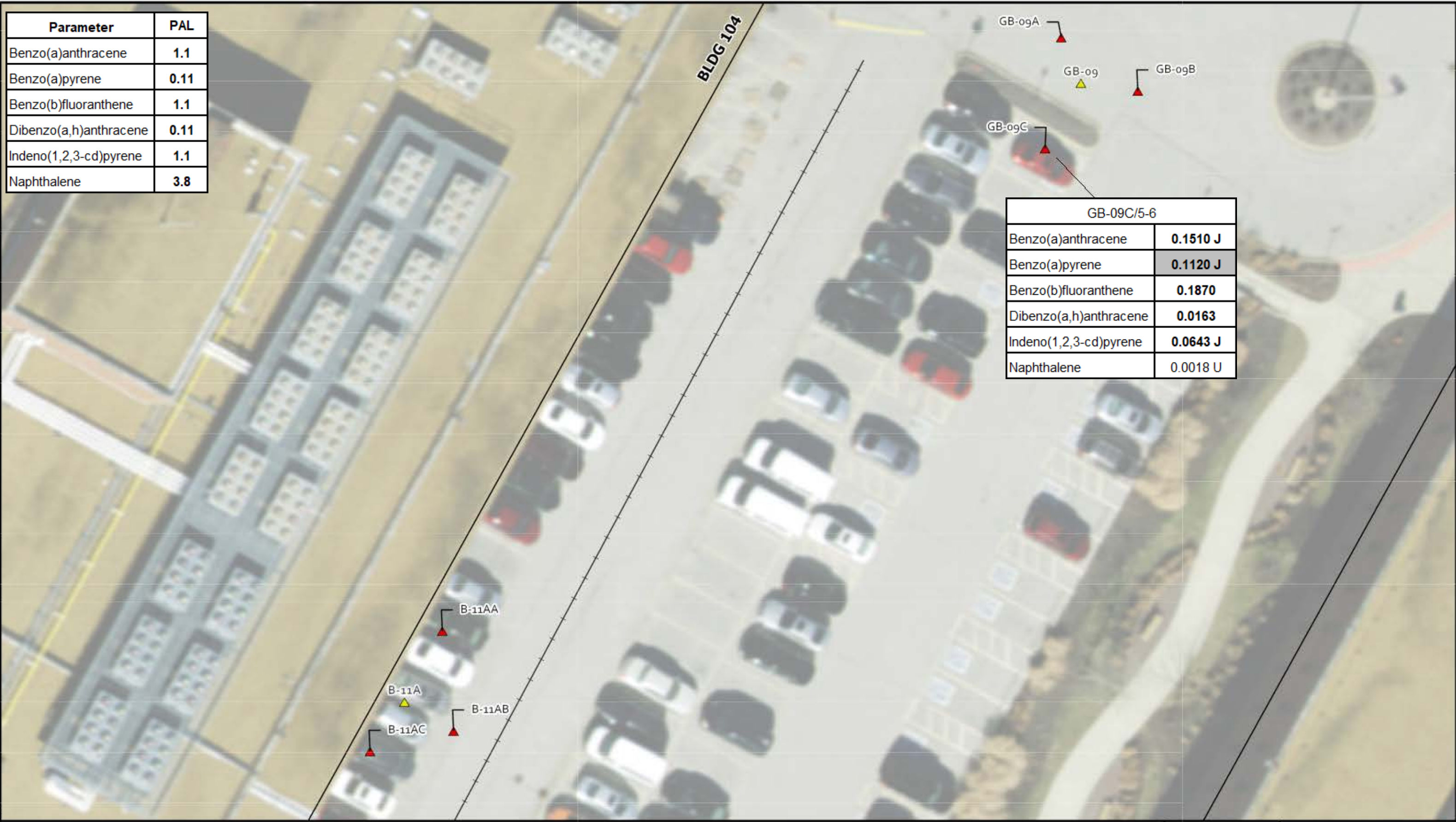


**Figure 13**  
Surface Soil Exceedances (PAHs)  
Boring GB-72  
Goodfellow Federal Complex  
St. Louis, Missouri

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Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8



GB-09C/5-6	
Benzo(a)anthracene	0.1510 J
Benzo(a)pyrene	0.1120 J
Benzo(b)fluoranthene	0.1870
Dibenzo(a,h)anthracene	0.0163
Indeno(1,2,3-cd)pyrene	0.0643 J
Naphthalene	0.0018 U

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- Former Railroad Track
- U - compound was not detected

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Highlighted values represent PAL exceedances.
- Figure only shows the sample that had PAL exceedances for PAHs in subsurface soil.
- The highest result between field duplicate and parent sample are shown.

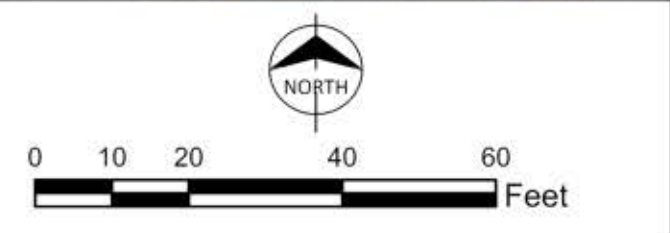
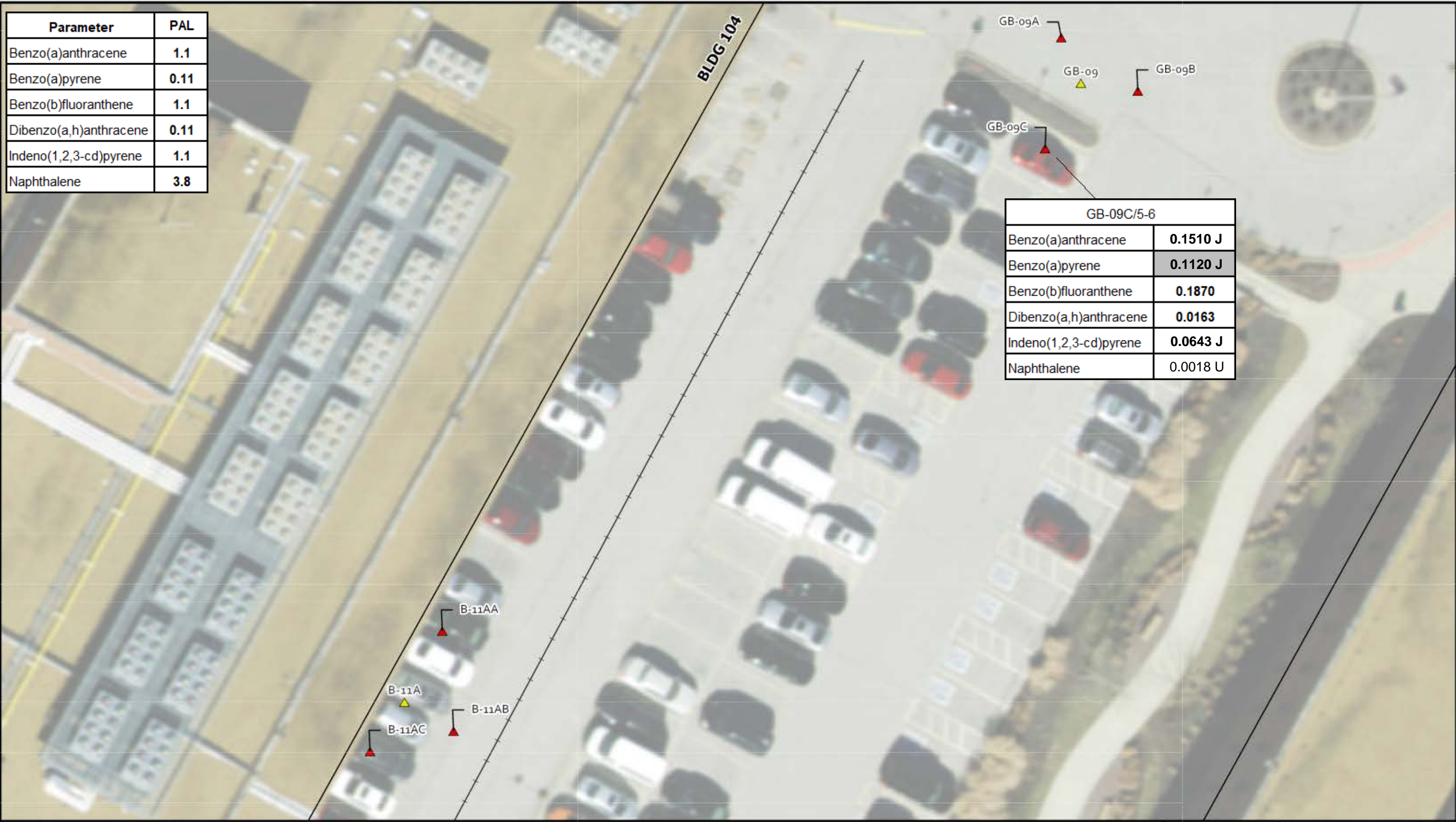


Figure 15  
Subsurface Soil Exceedances (PAHs)  
Boring GB-09C  
Goodfellow Federal Complex  
St. Louis, Missouri

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8



GB-09C/5-6	
Benzo(a)anthracene	0.1510 J
Benzo(a)pyrene	0.1120 J
Benzo(b)fluoranthene	0.1870
Dibenzo(a,h)anthracene	0.0163
Indeno(1,2,3-cd)pyrene	0.0643 J
Naphthalene	0.0018 U

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- Former Railroad Track
- U - compound was not detected

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Highlighted values represent PAL exceedances.
- Figure only shows the sample that had PAL exceedances for PAHs in subsurface soil.
- The highest result between field duplicate and parent sample are shown.

NORTH

0 10 20 40 60 Feet

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Figure 15  
Subsurface Soil Exceedances  
(PAHs)  
Boring GB-09C  
Goodfellow Federal Complex  
St. Louis, Missouri

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GB-19C/2-3	
Benzo(a)anthracene	0.2740
Benzo(a)pyrene	0.2530
Benzo(b)fluoranthene	0.4590
Dibenzo(a,h)anthracene	0.0395
Indeno(1,2,3-cd)pyrene	0.1510
Naphthalene	0.0086

GB-13/7-8	
Benzo(a)anthracene	0.3080
Benzo(a)pyrene	0.3170
Benzo(b)fluoranthene	0.5600
Dibenzo(a,h)anthracene	0.0638
Indeno(1,2,3-cd)pyrene	0.2450
Naphthalene	0.0067

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted
- ▲ Historical Boring Locations
- Former Railroad Track

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Highlighted values represent PAL exceedances.
- Figure only shows the samples that had PAL exceedances for PAHs in subsurface soil.
- The highest result between field duplicate and parent sample are shown.

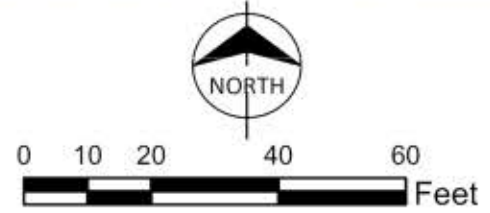
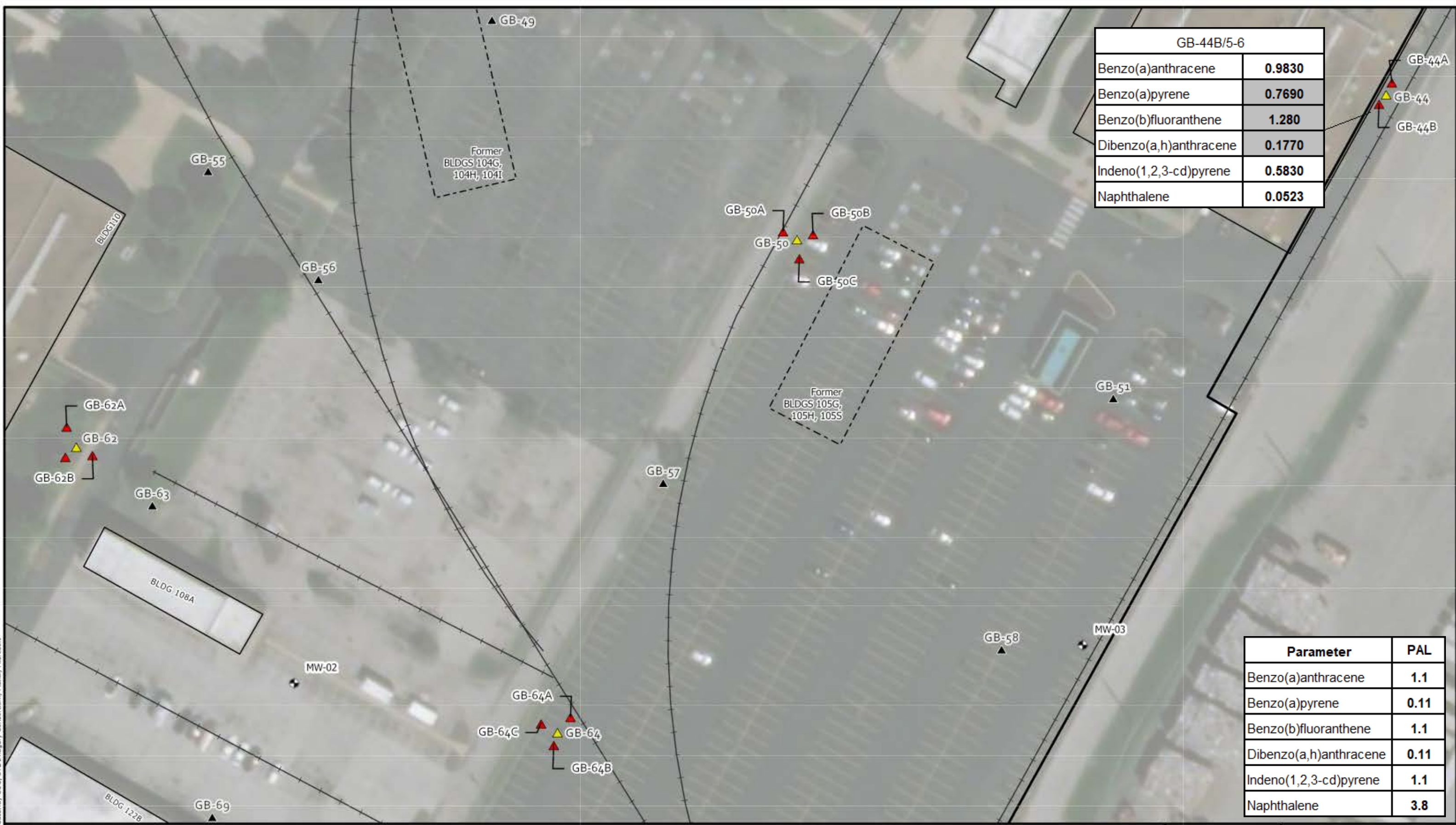


Figure 16  
 Subsurface Soil Exceedances (PAHs)  
 Borings GB-13 and GB-19C  
 Goodfellow Federal Complex  
 St. Louis, Missouri

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GB-44B/5-6	
Benzo(a)anthracene	0.9830
Benzo(a)pyrene	0.7690
Benzo(b)fluoranthene	1.280
Dibenzo(a,h)anthracene	0.1770
Indeno(1,2,3-cd)pyrene	0.5830
Naphthalene	0.0523

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8

**Legend**

- ▲ Step-Out Locations
- ▲ Historical Boring where Additional Sampling at Depth and/or Step-Out Sampling was Conducted; GB-64
- ▲ Historical Boring Locations
- Monitoring Well
- Former Railroad Track
- Building Outlines
- Former Powder Storage Bunker

- Notes:**
- All concentrations shown in milligrams per kilogram (mg/kg).
  - Highlighted values represent PAL exceedances.
  - Figure only shows the sample that had PAL exceedances for PAHs in subsurface soil.
  - The highest result between field duplicate and parent sample are shown.

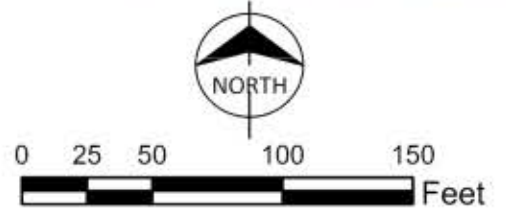
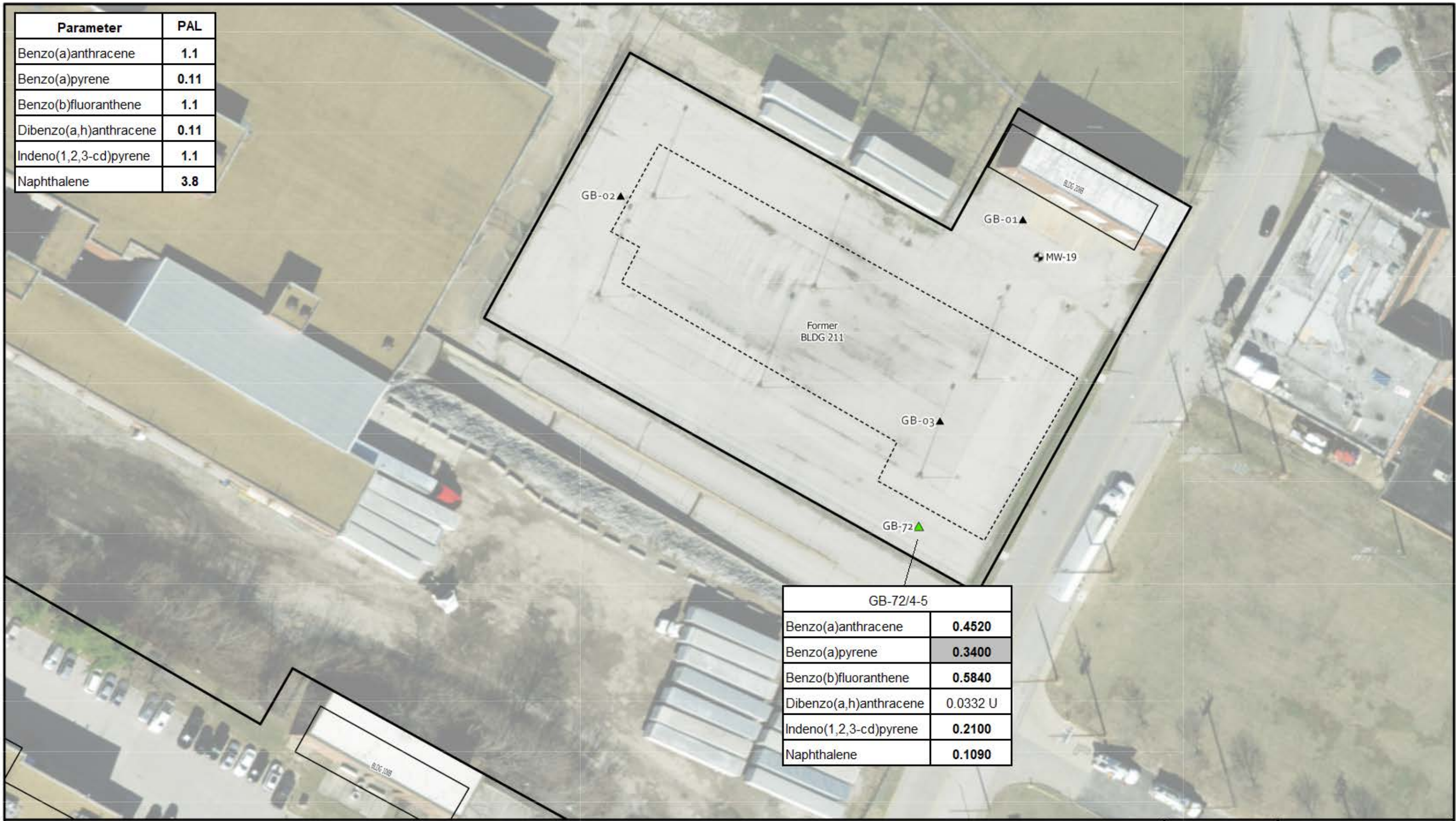


Figure 17  
Subsurface Soil Exceedances (PAHs)  
Boring GB-44B  
Goodfellow Federal Complex  
St. Louis, Missouri

Parameter	PAL
Benzo(a)anthracene	1.1
Benzo(a)pyrene	0.11
Benzo(b)fluoranthene	1.1
Dibenzo(a,h)anthracene	0.11
Indeno(1,2,3-cd)pyrene	1.1
Naphthalene	3.8



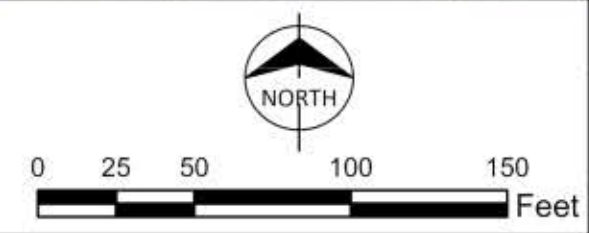
GB-72/4-5	
Benzo(a)anthracene	<b>0.4520</b>
Benzo(a)pyrene	<b>0.3400</b>
Benzo(b)fluoranthene	<b>0.5840</b>
Dibenzo(a,h)anthracene	0.0332 U
Indeno(1,2,3-cd)pyrene	<b>0.2100</b>
Naphthalene	<b>0.1090</b>

**Legend**

- ▲ New Boring Location
- ▲ Historical Boring Locations
- Monitoring Well
- U - compound was not detected

**Notes:**

- All concentrations shown in milligrams per kilogram (mg/kg).
- Concentrations in bold indicate a positive detection.
- Highlighted values represent PAL exceedances.
- Figure only shows the samples that had PAL exceedances for PAHs in subsurface soil.
- The highest result between field duplicate and parent sample are shown.



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Figure 18  
Subsurface Soil Exceedances  
(PAHs)  
Boring GB-72  
Goodfellow Federal Complex  
St. Louis, Missouri

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**EXHIBIT 1 – TABLE 1 (PROJECT ACTION LIMITS AND LABORATORY  
DETECTION/QUANTITATION LIMITS – SOILID SAMPLES)**

**TABLE 1**  
**PROJECT ACTION LIMITS AND LABORATORY DETECTION/QUANTITATION LIMITS - SOLID SAMPLES**  
**GOODFELLOW FEDERAL COMPLEX**  
**REMEDIAL INVESTIGATION WORK PLAN**

Analyte	Category	Test	PAL	PAL Reference	PQL Goal	PQL	MDL
Antimony	Metal	SW6010B	10	Technology Limit	10	5	1.23
Arsenic	Metal	SW6010B	12.3	URS 2008 UTL	12.3	2.5	0.97
Copper	Metal	SW6010B	310	RSL (Res, 0.1)	2.5	0.5	0.21
Lead	Metal	SW6010B	400	RSL (Res, 0.1)	7.5	1.5	0.59
Zinc	Metal	SW6010B	2300	RSL (Res, 0.1)	15	3	1.1
Aroclor 1016	PCB	SW8082	0.41	RSL (Res, 0.1)	0.12	0.0375	0.0045
Aroclor 1221	PCB	SW8082	0.2	RSL (Res, 0.1)	0.12	0.0375	0.0042
Aroclor 1232	PCB	SW8082	0.17	RSL (Res, 0.1)	0.12	0.0375	0.0036
Aroclor 1242	PCB	SW8082	0.23	RSL (Res, 0.1)	0.12	0.0375	0.0039
Aroclor 1248	PCB	SW8082	0.23	RSL (Res, 0.1)	0.12	0.0375	0.003
Aroclor 1254	PCB	SW8082	0.12	RSL (Res, 0.1)	0.12	0.0375	0.0045
Aroclor 1260	PCB	SW8082	0.24	RSL (Res, 0.1)	0.12	0.0375	0.0055
PCB-77	PCB Congeners	1668C	0.038	RSL (Res, 0.1)	0.000025	0.000005	0.0000014
PCB-81	PCB Congeners	1668C	0.012	RSL (Res, 0.1)	0.000025	0.000005	0.0000018
PCB-126	PCB Congeners	1668C	0.000036	RSL (Res, 0.1)	0.000025	0.000005	0.0000016
PCB-169	PCB Congeners	1668C	0.00012	RSL (Res, 0.1)	0.000025	0.000005	0.0000015
PCB-105	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.000025	0.000005	0.0000017
PCB-114	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.000025	0.000005	0.0000015
PCB-118	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.00005	0.00001	0.000003
PCB-123	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.000025	0.000005	0.0000017
PCB-156	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.00005	0.00001	0.0000023
PCB-157	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.00005	0.00001	0.0000023
PCB-167	PCB Congeners	1668C	0.12	RSL (Res, 0.1)	0.000025	0.000005	0.0000013
PCB-189	PCB Congeners	1668C	0.13	RSL (Res, 0.1)	0.000025	0.000005	0.0000013
Acenaphthene	SVOC	SW8270C	360	RSL (Res, 0.1)	0.17	0.034	0.01
Acenaphthylene	SVOC	SW8270C	4180	MDNR RBTL (Surf)	0.17	0.034	0.011
Anthracene	SVOC	SW8270C	1800	RSL (Res, 0.1)	0.17	0.034	0.005
Benzo(a)anthracene	SVOC	SW8270C	1.1	RSL (Res, 0.1)	0.17	0.034	0.011
Benzo(a)pyrene	SVOC	SW8270C	0.11	RSL (Res, 0.1)	0.11	0.034	0.006
Benzo(b)fluoranthene	SVOC	SW8270C	1.1	RSL (Res, 0.1)	0.17	0.034	0.006
Benzo(g,h,i)perylene	SVOC	SW8270C	1720	MDNR RBTL (Surf)	0.17	0.034	0.01
Benzo(k)fluoranthene	SVOC	SW8270C	11	RSL (Res, 0.1)	0.17	0.034	0.005
Chrysene	SVOC	SW8270C	110	RSL (Res, 0.1)	0.17	0.034	0.012
Dibenzo(a,h)anthracene	SVOC	SW8270C	0.11	RSL (Res, 0.1)	0.11	0.034	0.009
Fluoranthene	SVOC	SW8270C	240	RSL (Res, 0.1)	0.17	0.034	0.012
Fluorene	SVOC	SW8270C	240	RSL (Res, 0.1)	0.17	0.034	0.01
Indeno(1,2,3-cd)pyrene	SVOC	SW8270C	1.1	RSL (Res, 0.1)	0.17	0.034	0.008
Naphthalene	SVOC	SW8270C	3.8	RSL (Res, 0.1)	0.17	0.034	0.01
Phenanthrene	SVOC	SW8270C	2170	MDNR RBTL (Surf)	0.17	0.034	0.011
Pyrene	SVOC	SW8270C	180	RSL (Res, 0.1)	0.17	0.034	0.012
1,1,1,2-Tetrachloroethane	VOC	SW8260B	2	RSL (Res, 0.1)	0.01	0.002	0.00056
1,1,1-Trichloroethane	VOC	SW8260B	810	RSL (Res, 0.1)	0.01	0.002	0.00029
1,1,2,2-Tetrachloroethane	VOC	SW8260B	0.6	RSL (Res, 0.1)	0.01	0.002	0.00038
1,1,2-Trichloro-1,2,2-trifluoroethane	VOC	SW8260B	670	RSL (Res, 0.1)	0.01	0.002	0.00086
1,1,2-Trichloroethane	VOC	SW8260B	0.15	RSL (Res, 0.1)	0.025	0.005	0.00032
1,1-Dichloro-2-propanone	VOC	SW8260B	NE	NE	0.25	0.05	0.00698
1,1-Dichloroethane	VOC	SW8260B	3.6	RSL (Res, 0.1)	0.01	0.002	0.00054
1,1-Dichloroethene	VOC	SW8260B	23	RSL (Res, 0.1)	0.01	0.002	0.00019
1,1-Dichloropropene	VOC	SW8260B	NE	NE	0.01	0.002	0.00041
1,2,3-Trichlorobenzene	VOC	SW8260B	6.3	RSL (Res, 0.1)	0.01	0.002	0.00061
1,2,3-Trichloropropane	VOC	SW8260B	0.0051	RSL (Res, 0.1)	0.0051	0.002	0.00072
1,2,3-Trimethylbenzene	VOC	SW8260B	34	RSL (Res, 0.1)	0.01	0.002	0.00067
1,2,4-Trichlorobenzene	VOC	SW8260B	5.8	RSL (Res, 0.1)	0.01	0.002	0.00048
1,2,4-Trimethylbenzene	VOC	SW8260B	30	RSL (Res, 0.1)	0.01	0.002	0.00063
1,2-Dibromo-3-chloropropane	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00079
1,2-Dibromoethane	VOC	SW8260B	0.036	RSL (Res, 0.1)	0.01	0.002	0.00011
1,2-Dichlorobenzene	VOC	SW8260B	180	RSL (Res, 0.1)	0.01	0.002	0.00033
1,2-Dichloroethane	VOC	SW8260B	0.46	RSL (Res, 0.1)	0.01	0.002	0.00015
1,2-Dichloropropane	VOC	SW8260B	1.6	RSL (Res, 0.1)	0.01	0.002	0.00021
1,3,5-Trimethylbenzene	VOC	SW8260B	27	RSL (Res, 0.1)	0.01	0.002	0.00052
1,3-Dichlorobenzene	VOC	SW8260B	148	MDNR RBTL (Sub)	0.01	0.002	0.00052
1,3-Dichloropropane	VOC	SW8260B	160	RSL (Res, 0.1)	0.01	0.002	0.00028
1,4-Dichlorobenzene	VOC	SW8260B	2.6	RSL (Res, 0.1)	0.01	0.002	0.00046
1-Chlorobutane	VOC	SW8260B	310	RSL (Res, 0.1)	0.01	0.002	0.00038
2,2-Dichloropropane	VOC	SW8260B	NE	NE	0.01	0.002	0.0002
2-Butanone	VOC	SW8260B	2700	RSL (Res, 0.1)	0.125	0.025	0.00325
2-Chlorotoluene	VOC	SW8260B	160	RSL (Res, 0.1)	0.01	0.002	0.00043
2-Hexanone	VOC	SW8260B	20	RSL (Res, 0.1)	0.125	0.025	0.00204
2-Nitropropane	VOC	SW8260B	0.1	Technology Limit	0.1	0.05	0.00456
4-Chlorotoluene	VOC	SW8260B	160	RSL (Res, 0.1)	0.01	0.002	0.00054

**TABLE 1**  
**PROJECT ACTION LIMITS AND LABORATORY DETECTION/QUANTITATION LIMITS - SOLID SAMPLES**  
**GOODFELLOW FEDERAL COMPLEX**  
**REMEDIAL INVESTIGATION WORK PLAN**

Analyte	Category	Test	PAL	PAL Reference	PQL Goal	PQL	MDL
4-Methyl-2-pentanone	VOC	SW8260B	3300	RSL (Res, 0.1)	0.125	0.025	0.0022
Acetone	VOC	SW8260B	6100	RSL (Res, 0.1)	0.125	0.025	0.01073
Acrolein	VOC	SW8260B	0.1	Technology Limit	0.1	0.05	0.0207
Acrylonitrile	VOC	SW8260B	0.25	RSL (Res, 0.1)	0.025	0.005	0.00097
Allyl chloride	VOC	SW8260B	0.17	RSL (Res, 0.1)	0.01	0.002	0.00026
Benzene	VOC	SW8260B	1.2	RSL (Res, 0.1)	0.005	0.001	0.00027
Bromobenzene	VOC	SW8260B	29	RSL (Res, 0.1)	0.01	0.002	0.00039
Bromochloromethane	VOC	SW8260B	15	RSL (Res, 0.1)	0.01	0.002	0.00031
Bromodichloromethane	VOC	SW8260B	0.29	RSL (Res, 0.1)	0.01	0.002	0.0003
Bromoform	VOC	SW8260B	19	RSL (Res, 0.1)	0.025	0.005	0.00037
Bromomethane	VOC	SW8260B	0.68	RSL (Res, 0.1)	0.05	0.01	0.00131
Carbon disulfide	VOC	SW8260B	77	RSL (Res, 0.1)	0.01	0.002	0.00172
Carbon tetrachloride	VOC	SW8260B	0.65	RSL (Res, 0.1)	0.01	0.002	0.00021
Chlorobenzene	VOC	SW8260B	28	RSL (Res, 0.1)	0.01	0.002	0.00035
Chloroethane	VOC	SW8260B	1400	RSL (Res, 0.1)	0.05	0.01	0.00155
Chloroform	VOC	SW8260B	0.32	RSL (Res, 0.1)	0.01	0.002	0.00034
Chloromethane	VOC	SW8260B	11	RSL (Res, 0.1)	0.05	0.01	0.00123
cis-1,2-Dichloroethene	VOC	SW8260B	16	RSL (Res, 0.1)	0.01	0.002	0.00022
cis-1,3-Dichloropropene	VOC	SW8260B	0.224	MDNR RBTL (Sub)	0.01	0.002	0.00025
Cyclohexanone	VOC	SW8260B	2800	RSL (Res, 0.1)	0.25	0.05	0.01836
Dibromochloromethane	VOC	SW8260B	8.3	RSL (Res, 0.1)	0.01	0.002	0.0003
Dibromomethane	VOC	SW8260B	2.4	RSL (Res, 0.1)	0.01	0.002	0.00023
Dichlorodifluoromethane	VOC	SW8260B	8.7	RSL (Res, 0.1)	0.05	0.01	0.00157
Ethyl ether	VOC	SW8260B	1600	RSL (Res, 0.1)	0.01	0.002	0.00031
Ethyl methacrylate	VOC	SW8260B	180	RSL (Res, 0.1)	0.01	0.002	0.00042
Ethylbenzene	VOC	SW8260B	5.8	RSL (Res, 0.1)	0.01	0.002	0.00056
Hexachlorobutadiene	VOC	SW8260B	1.2	RSL (Res, 0.1)	0.01	0.002	0.0004
Hexachloroethane	VOC	SW8260B	1.8	RSL (Res, 0.1)	0.01	0.002	0.00038
Iodomethane	VOC	SW8260B	NE	NE	0.05	0.01	0.00312
Isopropylbenzene	VOC	SW8260B	190	RSL (Res, 0.1)	0.01	0.002	0.00056
m,p-Xylenes	VOC	SW8260B	NE	NE	0.02	0.004	0.0012
Methacrylonitrile	VOC	SW8260B	0.75	RSL (Res, 0.1)	0.025	0.005	0.00102
Methyl Methacrylate	VOC	SW8260B	440	RSL (Res, 0.1)	0.025	0.005	0.00065
Methyl tert-butyl ether	VOC	SW8260B	47	RSL (Res, 0.1)	0.01	0.002	0.00026
Methylacrylate	VOC	SW8260B	15	RSL (Res, 0.1)	0.025	0.005	0.00062
Methylene chloride	VOC	SW8260B	35	RSL (Res, 0.1)	0.05	0.01	0.00689
Naphthalene	VOC	SW8260B	3.8	RSL (Res, 0.1)	0.025	0.005	0.0012
n-Butylbenzene	VOC	SW8260B	390	RSL (Res, 0.1)	0.01	0.002	0.00055
n-Heptane	VOC	SW8260B	2.2	RSL (Res, 0.1)	0.1	0.02	0.0007
n-Hexane	VOC	SW8260B	61	RSL (Res, 0.1)	0.1	0.02	0.00347
Nitrobenzene	VOC	SW8260B	5.1	RSL (Res, 0.1)	0.25	0.05	0.03306
n-Propylbenzene	VOC	SW8260B	380	RSL (Res, 0.1)	0.01	0.002	0.00045
o-Xylene	VOC	SW8260B	65	RSL (Res, 0.1)	0.02	0.004	0.00054
Pentachloroethane	VOC	SW8260B	7.7	RSL (Res, 0.1)	0.025	0.005	0.0003
p-Isopropyltoluene	VOC	SW8260B	1100	MDNR RBTL (Sub)	0.01	0.002	0.0006
Propionitrile	VOC	SW8260B	NE	NE	0.25	0.05	0.00682
sec-Butylbenzene	VOC	SW8260B	780	RSL (Res, 0.1)	0.01	0.002	0.0005
Styrene	VOC	SW8260B	600	RSL (Res, 0.1)	0.01	0.002	0.00058
tert-Butylbenzene	VOC	SW8260B	780	RSL (Res, 0.1)	0.01	0.002	0.00046
Tetrachloroethene	VOC	SW8260B	8.1	RSL (Res, 0.1)	0.01	0.002	0.00045
Tetrahydrofuran	VOC	SW8260B	1800	RSL (Res, 0.1)	0.05	0.01	0.00131
Toluene	VOC	SW8260B	490	RSL (Res, 0.1)	0.01	0.002	0.00035
trans-1,2-Dichloroethene	VOC	SW8260B	160	RSL (Res, 0.1)	0.01	0.002	0.00018
trans-1,3-Dichloropropene	VOC	SW8260B	0.224	MDNR RBTL (Sub)	0.01	0.002	0.00027
Trichloroethene	VOC	SW8260B	0.41	RSL (Res, 0.1)	0.01	0.002	0.0003
Trichlorofluoromethane	VOC	SW8260B	2300	RSL (Res, 0.1)	0.025	0.005	0.00039
Vinyl acetate	VOC	SW8260B	91	RSL (Res, 0.1)	0.25	0.05	0.00102
Vinyl chloride	VOC	SW8260B	0.059	RSL (Res, 0.1)	0.01	0.002	0.00032

PAL = Project Action Limit

PQL = Practical Quantitation Limit

MDL = Minimum Detection Limit

Values reported in units of mg/kg.

RSL = USEPA Regional Screening Level, THQ = 0.1, TR = 1E-06

MDNR RBTL (Surf) = Missouri Department of Natural Resources Risk-Based Target Level for Residential Sites, Surficial Soils

MDNR RBTL (Sub) = Missouri Department of Natural Resources Risk-Based Target Level for Residential Sites, Subsurface Soils

NE = Limit not established.



**EXHIBIT 2 – TABLE 2 (PROJECT ACTION LIMITS AND LABORATORY  
DETECTION/QUANTITATION LIMITS – AQUEOUS SAMPLES)**

**TABLE 2**  
**PROJECT ACTION LIMITS AND LABORATORY DETECTION/QUANTITATION LIMITS - AQUEOUS SAMPLES**  
**GOODFELLOW FEDERAL COMPLEX**  
**REMEDIAL INVESTIGATION WORK PLAN**

Analyte	Category	Test	PAL	PAL Reference	PQL Goal	PQL	MDL
Antimony	Metal	E200.7	6	MCL	0.25	0.05	0.0068
Arsenic	Metal	E200.7	10	MCL	0.125	0.025	0.0087
Copper	Metal	E200.7	1300	MCL	0.025	0.005	0.0013
Lead	Metal	E200.7	15	MCL	0.075	0.015	0.004
Zinc	Metal	E200.7	4.69	MDNR RBTL (Ingest)	0.05	0.01	0.005
Aroclor 1016	PCB	SW8082	0.0172	VISL	0.005	0.001	0.0002
Aroclor 1221	PCB	SW8082	0.002	Technology Limit	0.002	0.001	0.00016
Aroclor 1232	PCB	SW8082	0.002	Technology Limit	0.002	0.001	0.00012
Aroclor 1242	PCB	SW8082	0.00101	VISL	0.00101	0.001	0.00013
Aroclor 1248	PCB	SW8082	0.002	Technology Limit	0.002	0.001	0.00016
Aroclor 1254	PCB	SW8082	0.00125	VISL	0.00125	0.001	0.00022
Aroclor 1260	PCB	SW8082	0.002	Technology Limit	0.002	0.001	0.0001
Acenaphthene	SVOC	SW8270C	1610	MDNR RBTL (Inhal)	0.05	0.01	0.001
Acenaphthylene	SVOC	SW8270C	2060	MDNR RBTL (Inhal)	0.05	0.01	0.001
Anthracene	SVOC	SW8270C	2290	MDNR RBTL (Inhal)	0.05	0.01	0.001
Benzo(a)anthracene	SVOC	SW8270C	0.133	VISL	0.05	0.01	0.001
Benzo(a)pyrene	SVOC	SW8270C	0.2	MCL	0.05	0.01	0.001
Benzo(b)fluoranthene	SVOC	SW8270C	7.65	MDNR RBTL (Inhal)	0.05	0.01	0.001
Benzo(g,h,i)perylene	SVOC	SW8270C	218000	MDNR RBTL (Inhal)	0.05	0.01	0.001
Benzo(k)fluoranthene	SVOC	SW8270C	937	MDNR RBTL (Inhal)	0.05	0.01	0.001
Chrysene	SVOC	SW8270C	81.7	MDNR RBTL (Inhal)	0.05	0.01	0.001
Dibenzo(a,h)anthracene	SVOC	SW8270C	985	MDNR RBTL (Inhal)	0.05	0.01	0.001
Fluoranthene	SVOC	SW8270C	14200	MDNR RBTL (Inhal)	0.05	0.01	0.001
Fluorene	SVOC	SW8270C	3010	MDNR RBTL (Inhal)	0.05	0.01	0.001
Indeno(1,2,3-cd)pyrene	SVOC	SW8270C	596	MDNR RBTL (Inhal)	0.05	0.01	0.001
Naphthalene	SVOC	SW8270C	0.1	Technology Limit	0.1	0.01	0.001
Phenanthrene	SVOC	SW8270C	1190	MDNR RBTL (Inhal)	0.05	0.01	0.001
Pyrene	SVOC	SW8270C	17300	MDNR RBTL (Inhal)	0.05	0.01	0.001
1,1,1,2-Tetrachloroethane	VOC	SW8260B	0.00699	VISL	0.004	0.002	0.00022
1,1,1-Trichloroethane	VOC	SW8260B	1.13	VISL	0.01	0.002	0.00033
1,1,2,2-Tetrachloroethane	VOC	SW8260B	0.00582	VISL	0.004	0.002	0.0001
1,1,2-Trichloro-1,2,2-trifluoroethane	VOC	SW8260B	0.0351	VISL	0.025	0.005	0.00036
1,1,2-Trichloroethane	VOC	SW8260B	0.00105	VISL	0.001	0.0005	0.0001
1,1-Dichloro-2-propanone	VOC	SW8260B	NE	NE	0.15	0.03	0.00273
1,1-Dichloroethane	VOC	SW8260B	0.0114	VISL	0.01	0.002	0.00039
1,1-Dichloroethene	VOC	SW8260B	0.0276	VISL	0.01	0.002	0.00038
1,1-Dichloropropene	VOC	SW8260B	NE	NE	0.01	0.002	0.0001
1,2,3-Trichlorobenzene	VOC	SW8260B	NE	NE	0.01	0.002	0.00018
1,2,3-Trichloropropane	VOC	SW8260B	0.00411	VISL	0.004	0.002	0.00017
1,2,3-Trimethylbenzene	VOC	SW8260B	0.0794	VISL	0.01	0.002	0.00014
1,2,4-Trichlorobenzene	VOC	SW8260B	0.00752	VISL	0.004	0.002	0.00024
1,2,4-Trimethylbenzene	VOC	SW8260B	0.0475	VISL	0.01	0.002	0.0001
1,2-Dibromo-3-chloropropane	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00034
1,2-Dibromoethane	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00012
1,2-Dichlorobenzene	VOC	SW8260B	0.5	VISL	0.01	0.002	0.00022
1,2-Dichloroethane	VOC	SW8260B	0.00355	VISL	0.003	0.002	0.00011
1,2-Dichloropropane	VOC	SW8260B	0.00577	VISL	0.004	0.002	0.00011
1,3,5-Trimethylbenzene	VOC	SW8260B	0.0333	VISL	0.01	0.002	0.00014
1,3-Dichlorobenzene	VOC	SW8260B	43.6	MDNR RBTL (Inhal)	0.01	0.002	0.0001
1,3-Dichloropropane	VOC	SW8260B	NE	NE	0.01	0.002	0.0001
1,4-Dichlorobenzene	VOC	SW8260B	0.00488	VISL	0.004	0.002	0.00014
1-Chlorobutane	VOC	SW8260B	NE	NE	0.025	0.005	0.0001
2,2-Dichloropropane	VOC	SW8260B	NE	NE	0.01	0.002	0.0001
2-Butanone	VOC	SW8260B	354	VISL	0.05	0.01	0.00112
2-Chloroethyl vinyl ether	VOC	SW8260B	NE	NE	0.025	0.005	0.00045
2-Chlorotoluene	VOC	SW8260B	17.1	MDNR RBTL (Inhal)	0.01	0.002	0.0001
2-Hexanone	VOC	SW8260B	1.46	VISL	0.05	0.01	0.0004
2-Nitropropane	VOC	SW8260B	0.02	Technology Limit	0.02	0.01	0.00229
4-Chlorotoluene	VOC	SW8260B	0.0666	MDNR RBTL (Inhal)	0.01	0.002	0.0001
4-Methyl-2-pentanone	VOC	SW8260B	94.9	VISL	0.05	0.01	0.00043
Acetone	VOC	SW8260B	3370	VISL	0.05	0.01	0.00244
Acetonitrile	VOC	SW8260B	6.82	VISL	0.05	0.01	0.00142
Acrolein	VOC	SW8260B	0.04	Technology Limit	0.04	0.02	0.00214
Acrylonitrile	VOC	SW8260B	0.0117	VISL	0.01	0.005	0.00025
Allyl chloride	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00021
Benzene	VOC	SW8260B	0.00246	VISL	0.001	0.0005	0.00005
Bromobenzene	VOC	SW8260B	0.125	VISL	0.01	0.002	0.00017
Bromochloromethane	VOC	SW8260B	0.106	VISL	0.01	0.002	0.00016
Bromodichloromethane	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.0001
Bromoform	VOC	SW8260B	0.214	VISL	0.01	0.002	0.0001

**TABLE 2**  
**PROJECT ACTION LIMITS AND LABORATORY DETECTION/QUANTITATION LIMITS - AQUEOUS SAMPLES**  
**GOODFELLOW FEDERAL COMPLEX**  
**REMEDIAL INVESTIGATION WORK PLAN**

Analyte	Category	Test	PAL	PAL Reference	PQL Goal	PQL	MDL
Bromomethane	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00101
Carbon disulfide	VOC	SW8260B	0.177	VISL	0.01	0.002	0.00046
Carbon tetrachloride	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.0001
Chlorobenzene	VOC	SW8260B	0.0702	VISL	0.01	0.002	0.0001
Chloroethane	VOC	SW8260B	3.13	VISL	0.01	0.002	0.00021
Chloroform	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00021
Chloromethane	VOC	SW8260B	0.0331	VISL	0.025	0.005	0.00018
Chloroprene	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00012
cis-1,2-Dichloroethene	VOC	SW8260B	70	MCL	0.01	0.002	0.00015
cis-1,3-Dichloropropene	VOC	SW8260B	0.596	MDNR RBTL (Inhal)	0.01	0.002	0.00012
cis-1,4-Dichloro-2-butene	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00018
Cyclohexanone	VOC	SW8260B	404	VISL	0.1	0.02	0.016
Dibromochloromethane	VOC	SW8260B	80	MCL	0.01	0.002	0.00017
Dibromomethane	VOC	SW8260B	0.0199	VISL	0.01	0.002	0.00016
Dichlorodifluoromethane	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00015
Ethyl acetate	VOC	SW8260B	2.13	VISL	0.05	0.01	0.00107
Ethyl ether	VOC	SW8260B	NE	NE	0.025	0.005	0.00017
Ethyl methacrylate	VOC	SW8260B	2.76	VISL	0.025	0.005	0.00029
Ethylbenzene	VOC	SW8260B	0.00609	VISL	0.006	0.002	0.0001
Hexachlorobutadiene	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00027
Hexachloroethane	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00025
Iodomethane	VOC	SW8260B	NE	NE	0.025	0.005	0.00026
Isopropylbenzene	VOC	SW8260B	0.179	VISL	0.01	0.002	0.00012
m,p-Xylenes	VOC	SW8260B	NE	NE	0.01	0.002	0.00018
Methacrylonitrile	VOC	SW8260B	0.495	VISL	0.025	0.005	0.00051
Methyl Methacrylate	VOC	SW8260B	10.1	VISL	0.025	0.005	0.00023
Methyl tert-butyl ether	VOC	SW8260B	0.664	VISL	0.01	0.002	0.0001
Methylacrylate	VOC	SW8260B	0.417	VISL	0.025	0.005	0.00025
Methylene chloride	VOC	SW8260B	0.685	VISL	0.01	0.002	0.00087
Naphthalene	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00036
n-Butyl acetate	VOC	SW8260B	NE	NE	0.01	0.002	0.00028
n-Butylbenzene	VOC	SW8260B	8.76	MDNR RBTL (Inhal)	0.01	0.002	0.00011
n-Heptane	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.0002
n-Hexane	VOC	SW8260B	0.01	Technology Limit	0.01	0.005	0.00154
Nitrobenzene	VOC	SW8260B	0.151	VISL	0.1	0.05	0.01
n-Propylbenzene	VOC	SW8260B	0.452	VISL	0.01	0.002	0.0001
o-Xylene	VOC	SW8260B	0.0873	VISL	0.01	0.002	0.0001
Pentachloroethane	VOC	SW8260B	NE	NE	0.025	0.005	0.00036
p-Isopropyltoluene	VOC	SW8260B	98.5	MDNR RBTL (Inhal)	0.01	0.002	0.0001
Propionitrile	VOC	SW8260B	NE	NE	0.05	0.01	0.00092
sec-Butylbenzene	VOC	SW8260B	6.23	MDNR RBTL (Inhal)	0.01	0.002	0.0001
Styrene	VOC	SW8260B	1.65	VISL	0.01	0.002	0.00014
tert-Butylbenzene	VOC	SW8260B	9.43	MDNR RBTL (Inhal)	0.01	0.002	0.00011
Tetrachloroethene	VOC	SW8260B	0.00972	VISL	0.0025	0.0005	0.0001
Tetrahydrofuran	VOC	SW8260B	109	VISL	0.025	0.005	0.00081
Toluene	VOC	SW8260B	3.16	VISL	0.01	0.002	0.0001
trans-1,2-Dichloroethene	VOC	SW8260B	100	MCL	0.01	0.002	0.0001
trans-1,3-Dichloropropene	VOC	SW8260B	0.596	MDNR RBTL (Inhal)	0.01	0.002	0.00012
trans-1,4-Dichloro-2-butene	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00017
Trichloroethene	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.00018
Trichlorofluoromethane	VOC	SW8260B	5.36	MDNR RBTL (Inhal)	0.025	0.005	0.00013
Vinyl acetate	VOC	SW8260B	1.61	VISL	0.025	0.005	0.00033
Vinyl chloride	VOC	SW8260B	0.004	Technology Limit	0.004	0.002	0.0001

PAL = Project Action Limit

PQL = Practical Quantitation Limit

MDL = Minimum Detection Limit

Values reported in units of mg/L.

VISL = USEPA Vapor Intrusion Screening Level for residential sites using default inputs

MCL = USEPA Maximum Contaminant Level for drinking water

MDNR RBTL (Inhal) = Missouri Department of Natural Resources Risk-Based Target Level for Residential Sites, Inhalation Pathway

MDNR RBTL (Ingest) = Missouri Department of Natural Resources Risk-Based Target Level for Residential Sites, Ingestion Pathway

NE = Limit not established.

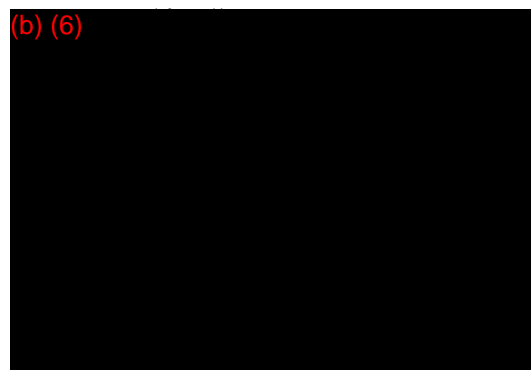
## **APPENDIX A – FIELD NOTES**

13702

Enclined

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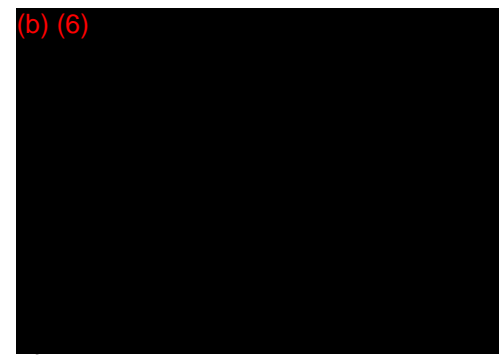


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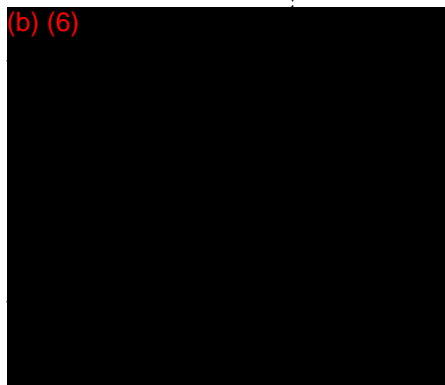
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80

4/11/22

143702

B. Labrey

Task: Saw Samples

T. UDD.W

Location: S.S. Primary

B.S. Labrey: UDD.W

1095 Rebar's drilling onsite (mult. &amp; 1/2)

0970 Ed. Lay in level 3 onsite.

1005 Final 1/2 S. Layer. Stop on GB-64

1015 Run through story of Rebar's &amp; Ties.

1025 Rebar Drilling GB-64

1050 collect GB-64/7-10 7 1/2

1055 collect GB-64/12-14

1057 Rebar Drilling GB-64. Stop due to GB-64

effect

1107 Air Layer @ 6' margin to base thereof.

will expect no 2-3' of air mixing

1120 collect GB-64/15-16

1123 collect GB-64/15-16

1130 Rebar Drilling GB-64. SW of GB-64 effect.

1144 cross GB-64/15-16

1152 collect GB-64/15-16 1/2

1156 Rebar Drilling GB-64. West side of GB-64 effect.

1205 Final Drilling GB-64. Patch air holes.

1208 collect GB-64/20-25

1209 collect GB-64/19-5

1315 Start drilling GB-64 N. of GB-62 (06)

1322 Final Drilling GB-64. Stop on GB-62.

4/11/22

143702

B. Labrey

T. UDD.W

1327 collect GB-62/1-2

1328 collect GB-62/3-4

1337 Rebar Drilling on GB-62 SW of GB-62 (06)

1340 Final Drilling GB-62. Move to 62B

1342 collect GB-62/1-2

1344 collect GB-62/3-4

1350 Rebar Drilling GB-62B SW of GB-62 (06)

1358 unable to put through concrete under

Asphalt - 6' deep. will expect next after

1400 unable to put through. Given situation depth

in proximity to marked utilities, we will

try a smaller bar.

1418 Success.

1420 0-5' hole stuck.

1430 0-5' stuck. margin of no recovery. 5-10'

Bar is likely 10' of soil compressed.

will expect 3-4' to concrete slab.

Rebar Drilling concrete of Block Bar?

then use standard 100

1452 Final Drilling GB-62B

1454 collect GB-62B/3-5-3-5

1505 Rebar Drilling GB-62B. Stop 1/2

1510 collect GB-62B/5-10

1520 stop on GB-62

1530 Rebar Drilling GB-62

1532 unable to advance past 10'. Hard Hammer

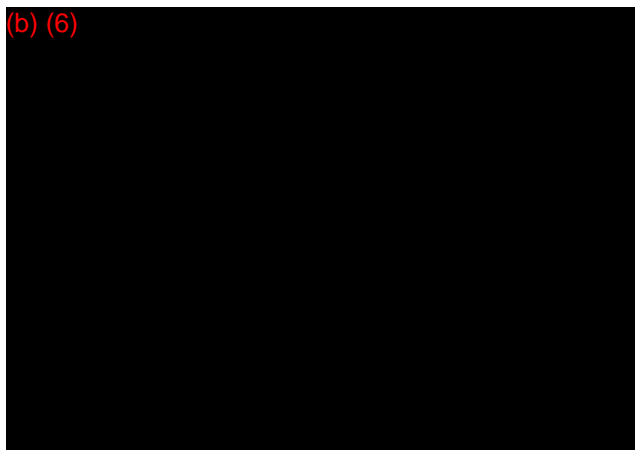
4/1/76

143702

B. Lohman

5:00 PM

- 1520 Search 711 with officer [unclear] [unclear]
- 1530 Search [unclear] [unclear]
- 1535 Search GB-40/14-26
- 1605 Records [unclear] [unclear]
- 1640 Collect GB-40/14-26
- 1700 Final cleanup, MOB to [unclear]
- 1710 Cleanup complete and [unclear]



(b) (6)

4/1/76

143702

B. Lohman

7:00 PM

- 1500 Search [unclear] [unclear]
- 1530 Search [unclear] [unclear]
- 1535 Search GB-40/14-26
- 1605 Records [unclear] [unclear]
- 1640 Collect GB-40/14-26
- 1700 Final cleanup, MOB to [unclear]
- 1710 Cleanup complete and [unclear]

- 1730 [unclear] [unclear] [unclear]
- 1740 [unclear] [unclear] [unclear]
- 1750 [unclear] [unclear] [unclear]
- 1800 [unclear] GB-40/14-26 [unclear]
- 1810 [unclear] [unclear] [unclear]
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4/12/22

143702

B. Ladewood

T. UDDW

\*LW45\*

1041 collect GB-57/14-15 ; GB-57/14-15 3  
GB-57/14-15-hSD

\*8000 LW45\*

1074 collect GB-45C/0.5-1.5 ; GB-45C/0.5-1.5 D1176 collect GB-45C/2.5-3.5

1188 Below Draining GB-45B

1183 collect GB-45B/1-21184 collect GB-45B/3-4

1189 Below Draining GB-45A

1208 collect GB-45A/1-21209 collect GB-45A/3-4 ; GB-45A/3-4 3  
GB-45A/3-4-hSD

1220 LW45

1310 web to GB-19S-2

1320 Below Draining DITS-2

1334 collect DITS-2/9-101337 collect DITS-2/13-14

1350 web to GB-19

1405 Below Draining GB-19B in Room

1417 collect GB-19A/2.5-3.51419 collect GB-19A/4-5

1423 notes to GB-19A

1425 Below Draining GB-19A

1438 collect GB-19A/0.5-1.51440 collect GB-19A/5.5-6.5

4/12/22

143702

B. Ladewood

T. UDDW

1448 Below Draining GB-19C

1500 collect GB-19C/1-2 ; GB-19C/1-2 D1503 collect GB-19C/2-3

1505 walk stream Basin to discuss access  
 to GB-13. Matt does not think  
 the mod will be an issue. We  
 will try to work it

1508 ~~1508~~ <sup>1508</sup> collect GB-13 to down rods.

1530 call Tom F (AUCS Liaison) to set pickup for AUCS

1547 EBB 04122022 of sheet

1548 web to GB-13

1600 Below Draining GB-13 100% west (Down slope)  
 of GB-13 (eg)

1609 collect GB-13B/0.5-1.51611 collect GB-13B/2-3

1614 Below Draining GB-13A 100% NW of GB-13 (eg)

1622 collect GB-13A/0.5-1.51630 collect GB-13A/5-6

1636 Below Draining GB-13 offset lit from GB-13 (eg)

1651 collect GB-13/7-81653 collect GB-13/11-12

1709 Below Draining GB-13C 100% SW of GB-13 (eg)

1712 collect GB-13C/1-21715 collect GB-13C/5-6

1719 Below Litawop, web to GB-09 ? Down rods.

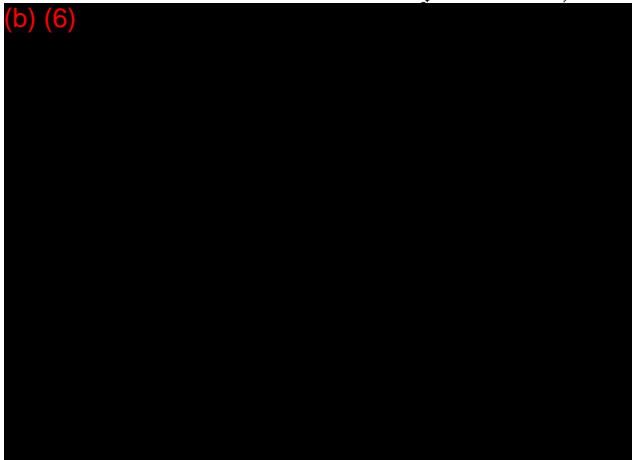
4/12/22

143702

B. Lohrsted  
T. 00001

- 1740 TBS exposure ten day
- 1745 call w/ center to discuss TED+4 work  
plans ten tomorrow. He sees no point in  
trying to square in 12 barrels if  
low's just going to get raised up.  
All cancelled for tomorrow.
- 1800 students have walked up west of Seneca  
mountain (Canaan & W-2).
- 1810 Partial exposure around 1800

(b) (6)



4/12/22

143702

B. Lohrsted  
T. 00001

Ten: Se - Sampling

Wanted to see - 6/1/22

- 747 Lohrsted 10:00 AM, 2001 grade, 10000
- 748 Lohrsted 10:00 AM, 2001 grade, 10000
- 749 Lohrsted 10:00 AM, 2001 grade, 10000
- 750 Lohrsted 10:00 AM, 2001 grade, 10000
- 751 Lohrsted 10:00 AM, 2001 grade, 10000
- 752 Lohrsted 10:00 AM, 2001 grade, 10000
- 753 Lohrsted 10:00 AM, 2001 grade, 10000
- 754 Lohrsted 10:00 AM, 2001 grade, 10000
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- 795 Lohrsted 10:00 AM, 2001 grade, 10000
- 796 Lohrsted 10:00 AM, 2001 grade, 10000
- 797 Lohrsted 10:00 AM, 2001 grade, 10000
- 798 Lohrsted 10:00 AM, 2001 grade, 10000
- 799 Lohrsted 10:00 AM, 2001 grade, 10000
- 800 Lohrsted 10:00 AM, 2001 grade, 10000

4/11/22

143702

B. Lockwood

T. Uddin

- 995 Brown Damning GB-11C  
 995 Collect GB-11A/1-2  
 996 Collect GB-11A/4-5  
 1000 MOB M GB-50  
 1020 cases remaining in the way of A Bunks are  
 gone. Policy Bunk to have them moved.  
 1030 Policy cases back to container they will be moved  
 in 15-20 min. will pull GB-50C in the  
 new tank.  
 1035 Brown Damning GB-50C  
 1040 Collect GB-50C/15-25  
 1050 Collect GB-50C/40-50  
 1055 Brown Damning GB-50A  
 1104 Collect GB-50A/15-25  
 1109 Collect GB-50/25-35  
 1100 Low some have not been moved  
 110 Level  
 1145 Brown Damning GB-70B  
 1155 Collect GB-50B/1-2  
 1157 Collect GB-70B/2A-3S  
 1200 MOB to GB-71  
 1210 Brown Damning GB-71A  
 1220 Collect GB-71A/3S-5C  
 1228 Collect GB-44A/5-10  
 1231 Brown Damning GB-44E

4/11/22

143702

B. Lockwood

T. Uddin

- 1232 Collect GB-44B/2S-3S  
 1243 Collect GB-44B/5-10  
 1245 Brown cases 1 hour for Brown  
 1258 Brown Damning GB-03 offset  
 1340 Robert & D.H. will offset 24' east of GB-03  
 & IM Against Lake (US and Education  
 in County.  
 1300 Same issue in offset 1st of concrete @  
 74' by. M 1000 by at least will try  
 alternatives for minor bridge repairs.  
 Some things new.  
 1315 Same offset 1st east of GB-03 of. Same  
 issue will try 5th function east.  
 Flange  
 1331 Collect GB-04/10-25 off Paul also  
 James Lake  
 1415 Two more offsets last family. will  
 offset 50' to outside end of main road  
 Post point.  
 1425 will with center given lake offset  
 we will collect two situations  
 samples along with dammed pumps  
 samples and return to GB-72  
 1530 Collect GB-72/6A ? GB-72 0-10 E (10)  
 1535 Collect GB-72/12-13 (10)  
 1600 Collect GB-72/4-5 (10)

4/14/02

143702

B. Lockman

T. V. P. W.

1245 Follow 671/2002 (3)

1245 RFD: Daniels parked up - offsite

Call w/ CARTON to Discus Day.

1650 Walk to STAGWIS AREA to collect water

CHAM sample.

1716 Collect 671/2002

1730 Turn - collect offsite.

(b) (6)



4/10/72

128187

B Lakewood

Time: 10:00 AM

Weather: 40S, Rainy

830 Lakewood 20000

840 Lakewood 20000

850 Lakewood 20000

900 Lakewood 20000

910 Lakewood 20000

920 Lakewood 20000

2 Lakewood (15 Pairs)

3 Lakewood (3 Pairs)

1 Lakewood (1 Pair)

950 Lakewood 20000

600 Lakewood

(b) (6)

4/10/72

143702

B Lakewood

Time: 10:00 AM

Weather: 50S, Rainy

800 Lakewood 20000

805 Lakewood 20000

810 Lakewood 20000

815 Lakewood 20000

820 Lakewood 20000

825 Lakewood 20000

830 Lakewood 20000

840 Lakewood 20000

845 Lakewood 20000

850 Lakewood 20000

860 Lakewood 20000

865 Lakewood 20000

870 Lakewood 20000

875 Lakewood 20000

880 Lakewood 20000

885 Lakewood 20000

890 Lakewood 20000

895 Lakewood 20000

900 Lakewood 20000

905 Lakewood 20000

910 Lakewood 20000

915 Lakewood 20000

(b) (6)

6/23/22

Blackwood

Test: 100 pickup

Water: 3000 gal

800 Blackwood onsite, 06 Ennis onsite

805 6 drums loaded on truck

- 3 water, 2 sol, 1 paste tank

800 Blackwood signs indicate as Agent of GST.

830 06 : Blackwood, offsite

(b) (6)



**APPENDIX B – DRILLING LOGS**

## List of Acronyms

bgs	below ground surface
CH	high plasticity clay
CL	low plasticity clay
DUP	duplicate sample
GW	clean gravel – well graded
MC	MacroCore <sup>®</sup>
MS	matrix spike
MSD	matrix spike duplicate
MSL	mean sea level
NA	not applicable
PID	photoionization detector
ppm	parts per million
SM	silty sand
SP	clean sand – poorly graded
SW	clean sand – well graded
tsf	tons per square foot



# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-09A</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									▽ Depth to water while drilling ▾ Depth to water after drilling
	1	Asphalt and Limestone GRAVEL with Clay									
	2			MC	1		NA	4.0/5.0	1.5	0.0	
	3								2.5	0.0	
	4	Silty CLAY, trace coarse sand, Dark Greenish Gray (Gley 1 4/10Y), trace fine brick fragments, moist, low plasticity, no odor.							2.5	0.0	Collect GB-09A/3-4 (829)
	5										
	6	Silty CLAY, Brown (10YR 5/3) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, medium plasticity, no odor.							2.0	0.0	Collect GB-09A/5-6 (832)
	7								2.0	0.0	
	8			MC	2		NA	4.0/5.0	2.0	0.0	
	9								2.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-09B</b>	
	Coordinates		Ground Elevation		Page <b>1 of 2</b>	
	Total Depth (feet) <b>15</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			


Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt	GM								No free water observed
	1	Asphalt and Limestone GRAVEL, Fine to Coarse		MC	1		NA	2.2/5.0	--	--	
	4	Silty CLAY, Dark Greenish Gray (Gley 1 4/5GY) with very dark grey streaks, moist, soft, no odor.							1.5	0.0	Collect GB-09B/4-5 (852)
	5								0.5	0.0	
	7			MC	2		NA	2.5/5.0	--	--	Collect GB-09B/9-10 (855)
	9	Silty CLAY, Brown (10YR 5/3) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.							--	--	
	11								1.0	0.0	
	12			MC	3		NA	5.0/5.0	1.0	0.0	
	13								1.0	0.0	

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log, continued

			Boring/Monitoring Well Number	GB-09B
	Project Name	Goodfellow Additional RI	Page	2 of 2
	Project Number	143702	Date	4/14/2022


Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	15	Silty CLAY, Brown (10YR 5/3) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.		MC	3		NA	5.0/5.0	1.0	0.0	
	15	Boring terminated at 15 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	16										
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										

# Drilling Log


		Project Name <b>Goodfellow Additional RI</b>			Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-09C</b>				
		Coordinates			Ground Elevation		Page <b>1 of 1</b>				
		Total Depth (feet) <b>10</b>		Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>						
Drilling Rig <b>Geoprobe 8040DT</b>					Drilling Company <b>Roberts Environmental Drilling, Inc.</b>						
Date <b>4/14/2022</b>			Logged By: <b>B. Lockwood</b>		Reviewed by:			Approved by:			
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	0	Asphalt									No free water observed
	1	Asphalt and Limestone GRAVEL, some clay.									
	2										
	3	Silty CLAY, Dark yellowish brown (10YR 3/6), trace gray (10YR 5/1) mottles, some fine iron nodules and brick fragments, moist, medium plasticity, no odor.		MC	1		NA	3.2/5.0	2.0	0.0	Collect GB-09C/2-3 (811)
	4								1.5	0.0	
	5										
	6								1.0	0.0	Collect GB-09C/5-6 (813)
	7								1.0	0.0	
	8			MC	2		NA	5.0/5.0	1.0	0.0	
	9								1.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log


	Project Name <b>Goodfellow Remedial Investigation</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-13</b>							
	Coordinates		Ground Elevation		Page <b>1 of 1</b>							
	Total Depth (feet) <b>12</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>									
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>									
Date <b>4/12/2022 to 4/12/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:			Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks	
		Grass	Grass									
	1	silty CLAY, trace coarse sand and fine gravel, dark yellowish brown (10YR 3/6), with very dark brown (10YR 3/1) mottles, moist, high plasticity, no odor		MC	1		NA	1.5/3.0	1.5	0.0		
	2									-		0.0
	3									1.5		0.0
	4									-		0.0
	5			MC	2		NA	2.5/5.0	1.0	0.0	No free water observed	
	6											
	7											
	8										Collect GB-13/7-8 (1651)	
	9			MC	3		NA	2.2/2.0	1.0	0.0		
	10								1.5	0.0		
	11								2.5	0.0		
	12			MC	4		NA	2.6/4	3.0	0.0	Collect GB-13/11-12 (1653)	
	13	Boring terminated at 12 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022	

# Drilling Log

		Project Name <b>Goodfellow Additional RI</b>			Project No. <b>143702</b>			Boring/Monitoring Well Number <b>GB-13A</b>			
		Coordinates			Ground Elevation			Page <b>1 of 1</b>			
		Total Depth (feet) <b>10</b>		Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>						
Drilling Rig <b>Geoprobe 8040DT</b>					Drilling Company <b>Roberts Environmental Drilling, Inc.</b>						
Date <b>4/12/2022</b>			Logged By: <b>B. Lockwood</b>			Reviewed by:			Approved by:		
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass CLAY trace silt, Dark yellowish brown (10YR 4/6), trace fine iron nodules, moist, high plasticity, no odor.	1628	MC	1		NA	2.0/5.0	1.0	0.0	No free water observed  Collect GB-13A/0.5-1.5 (1628)
	2								1.0	0.0	
	3								-	-	
	4								-	-	
	5										
	6	Increasing silt							1.5	0.0	Collect GB-13A/5-6 (1630)
	7	Increasing clay, decreasing silt							1.5	0.0	
	8			MC	2		NA	5.0/5.0	2.0	0.0	
	9								2.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-13B</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/12/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:			Approved by:				
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass CLAY trace silt, Dark yellowish brown (10YR 4/6), trace fine iron nodules, moist, high plasticity, no odor.		MC	1		NA	3.7/5.0	2.5	0.0	No free water observed  GB-13B/0.5-1.5 (1609)
	2								2.5	0.0	
	3	Grades to 5YR 4/3 Reddish brown		MC	2		NA	5.0/5.0	2.0	0.0	GB-13B/2-3 (1611)
	4								--	--	
	5								--	0.0	
	6	Boring terminated at 10 feet bgs.							--	0.0	Abandoned with hydrated bentonite chips on 4/12/2022
	7								--	0.0	
	8								--	0.0	
	9								--	0.0	
	10										
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22


# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-13C</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/12/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:		Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass CLAY trace silt, Dark yellowish brown (10YR 4/6), trace fine iron nodules, moist, high plasticity, no odor. Limestone gravel lense, fine		MC	1		NA	2.5/5.0	0.5	0.0	No free water observed
	2								1.5	0.0	
	3								-	-	
	4								-	-	
	5								-	-	
	6								2.0	0.0	
	7								2.5	0.0	
	8								2.5	0.0	
	9								3.0	0.0	
	10								3.0	0.0	
	11	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22



# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-19A</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/12/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:		Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass Silty CLAY, Dark yellowish brown (10YR 4/4) with dark reddish brown (5YR 3/3) mottles, trace medium gravel and brick fragments, fine to medium sand. moist, medium plasticity, no odor.	GM	MC	1		NA	2.0/5.0	2.0	0.0	No free water observed  Collect GB-19A/0.5-1.5 (1438)
	2								2.0	0.0	
	3								--	--	
	4								--	--	
	5	Limestone GRAVEL, coarse, silty	GM								Collect GB-19A/5.5-6.5 (1440)
	6	CLAY trace silt, Yellowish brown (10YR 5/6) trace black (10YR 2/1) mottles, some fine iron nodules, moist, high plasticity, hard, no odor, copper green staining on soil @6ft	GM						3.0	0.0	
	7	CLAY some silt, dark reddish brown (2.5YR 3/3) with light greenish gray (Gley 1 7/N) and yellow (2.5Y 7/8) mottles, moist, friable, no odor.	CL	MC	2		NA	4.2/5.0	2.5	0.0	
	8								3.5	0.0	
	9								3.5	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-19B</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	0	Asphalt									No free water observed
	1	Asphalt and Limestone GRAVEL							--	--	
	2	Chert concrete GRAVEL							--	--	Collect GB-19B/2.5-3.5 (1417)
	2.5	SAND, medium grained, well sorted		MC	1		NA	4.0/5.0			
	3	CLAY trace silt, Dark yellowish brown (10YR 4/4), some fine iron nodules, moist, high plasticity, no odor							3.5	0.0	Collect GB-19B/4-5 (1419)
	4								3.5	0.0	
	6								3.0	0.0	Abandoned with hydrated bentonite chips on 4/12/2022
	7	CLAY some silt, weak red (10R 4/3) with brownish yellow (10Yr 6/6) mottles, moist, low plasticity to friable, no odor.		MC	2		NA	5.0/5.0	3.0	0.0	
	8								4.0	0.0	
	9								4.5	0.0	
	10	Boring terminated at 10 feet bgs.									
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-19C</b>
	Coordinates		Ground Elevation	Page <b>1 of 1</b>
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Grass									
	1	Silty CLAY, Dark yellowish brown (10YR 4/4) with dark reddish brown (5YR 3/3) mottles, moist, medium plasticity, no odor, trace fine brick fragments and gravel throughout	CH	MC	1		NA	3.0/5.0	2.0	0.0	▽ Depth to water while drilling ▾ Depth to water after drilling
	2								2.5	0.0	
	3	CLAY trace silt, brown (7.5YR 5/4) with very dark gray (10YR 3/1) mottles, moist, high plasticity, no odor, trace fine iron nodules.	CH	MC	2		NA	5.0/5.0	2.5	0.0	Collect GB-19C/2-3 (1503)
	4								--	--	
	5								1.5	0.0	
	6	Boring terminated at 10 feet bgs.							2.0	0.0	Abandoned with hydrated bentonite chips on 4/12/2022
	7								2.0	0.0	
	8								2.0	0.0	
	9								2.0	0.0	
	10										
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log


	Project Name <b>Goodfellow Remedial Investigation</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-40</b>
	Coordinates		Ground Elevation	Page <b>1 of 2</b>
	Total Depth (feet) <b>20</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022 to 4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									No free water observed
		Asphalt gravel (fine-med)									
	1	Clay fill							-	0.0	
		-Black gravel (fine) lense (3")		MC	1		NA	2.5/3	-	2.4	
	2	-Coarse sand lense							-	0.0	
	3	Cherty concrete fragments (4")							-	0.0	
		-Coarse sand lense							-	0.0	
	4								-	0.0	
	5	Cherty concrete fragments (3")		MC	2		NA	3.5/5	-	0.0	
		-Coarse sand lense							-	0.0	
	6								-	0.0	
	7								-	0.0	
	8								-	0.0	
	9	Cherty concrete fragments (4")		MC	3		NA	1.5/2	-	0.0	
		-Coarse sand lense							-	0.0	
	10								-	0.0	
	11	sandy CLAY, dark greenish gray (Gley 1 4/10Y), wet, high plasticity, no odor							-	0.0	
	12	CLAY trace silt, Brown (7.5YR 4/4), trace fine iron nodules, moist, high plasticity, no odor		MC	4		NA	3/5	2.0	0.0	
	13								3.0	0.0	

# Drilling Log, continued

			Boring/Monitoring Well Number <b>GB-40</b>	
	Project Name	Goodfellow Remedial Investigation	Page	2 of 2
	Project Number	143702	Date	4/11/2022 to 4/11/2022

Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		CLAY trace silt, Brown (7.5YR 4/4), trace fine iron nodules, moist, high plasticity, no odor	CL	MC	4		NA	3/5	4.0	0.0	
	15	CLAY trace silt, Light gray (10YR 7/2) with reddish brown (5YR 4/3) mottles, friable-medium plasticity, no odor.	CL							0.0	
	16								4.5	3.1	Collect GB-40/15-16 (1639)
	17	-Increasing friability							4.0	5.1	
	18			MC	5		NA	5/5			
	19								4.0	0.0	
	20	-Crumbles on contact							1.5	0.0	Collect GB-40/19-20 (1648)
	20	Boring terminated at 20 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-40A</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt and Limestone Gravel	GM								No free water observed
	2	CLAY trace silt, trace sand, grayish brown (10YR 5/2), moist, medium to high plasticity, no odor.	CH	MC	1		NA	??/5.0	3.0	0.0	Collect GB-40A/1-2 (829)
	3	SAND with clay, medium grained, poorly sorted	SC								Collect GB-40A/3-4 (830)
	5	Chert Concrete GRAVEL	GP								
	7	SAND, well sorted, medium grained, wet	SW	MC	2		NA	5.0/5.0			
	9	Chert Concrete GRAVEL	GP								
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-40B</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt CLAY trace silt, trace sand, grayish brown (10YR 5/2), moist, medium to high plasticity, no odor.	CH						--	0.0	No free water observed  Collect GB-40B/1-2 (851)
	2		CH	MC	1		NA	3.2/5.0	--	0.0	
	3		CH						--	0.0	
	4	SAND with clay, medium grained, poorly sorted.	SC						--	--	
	5	CLAY, brown (10YR 5/4) moist, high plasticity, no odor.	CH								Collect GB-40B/5-6 (853)
	6		CH						2.5	0.0	
	7		CH	MC	2		NA	5.0/5.0	2.5	0.0	
	8		CH						3.0	0.0	
	9		CH						2.5	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

		Project Name <b>Goodfellow Additional RI</b>			Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-40C</b>				
		Coordinates			Ground Elevation		Page <b>1 of 1</b>				
		Total Depth (feet) <b>10</b>		Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>						
Drilling Rig <b>Geoprobe 8040DT</b>					Drilling Company <b>Roberts Environmental Drilling, Inc.</b>						
Date <b>4/12/2022</b>			Logged By: <b>B. Lockwood</b>			Reviewed by:		Approved by:			
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt Asphalt GRAVEL with Clay, Very dark gray (10YR 3/1), moist, medium plasticity	GC						1.5	0.0	No free water observed  Collect GB-40C/0.5-1.5 (920)
	2	Chert Concrete GRAVEL  Chert GRAVEL with sand, medium grained, poorly sorted, wet	GP	MC	1		NA	2.5/5.0	--	--	
	6	CLAY, brown (10YR 5/4) moist, high plasticity, no odor	CH						2.0	0.0	Collect GB-40C/5.5-6.5 (922)
	7			MC	2		NA	5.0/5.0	2.0	0.0	
	8								2.0	0.0	
	9								3.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22



# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-44A</b>
	Coordinates		Ground Elevation	Page <b>1 of 1</b>
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	0	Asphalt									<div style="font-size: small;">  Depth to water while drilling   Depth to water after drilling                 </div>
	1	Asphalt and Limestone GRAVEL with silty clay		MC	1		NA	3.8/5.0	--	--	No free water observed
	2								--	--	
	3								--	--	
	4	Silty CLAY, Dark greenish gray (Gley 1 4/10Y) with Dark grayish brown (10YR 4/2) mottles, moist, high plasticity, no odor.							2.0	0.0	Collect GB-44A/3.5-4.5 (1226)
	5	Becomes with fine iron nodules, fine gravel and brick fragments							1.0	0.0	Collect GB044A/5-6 (1228)
	6	Increasing Clay							1.0	0.0	
	7	CLAY some silt, yellowish brown (10YR 5/4) with strong brown (7.5YR 5/8) streaking (not mottles), moist, high plasticity, no odor.		MC	2		NA	3.5/5.0	2.0	0.0	
	8								2.0	0.0	
	9								--	--	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-44B</b>
	Coordinates		Ground Elevation	Page <b>1 of 1</b>
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									▽ Depth to water while drilling
		Asphalt and Limestone GRAVEL									▼ Depth to water after drilling
	1										No free water observed
	2										
	3	Silty CLAY, Dark greenish gray (Gley 1 4/10Y) with Dark grayish brown (10YR 4/2) mottles, moist, high plasticity, no odor.		MC	1		NA	3.4/5.0	1.5	0.0	Collect GB-44B/2.5-3.5 (1237)
	4										Collect GB-44B/5-6 (1243)
	5	Increasing Clay									
	6								1.5	0.0	
	7								2.0	0.0	Abandoned with hydrated bentonite chips on 4/14/2022
	8	Decreasing Clay, Increasing Silt CLAY some silt, yellowish brown (10YR 5/4) with strong brown (7.5YR 5/8) streaking (not mottles), moist, high plasticity, no odor.		MC	2		NA	4.0/5.0	1.5	0.0	
	9								1.5	0.0	
	10	Boring terminated at 10 feet bgs.									
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-45A</b>
	Coordinates		Ground Elevation	Page <b>1 of 1</b>
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass Silty CLAY, darkk yellowish brown (10YR 4/6) with Gray (10YR 6/1) and very dark gray (10YR 3/1) mottles, trace medium gravel and trace fine iron nodules, moist, high plasticity, no odor.		MC	1		NA	3.5/5.0	2.5	0.0	No free water observed
	2										Collect GB-45A/1-2 (1208)
	3										Collect GB-45A/3-4 & MS/MSD (1209)
	4										
	5										
	6								1.0	0.0	
	7								1.0	0.0	
	8			MC	2		NA	4.8/5.0	1.5	0.0	
	9								1.5	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-45B</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/12/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:		Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass Silty CLAY, dark yellowish brown (10YR 4/6) with Gray (10YR 6/1) and very dark gray (10YR 3/1) mottles, moist, high plasticity, no odor.		MC	1		NA	4.5/5.0	1.5	0.0	No free water observed
	2								1.5	0.0	
	3							1.5	0.0	Collect GB-45B/3-4 (1154)	
	4							1.5	0.0		
	5										
	6								1.0	0.0	
	7								1.0	0.0	
	8			MC	2		NA	5.0/5.0	1.0	0.0	
	9								1.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-45C</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass Silty CLAY, Dark yellowish brown (10YR 4/4), most, low to medium plasticity	CL						2.0	0.0	No free water observed
	2	Limestone GRAVEL, poorly sorted. 3" seam Becomes light yellowish brown (2.5Y 6/5) with trace very dark grayish brown (10YR 3/2) mottles	MC	MC	1		NA	4.5/5.0	1.5	0.0	Collect GB-45C/0.5-1.5 & DUP (1124)
	3								1.0	0.0	Collect GB-45C/2.5-3.5 (1126)
	4								1.0	0.0	
	5										
	6								1.0	0.0	
	7	Becomes Dark yellowish brown (10YR 4/4) with some 10YR 5/1 mottles		MC	2		NA	5.0/5.0	1.5	0.0	
	8								1.0	0.0	
	9								1.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	11										
	12										
	13										




143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

		Project Name <b>Goodfellow Additional RI</b>			Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-50A</b>				
		Coordinates			Ground Elevation		Page <b>1 of 1</b>				
		Total Depth (feet) <b>10</b>		Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>						
Drilling Rig <b>Geoprobe 8040DT</b>					Drilling Company <b>Roberts Environmental Drilling, Inc.</b>						
Date <b>4/14/2022</b>			Logged By: <b>B. Lockwood</b>			Reviewed by:		Approved by:			
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	0	Asphalt									▽ Depth to water while drilling
	0.5	Asphalt and Limestone GRAVEL									▼ Depth to water after drilling
	1										<b>Remarks</b>
	1.5	Silty CLAY, Grayish brown (10YR 5/2) with Dark greenish gray (Gley 1 4/5GY) mottles, moist, low plasticity, no odor.									No free water observed
	2										
	2.5	Silty CLAY, Yellowish brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor		MC	1		NA	3.5/5.0	2.5	0.0	Collect GB-50A/1.5-2.5 (1102)
	3								1.5	0.0	Collect GB-50A/2.5-3.5 (1104)
	4										
	5										
	6								1.0	0.0	
	7								1.0	0.0	
	8	Decreasing Silt		MC	2		NA	4.5/5.0	2.5	0.0	
	9								2.5	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-50B</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/14/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:		Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									 Depth to water while drilling  Depth to water after drilling
		Asphalt and Limestone GRAVEL									No free water observed
	1	Silty CLAY, Yellowish brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.		MC	1		NA	3.4/5.0	1.0	0.0	Collect GB-50B/1-2 (1155)
	2								1.0	0.0	
	3								--	--	
	4	--	--								
	5										
	6								1.5	0.0	
	7								1.5	0.0	
	8			MC	2		NA	4.0/5.0	1.5	0.0	
	9	Increasing Clay							2.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-50C</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									▽ Depth to water while drilling ▼ Depth to water after drilling
	1	Asphalt and Limestone GRAVEL							--	--	No free water observed
	2	Large brick chunk Silty CLAY, Grayish brown (10YR 5/2) with Dark greenish gray (Gley 1 4/8Y) mottles, moist, low plasticity, no odor.		MC	1		NA	2.5/5.0	2.5	0.0	Collect GB-50C/1.5-2.5 (1046)
	3								--	--	
	4								--	--	
	5	Silty CLAY, Yellowish brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor							1.5	0.0	Collect GB-50C/4-5 (1050)
	6								1.5	0.0	
	7								1.5	0.0	
	8	Increasing Silt		MC	2		NA	4.5/5.0	1.5	0.0	
	9								1.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22



# Drilling Log

	Project Name <b>Goodfellow Remedial Investigation</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>GB-59</b>
	Coordinates		Ground Elevation	Page <b>1 of 2</b>
	Total Depth (feet) <b>20</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022 to 4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									
	1	Asphalt and Limestone gravel (fine-coarse)		MC	1		NA	2.5/3	-	0.0	No free water observed
	2	silty CLAY trace gravel (fine-medium), dark grayish brown (10YR 4/2) with dark gray (10YR 3/1) mottles, moist, soft, high plasticity, no odor							-	0.0	
	3								2.0	0.0	
	4	silty CLAY, yellowish brown (10YR 5/4) and very dark grayish brown (10YR 3/2) mottles, moist, high plasticity, slightly sweet odor							-	1.0	
	5								1.0	0.0	
	6	silty CLAY, very dark gray (10YR 3/1), moist-wet, high plasticity, no odor		MC	2		NA	3.5/5	1.0	0.0	
	7								2.0	0.0	
	8	silty CLAY, yellowish brown (10YR 5/4) with trace very dark grayish brown (10YR 3/2) mottles, moist, high plasticity, no odor							1.0	0.0	
	9								2.5	0.0	
	10	-Becomes soft		MC	3		NA	2.5/2	1.5	38.3	
	11								1.0	0.0	
	12			MC	4		NA	5/5	0.5	0.0	
	13								0.5	0.0	

Depth to water while drilling  
 Depth to water after drilling

Collect  
GB-59/12-13 &  
DUP (1038)

# Drilling Log, continued

			Boring/Monitoring Well Number	GB-59
	Project Name	Goodfellow Remedial Investigation	Page	2 of 2
	Project Number	143702	Date	4/11/2022 to 4/11/2022

Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks		
	15	silty CLAY, yellowish brown (10YR 5/4) with trace very dark grayish brown (10YR 3/2) mottles, moist, high plasticity, no odor		MC	4		NA	5/5	1.0	0.0	Collect GB-59/14-15 & MS/MSD (1041)		
	16									1.0		0.0	
	17									1.0		0.0	
	18					MC	5		NA	5/5		1.0	0.0
	19									1.0		0.0	
	20	Boring terminated at 20 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022		
	21												
	22												
	23												
	24												
	25												
	26												
	27												
	28												

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-62A</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Grass Silty CLAY, Dark yellowish brown (10YR 4/4) with Gray (10YR 5/1) mottles, trace weathered iron nodules, moist, high plasticity, no odor.	G						--	0.0	No free water observed
	2			MC	1		NA	3.5/5.0	2.0	0.0	Collect GB-62A/1-2 (1342)
	3								2.0	0.0	
	4								3.5	0.0	Collect GB-62A/3-4 (1345)
	5										
	6								NM	NM	
	7								NM	NM	
	8			MC	2		NA	3.4/5.0	NM	NM	
	9								NM	NM	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-62B</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			


Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									∇ Depth to water while drilling ▽ Depth to water after drilling
		Concrete	Concrete								
	1								--	--	
	2	Silty CLAY, Dark yellowish brown (10YR 4/4) with Gray (10YR 5/1) mottles, trace iron nodules, moist, medium to high plasticity, no odor.		MC	1		NA	2.5/5.0	--	--	
	3								2.0	18.6	Collect GB-62B/2.5-3.5 (1459)
	4								2.5	0.0	
	5										
	6	Becomes Gray (10YR 5/1) with Dark yellowish brown (10YR 4/4) mottles and weathered iron nodules							2.5	4.0	Collect GB-62B/5-6 (1510)
	7	Decreasing Clay		MC	2		NA	5.0/5.0	2.5	6.0	
	8								3.0	5.4	
	9								3.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-62C</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks		
	1	Grass Silty CLAY, Dark yellowish brown (10YR 4/4) with Gray (10YR 5/1) mottles, trace weathered iron nodules, moist, high plasticity, no odor.		MC	1		NA	4.0/5.0	2.0	0.0	No free water observed		
	2								2.0	0.0		Collect GB-62C/1-2 (1342)	
	3			1.5	0.0	Collect GB-62C/3-4 (1345)							
	4			1.5	0.0								
	5												
	6									2.0	0.0		
	7									2.5	0.0		
	8					MC	2		NA	5.0/5.0	2.0	0.0	
	9									3.0	0.0		
	10			Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022
	11												
	12												
	13												

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Remedial Investigation</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-64</b>	
	Coordinates		Ground Elevation		Page <b>1 of 2</b>	
	Total Depth (feet) <b>15</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			


Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022 to 4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">  Depth to water while drilling   Depth to water after drilling                 </div> <div style="width: 50%; text-align: center;"> <b>Remarks</b> </div> </div>
	1	Asphalt gravel (medium-coarse)									
	2	silty CLAY, dark grayish brown (2.5Y 4/2) with gray (10YR 5/1) mottles, moist, medium plasticity		MC	1		NA	1.2/3	3.0	0.0	
	3	Limestone gravel (fine-coarse)								0.0	
	4	silty CLAY, yellowish brown (10YR 5/4) with dark gray (10YR 4/1) and very dark gray (7.5YR 3/1) mottles, moist, medium-high plasticity, no odor							3.0	0.0	
	5								2.5	0.0	
	6			MC	2		NA	3.6/5	3.0	0.0	
	7								2.5	0.0	
	8								3.0	0.0	
	9	-Becomes some 10YR 4/1 mottles and no 7.5YR 3/1 mottles		MC	3		NA	2/2	3.0	0.0	
	10								3.0	0.0	
	11								2.0	0.0	
	12			MC	4		NA	5/5	2.5	0.0	
	13	-Increasing Clay							3.0	0.0	

2021 GSA DRILLING LOGS (SOIL BORINGS) GPJ 5/16/22

# Drilling Log, continued

			Boring/Monitoring Well Number	GB-64
	Project Name	Goodfellow Remedial Investigation	Page	2 of 2
	Project Number	143702	Date	4/11/2022 to 4/11/2022

Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	15	silty CLAY, yellowish brown (10YR 5/4) with dark gray (10YR 4/1) and very dark gray (7.5YR 3/1) mottles, moist, medium-high plasticity, no odor  Boring terminated at 15 feet bgs.		MC	4		NA	5/5	3.0	0.0	
	16										Abandoned with hydrated bentonite chips on 4/11/2022
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-64A</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt and Limestone GRAVEL with thin Clay lenses	GM						--	0.0	No free water observed
	2			MC	1		NA	--/--	3.0	0.0	
	3	Silty CLAY, some cinders and charcoal, yellowish brown (10YR 5/8) with very dark grayish brown (10YR 3/2) mottles, moist, medium plasticity, no odor	GM						--	0.0	
	4								2.0	0.0	
	5								0.0	2.0	Collect GB-64A/5-6 (1122)
	6	Silty CLAY, Dark yellowish brown (10YR 4/4) with white (10YR 8/1) mottles, trace very dark gray (10YR 3/1) mottles, moist, high plasticity, no odor.	GM	MC	2		NA	--/--	0.0	2.5	
	7								4.7	2.5	Abandoned with hydrated bentonite chips on 4/11/2022
	8										
	9										
	10	Boring terminated at 10 feet bgs.									
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22



# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-64B</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt and Limestone GRAVEL	GM						-	-	No free water observed
	2	Silty CLAY, Black (10YR 2/1) to Very dark gray (10YY 3/1), moist, medium plasticity, no odor.	GM						3.0	8.7	Collect GB-64B/1.5-2.5 (1144)
	3	Silty CLAY, some cinders and charcoal, Yellowish brown (10YR 5/8) with Very dark grayish brown (10YR 3/2) mottles, moist, medium plasticity, no odor.	GM	MC	1		NA	3.5/5.0	3.0	8.1	
	6	Becomes Gray (10YR 3/1) with very dark gray (7.5YR 3/1) and Yellowish brown (10YR 5/6) mottles	GM						3.0	5.0	Collect GB-64B/7.5-8.5 & MS/MSD (1152)
	7		GM	MC	2		NA	5.0/5.0	2.0	4.7	
	8		GM						2.0	3.5	
	9		GM						2.0	3.9	
	10	Boring terminated at 10 feet bgs.	GM								Abandoned with hydrated bentonite chips on 4/11/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-64C</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/11/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Asphalt and Limestone GRAVEL	GM								No free water observed
	2	Brick fragments, medium									
	3	CLAY trace silt, Black (10YR 2/1) with Yellowish Brown (10YR 5/6) mottles, moist, medium to high plasticity, no odor. Increasing Silt	GM	MC	1		NA	4.0/5.0	2.5	0.0	Collect GB-64C/2.5-3.5 (1208)
	4								3.5	0.0	Collect GB-64C/4-5 (1209)
	5	Becomes with Gray (10YR 5/1) mottles and fine weathered iron nodules							2.0	1.6	
	6								2.0	0.0	
	7	Becomes Gray (10YR 5/1) with Yellowish brown (10YR 5/6) mottles		MC	2		NA	5.0/5.0	1.5	0.0	
	8								2.0	3.4	
	9										
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/11/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

		Project Name <b>Goodfellow Additional RI</b>			Project No. <b>143702</b>		Boring/Monitoring Well Number <b>GB-72</b>				
		Coordinates			Ground Elevation		Page <b>1 of 1</b>				
		Total Depth (feet) <b>13</b>		Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>						
Drilling Rig <b>Geoprobe 8040DT</b>					Drilling Company <b>Roberts Environmental Drilling, Inc.</b>						
Date <b>4/14/2022</b>		Logged By: <b>B. Lockwood</b>			Reviewed by:			Approved by:			
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	0	Asphalt									Depth to water while drilling Depth to water after drilling
	1	Asphalt and Limestone GRAVEL CLAY fill		MC	1		NA	2.0/3.0	--	--	No free water observed  Collect GB-72/0.5-1.5
	2	Chert Concrete GRAVEL							--	--	
	3	Silty CLAY, Yellowish Brown (10YR 5/8) with very dark grayish brown (10YR 3/2) mottles, some cinders and charcoal throughout, moist, medium plasticity, no odor.									
	4								2.5	0.0	
	5			MC	2		NA	4.0/5.0	2.0	0.0	Collect GB-72/4-5
	6								2.5	0.0	
	7	Silty CLAY, Dark yellowish brown (10Y 4/4) with White (10YR 8/1) and trace very dark gray (10YR 3/1) mottles, moist, high plasticity, no odor.							1.5	0.0	
	8										
	9								2.5	0.0	Collect GB-72/8-9 (1335)
	10								2.0	0.0	
	11			MC	3		NA	3.8/5.0	2.0	0.0	
	12								1.5	0.0	
	13	Boring terminated at 13 feet bgs.									Collect GB-72/12-13 (1337) Abandoned with hydrated bentonite chips on 4/14/2022

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>DPTS-2</b>	
	Coordinates		Ground Elevation		Page <b>1 of 2</b>	
	Total Depth (feet) <b>15</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			


Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/12/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	1	Silty CLAY, Dark Yellowish Brown (10YR 3/6) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, medium-high plasticity, no odor. Limestone GRAVEL, medium grained.	CH SM CH	MC	1		NA	1.8/3.0	2.0	0.0	No free water observed
	2	Silty CLAY, Dark Yellowish Brown (10YR 3/6) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, medium-high plasticity, no odor.	CH	MC	2		NA	3.3/5.0	2.0	0.0	
	5	Large brick fragment Decreasing silt	CH	MC	2		NA	3.3/5.0	1.5	0.0	
	6		CH	MC	2		NA	3.3/5.0	2.5	0.0	
	7	CLAY, trace silt, Dark Yellowish Brown (10YR 4/6), trace fine iron nodules, moist, high plasticity, no odor.	CH						--	--	
	9		CH	MC	3		NA	5.0/5.0	2.5	0.0	Collect DPTS-2/9-10 (1334)
	10		CH	MC	3		NA	5.0/5.0	3.0	0.0	
	11		CH	MC	3		NA	5.0/5.0	3.0	0.0	
	12		CH	MC	3		NA	5.0/5.0	3.5	0.0	
	13		CH	MC	4		NA	2.0/2.0	3.5	0.0	Collect DPTS-2/13-14


143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log, continued

			Boring/Monitoring Well Number	DPTS-2
	Project Name	Goodfellow Additional RI	Page	2 of 2
	Project Number	143702	Date	4/12/2022

Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
	15	CLAY, trace silt, Dark Yellowish Brown (10YR 4/6), trace fine iron nodules, moist, high plasticity, no odor.		MC	4		NA	2.0/2.0	3.5	0.0	(1337)
	15	Boring terminated at 15 feet bgs.									Abandoned with hydrated bentonite chips on 4/12/2022
	16										
	17										
	18										
	19										
	20										
	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>B-11AA</b>						
	Coordinates		Ground Elevation		Page <b>1 of 1</b>						
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>								
Drilling Rig <b>Geoprobe 8040DT</b>			Drilling Company <b>Roberts Environmental Drilling, Inc.</b>								
Date <b>4/14/2022</b>		Logged By: <b>B. Lockwood</b>		Reviewed by:		Approved by:					
Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									▽ Depth to water while drilling ▼ Depth to water after drilling
	1	Asphalt and Limestone GRAVEL							--	--	No free water observed
	2	Silty CLAY, Yellowish brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.		MC	1		NA	3.0/5.0	1.0	0.0	Collect B-11AA/1-2 (921)
	3								1.0	0.0	
	4								--	--	
	5								1.0	0.0	Collect B-11AA/4-5 (926)
	6								1.0	0.0	
	7			MC	2		NA	4.0/5.0	1.0	0.0	
	8								1.0	0.0	
	9								1.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>		Boring/Monitoring Well Number <b>B-11AB</b>	
	Coordinates		Ground Elevation		Page <b>1 of 1</b>	
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>			

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks	
		Asphalt									No free water observed	
		Asphalt and Limestone GRAVEL										
	1								--	--		
	2	Silty CLAY, Yellowish brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.		MC	1		NA	3.0/5.0	1.0	0.0	Collect B-11AB/1.5-2.5 (938)	
	3									0.5	0.0	
	4									--	--	
	5											Collect B-11AB/4-5 (940)
	6								1.0	0.0		
	7								1.5	0.0		
	8			MC	2		NA	4.0/5.0	1.5	0.0		
	9								1.5	0.0		
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022	
	11											
	12											
	13											

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22

# Drilling Log

	Project Name <b>Goodfellow Additional RI</b>		Project No. <b>143702</b>	Boring/Monitoring Well Number <b>B-11AC</b>
	Coordinates		Ground Elevation	Page <b>1 of 1</b>
	Total Depth (feet) <b>10</b>	Hole Size (inches) <b>3</b>	Driller <b>Matt Kwiatkowski</b>	

Drilling Rig <b>Geoprobe 8040DT</b>	Drilling Company <b>Roberts Environmental Drilling, Inc.</b>
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Date <b>4/14/2022</b>	Logged By: <b>B. Lockwood</b>	Reviewed by:	Approved by:
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Elevation (MSL)	Depth (feet bgs)	Description	Graphic Log	Sample Type	Sample Number	Blow Count	N Value	Sample Recovery/Length (inches)	Penetrometer (tsf)	PID Reading (ppm)	Remarks
		Asphalt									▽ Depth to water while drilling
		Asphalt and Limestone GRAVEL									▼ Depth to water after drilling
	1	Silty CLAY, Yellowish Brown (10YR 5/4) with Gray (10YR 6/1) mottles, trace fine iron nodules, moist, high plasticity, no odor.							--	--	No free water observed
	2		MC	1		NA	NA	0.5	0.0	Collect B-11AC/1-2 (955)	
	3							--	--		
	4							--	--		
	5										Collect B-11AC/4-5 (956)
	6								1.5	0.0	
	7								1.5	0.0	
	8								1.5	0.0	
	9								2.0	0.0	
	10	Boring terminated at 10 feet bgs.									Abandoned with hydrated bentonite chips on 4/14/2022
	11										
	12										
	13										

143702 GOODFELLOWRIADD GINT LOGS.GPJ 5/12/22



**APPENDIX C – MONITORING WELL/TESTHOLE SOIL AND GEOTECHNICAL  
BORING PLUGGING REGISTRATION REPORTS**



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL/TEST HOLE/SOIL AND GEOTECHNICAL  
 BORING PLUGGING REGISTRATION REPORT**

FOR OFFICE USE ONLY	
REF NO.	DATE RECEIVED
CR NO.	CHECK NO.

ROUTE / /	APPROVED	DATE	ENTERED	STATE CERT NO.	REVENUE NO.
--------------	----------	------	---------	----------------	-------------

**OWNER AND SITE INFORMATION**

PROPERTY OWNER NAME WHERE WELL IS LOCATED			PRIMARY PHONE NUMBER WITH AREA CODE		
PROPERTY OWNER MAILING ADDRESS		CITY	STATE	ZIP CODE	
PHYSICAL ADDRESS OF PROPERTY WHERE WELL IS LOCATED			CITY		
NAME OF SITE, BUSINESS, OR CLEANUP PROJECT		DNR/EPA PROJECT NUMBER OR REGULATORY SITE ID NUMBER (IF APPLICABLE)		VARIANCE NUMBER (IF ISSUED)	
PRIMARY CONTRACTOR NAME (PLEASE PRINT)		PERMIT NUMBER		Section 256.607(3), RSMo, requires all primary contractors to comply with all rules and regulations promulgated pursuant to Sections 256.600 to 256.640 RSMo.	

**LOCATION INFORMATION**

Latitude _____ ° _____ ' _____ "	COUNTY	_____ 1/4 _____ 1/4 _____ 1/4
Longitude _____ ° _____ ' _____ "	Section _____ Township _____ N Range _____ <input type="checkbox"/> E <input type="checkbox"/> W	

**MONITORING WELL INFORMATION**

DATE WELL PLUGGED	ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED (IF KNOWN)	REFERENCE NUMBER (IF KNOWN)	WELL NUMBER
DEPTH OF WELL ft.	STATIC WATER LEVEL ft.	LENGTH OF RISER AND SCREEN ft.	DIAMETER OF RISER AND SCREEN in.	RISER AND SCREEN PLUGGED IN PLACE <input type="checkbox"/> Yes <input type="checkbox"/> No (Removed)
PUMP OR SAMPLING EQUIPMENT REMOVED <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			CASING REMOVED <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

**TEMPORARY MONITORING WELL/SOIL BORING/GEOTECHNICAL BORING INFORMATION**

Quantity	Depth of Well or Boring (ft.)	Diameter (in.)	Total Depth (Linear Feet) of All Wells or Borings	TOTAL NUMBER OF WELLS/BORINGS
				AVERAGE DEPTH OF ALL WELLS/BORINGS
				DATE FIRST WELL/BORING WAS PLUGGED
				DATE LAST WELL/BORING WAS PLUGGED

**TEST HOLE INFORMATION**

DATE TEST HOLE PLUGGED	DEPTH OF WELL ft.	LENGTH OF GROUT PLUG Bottom _____ ft. Top _____ ft.	DAVIS FORMATION REACHED <input type="checkbox"/> Yes <input type="checkbox"/> No	MECHANICAL PACKER (IF USED) <input type="checkbox"/> Yes, Depth _____ ft. <input type="checkbox"/> No	AMOUNT OF CLEAN FILL (IF USED) _____ Tons or _____ Cubic Yards	CASING REMOVED (CHOOSE ONE) <input type="checkbox"/> Yes, Diameter of Remaining Borehole _____ in. <input type="checkbox"/> No, Diameter of Casing _____ in.
------------------------	----------------------	---	--	---	--	--

**PLUGGING INFORMATION (This section is required in addition to one of the well, soil boring or test hole sections above.)**

WELL REMOVED BY EXCAVATION <input type="checkbox"/> Yes <input type="checkbox"/> No	GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input type="checkbox"/> Tremie <input type="checkbox"/> Pressure	GROUT MATERIAL USED CEMENT <input type="checkbox"/> Type I <input type="checkbox"/> Type III BENTONITE <input type="checkbox"/> Chips <input type="checkbox"/> Pellets <input type="checkbox"/> Other <input type="checkbox"/> Granular <input type="checkbox"/> Slurry	NUMBER OF SACKS OF GROUT USED LBS PER SACK _____	NUMBER OF GALLONS OF WATER USED PER SACK _____	GROUT HYDRATED TO SATURATION <input type="checkbox"/> Yes <input type="checkbox"/> No
FINISHED SURFACE MATERIAL <input type="checkbox"/> Asphalt <input type="checkbox"/> Concrete <input type="checkbox"/> Soil <input type="checkbox"/> Other	SURFACE MATERIAL DEPTH _____ ft. _____ in.	DRILLER NOTES			

I hereby certify that the monitoring well herein described was plugged in accordance with the Department of Natural Resources requirements.

MONITORING WELL INSTALLATION CONTRACTOR	PERMIT NUMBER	DATE
MONITORING WELL INSTALLATION CONTRACTOR APPRENTICE (IF APPLICABLE)	PERMIT NUMBER	DATE

## **APPENDIX D – SURVEY DATA**

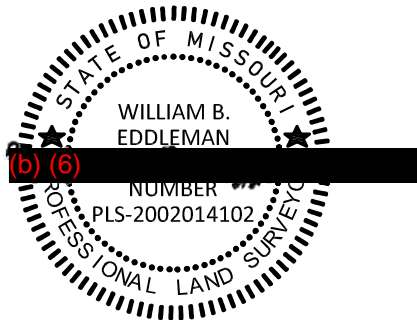
Project file data		Coordinate System	
Name:	R:\2021158-00 BMCD-Goodfellow Boring Locations\Trimble\2021158-00.vce	Name:	United States/State Plane 1983
Size:	111 KB	Zone:	Missouri East 2401
Modified:	4/25/2022 10:09:24 AM (UTC:-5)	Datum:	NAD 1983 (Conus)
Time zone:	Central Standard Time	Global reference datum:	NAD83(2011)
Reference number:		Global reference epoch:	2010
Description:		Geoid:	GEOID18 (Conus)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

### Point List

ID	Northing (US survey foot)	Easting (US survey foot)	Elevation (US survey foot)	Feature Code
1072	1040623.366	886502.652	561.027	120/GB-40C
1073	1040650.940	886511.219	561.200	120/GB-40B
1074	1040646.121	886491.767	561.268	120/GB-40A
1075	1040640.322	886503.819	561.150	120/GB-40 OFFSET
1076	1040170.335	886069.870	577.628	120/GB-59 OFFSET
1077	1040552.886	886279.952	577.667	120/GB-45A
1078	1040538.988	886274.574	578.022	120/GB-45B
1079	1040551.682	886261.363	577.672	120/GB-45C
1080	1041059.733	886560.565	560.729	120/DPTS-2 OFFSET
1081	1041180.165	887077.220	553.502	120/GB-13 OFFSET
1082	1041192.714	887084.188	553.347	120/GB-13A
1083	1041187.329	887068.195	550.295	120/GB-13B
1084	1041169.992	887071.705	553.427	120/GB-13C
1085	1041074.045	886857.049	557.592	120/GB-19A
1086	1041057.636	886862.386	557.267	120/GB-19B
1087	1041067.402	887692.299	545.136	120/GB-09C
1088	1041091.773	887695.785	544.945	120/GB-09A
1089	1041080.099	887712.717	544.663	120/GB-09B
1090	1040961.058	887559.522	545.590	120/B-11AA
1091	1040939.091	887562.058	545.317	120/B-11AB
1092	1040934.569	887543.641	545.698	120/B-11AC
1093	1040134.718	887485.468	539.797	120/GB-44A
1094	1040120.868	887477.133	539.802	120/GB-44B
1095	1040019.562	887099.497	545.460	120/GB-50C
1096	1040035.252	887108.366	545.394	120/GB-50B

1097	1040037.051	887088.829	544.836	120/GB-50A
1098	1039721.327	886951.090	543.355	120/GB-64A
1099	1039717.079	886931.897	543.370	120/GB-64C
1100	1039703.042	886940.210	543.193	120/GB-64B
1101	1039712.200	886941.898	543.280	120/GB-64 OFFSET
1102	1039909.025	886622.148	542.443	120/GB-62A
1103	1039889.367	886621.330	541.909	120/GB-62C
1104	1039890.570	886638.972	540.353	120/GB-62B
1106	1041054.966	886846.680	557.420	120/GB-19C
1107	1041283.949	888058.261	528.134	120/GB-72

4/25/2022 10:10:06 AM	R:\2021158-00 BMCD-Goodfellow Boring Locations\Trimble\2021158-00.vce	Trimble Business Center
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4/25/22

**APPENDIX E – ANALYTICAL LABORATORY TEST REPORT FOR SOIL IDW**

May 13, 2022

Justin Carter  
Burns & McDonnell  
9400 Ward Parkway  
Kansas City, MO 64114

RE: Project: GSA Goodfellow Waste Char. Soil  
Pace Project No.: 60398062

Dear Justin Carter:

Enclosed are the analytical results for sample(s) received by the laboratory on April 16, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City
- Pace Analytical Services - New Orleans

REVISED 5/13/22

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

(b) (6)

Alice Spiller  
alice.spiller@pacelabs.com  
(913)599-5665  
PM Lab Management

Enclosures

cc: SHAUNA LAWRENCE, BURNS & MCDONNELL  
Jacquelin Lee, Burns & McDonnell



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

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### **Pace Analytical Services New Orleans**

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 0025721

Kansas Department of Health and Environment (NELAC):  
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Texas Commission on Env. Quality (NELAC):  
T104704405-09-TX

U.S. Dept. of Agriculture Foreign Soil Import: P330-10-  
00119

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### **Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 20-020-0

Arkansas Drinking Water

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212020-2

Oklahoma Certification #: 9205/9935

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212019-9

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60398001031	IDW SOIL 04142022	Solid	04/14/22 17:10	04/16/22 04:47

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60398001031	IDW SOIL 04142022	EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	7	PASI-K
		EPA 7470	ALH	1	PASI-K
		EPA 8270	JMT	18	PASI-K
		EPA 8260	AML	13	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 9034	LJL	1	PASI-N
		EPA 9045	KWM	1	PASI-K
		EPA 9095	MAW	1	PASI-K
		ASTM D92	ECF	1	PASI-K
		SM 4500-CN-E	KWM	1	PASI-K
		EPA 9056	KB	1	PASI-K
		EPA 9066	KWM	1	PASI-K

PASI-K = Pace Analytical Services - Kansas City

PASI-N = Pace Analytical Services - New Orleans

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil  
Pace Project No.: 60398062

---

**Date:** May 13, 2022

Ammended report to include paint filter analysis requested on 5/9/22

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 8082

**Description:** 8082 GCS PCB SW

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 8082 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

QC Batch: 782201

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- BLANK (Lab ID: 3119502)
  - PCB-1016 (Aroclor 1016)
  - PCB-1260 (Aroclor 1260)
- LCS (Lab ID: 3119503)
  - PCB-1016 (Aroclor 1016)
  - PCB-1260 (Aroclor 1260)

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- IDW SOIL 04142022 (Lab ID: 60398001031)
  - Decachlorobiphenyl (S)
- MS (Lab ID: 3119504)
  - Decachlorobiphenyl (S)
- MSD (Lab ID: 3119505)
  - Decachlorobiphenyl (S)

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 8082

**Description:** 8082 GCS PCB SW

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 6010

**Description:** 6010 MET ICP, TCLP

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 7470

**Description:** 7470 Mercury, TCLP

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 7470 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 8270

**Description:** 8270 MSSV TCLP Sep Funnel

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 8270 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 8260

**Description:** 8260 MSV TCLP

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 9034

**Description:** 9034 Sulfide, Titration

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

### General Information:

1 sample was analyzed for EPA 9034 by Pace Analytical Services New Orleans. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.

- IDW SOIL 04142022 (Lab ID: 60398001031)

### Sample Preparation:

The samples were prepared in accordance with EPA 9030B with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

### Additional Comments:

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 9045

**Description:** 9045 pH Soil

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 9045 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 9095

**Description:** 9095 Paint Filter Liquid Test

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 9095 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** ASTM D92

**Description:** Flashpoint, Open Cup

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for ASTM D92 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** SM 4500-CN-E

**Description:** 4500CNE Cyanide, Total

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for SM 4500-CN-E by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with SM 4500-CN-E with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 9056

**Description:** 9056 IC Anions

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 9056 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 9056 with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

---

**Method:** EPA 9066

**Description:** Phenolics, Total Recoverable

**Client:** BURNS & MCDONNELL

**Date:** May 13, 2022

**General Information:**

1 sample was analyzed for EPA 9066 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 9066 with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 784357

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001031

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MSD (Lab ID: 3127558)
- Phenolics, Total Recoverable

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

**Sample: IDW SOIL 04142022**      **Lab ID: 60398001031**      Collected: 04/14/22 17:10      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	37.1	1	04/20/22 16:26	04/21/22 21:38	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	63	%	35-120	1	04/20/22 16:26	04/21/22 21:38	2051-24-3	CL
<b>6010 MET ICP, TCLP</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 04/21/22 15:50    Initial pH: 7.85; Final pH: 5.03								
Pace Analytical Services - Kansas City								
Arsenic	ND	mg/L	0.50	1	04/22/22 15:21	04/25/22 19:37	7440-38-2	
Barium	ND	mg/L	2.5	1	04/22/22 15:21	04/25/22 19:37	7440-39-3	
Cadmium	ND	mg/L	0.050	1	04/22/22 15:21	04/25/22 19:37	7440-43-9	
Chromium	ND	mg/L	0.10	1	04/22/22 15:21	04/25/22 19:37	7440-47-3	
Lead	ND	mg/L	0.50	1	04/22/22 15:21	04/25/22 19:37	7439-92-1	
Selenium	ND	mg/L	0.50	1	04/22/22 15:21	04/25/22 19:37	7782-49-2	
Silver	ND	mg/L	0.10	1	04/22/22 15:21	04/25/22 19:37	7440-22-4	
<b>7470 Mercury, TCLP</b>								
Analytical Method: EPA 7470    Preparation Method: EPA 7470								
Leachate Method/Date: EPA 1311; 04/21/22 15:50    Initial pH: 7.85; Final pH: 5.03								
Pace Analytical Services - Kansas City								
Mercury	ND	mg/L	0.0020	1	04/25/22 13:24	04/26/22 10:54	7439-97-6	
<b>8270 MSSV TCLP Sep Funnel</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 04/21/22 15:50    Initial pH: 7.85; Final pH: 5.03								
Pace Analytical Services - Kansas City								
1,4-Dichlorobenzene	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	87-68-3	
Hexachlorobenzene	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	118-74-1	
Hexachloroethane	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	15831-10-4	
Nitrobenzene	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	98-95-3	
Pentachlorophenol	ND	ug/L	500	1	04/25/22 23:26	04/26/22 12:28	87-86-5	
Pyridine	ND	ug/L	500	1	04/25/22 23:26	04/26/22 12:28	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	500	1	04/25/22 23:26	04/26/22 12:28	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	1	04/25/22 23:26	04/26/22 12:28	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	76	%	57-101	1	04/25/22 23:26	04/26/22 12:28	4165-60-0	
2-Fluorobiphenyl (S)	72	%	56-97	1	04/25/22 23:26	04/26/22 12:28	321-60-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

**Sample: IDW SOIL 04142022**      **Lab ID: 60398001031**      Collected: 04/14/22 17:10      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV TCLP Sep Funnel</b>		Analytical Method: EPA 8270    Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 04/21/22 15:50    Initial pH: 7.85; Final pH: 5.03 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
Terphenyl-d14 (S)	80	%	67-106	1	04/25/22 23:26	04/26/22 12:28	1718-51-0	
Phenol-d6 (S)	69	%	52-95	1	04/25/22 23:26	04/26/22 12:28	13127-88-3	
2-Fluorophenol (S)	70	%	47-94	1	04/25/22 23:26	04/26/22 12:28	367-12-4	
2,4,6-Tribromophenol (S)	89	%	57-110	1	04/25/22 23:26	04/26/22 12:28	118-79-6	
<b>8260 MSV TCLP</b>		Analytical Method: EPA 8260    Leachate Method/Date: EPA 1311; 04/25/22 15:15 Initial pH: ; Final pH: 5.13 Pace Analytical Services - Kansas City						
Benzene	ND	ug/L	50.0	1		04/29/22 02:29	71-43-2	
2-Butanone (MEK)	ND	ug/L	1000	1		04/29/22 02:29	78-93-3	
Carbon tetrachloride	ND	ug/L	50.0	1		04/29/22 02:29	56-23-5	
Chlorobenzene	ND	ug/L	50.0	1		04/29/22 02:29	108-90-7	
Chloroform	ND	ug/L	200	1		04/29/22 02:29	67-66-3	
1,2-Dichloroethane	ND	ug/L	50.0	1		04/29/22 02:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	1		04/29/22 02:29	75-35-4	
Tetrachloroethene	ND	ug/L	50.0	1		04/29/22 02:29	127-18-4	
Trichloroethene	ND	ug/L	50.0	1		04/29/22 02:29	79-01-6	
Vinyl chloride	ND	ug/L	50.0	1		04/29/22 02:29	75-01-4	
<b>Surrogates</b>								
Toluene-d8 (S)	111	%	80-120	1		04/29/22 02:29	2037-26-5	
4-Bromofluorobenzene (S)	104	%	80-120	1		04/29/22 02:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1		04/29/22 02:29	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>12.8</b>	%	0.50	1		04/21/22 14:18		
<b>9034 Sulfide, Titration</b>		Analytical Method: EPA 9034    Preparation Method: EPA 9030B Pace Analytical Services - New Orleans						
Sulfide	ND	mg/kg	57.4	1	04/26/22 13:15	04/26/22 15:30		H3
<b>9045 pH Soil</b>		Analytical Method: EPA 9045 Pace Analytical Services - Kansas City						
pH at 25 Degrees C	<b>7.9</b>	Std. Units	0.10	1		04/20/22 15:14		
<b>9095 Paint Filter Liquid Test</b>		Analytical Method: EPA 9095 Pace Analytical Services - Kansas City						
Free Liquids	<b>Negative</b>			1		05/12/22 15:40		
<b>Flashpoint, Open Cup</b>		Analytical Method: ASTM D92 Pace Analytical Services - Kansas City						
Flashpoint	<b>&gt;212</b>	deg F	212	1		04/29/22 16:45		N3

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

**Sample: IDW SOIL 04142022      Lab ID: 60398001031      Collected: 04/14/22 17:10      Received: 04/16/22 04:47      Matrix: Solid**

**Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>4500CNE Cyanide, Total</b>	Analytical Method: SM 4500-CN-E    Preparation Method: SM 4500-CN-E Pace Analytical Services - Kansas City							
Cyanide	ND	mg/kg	0.17	1	04/28/22 11:37	04/28/22 15:32	57-12-5	
<b>9056 IC Anions</b>	Analytical Method: EPA 9056    Preparation Method: EPA 9056 Pace Analytical Services - Kansas City							
Sulfate	ND	mg/kg	118	10	04/28/22 10:42	04/28/22 14:21	14808-79-8	
<b>Phenolics, Total Recoverable</b>	Analytical Method: EPA 9066    Preparation Method: EPA 9066 Pace Analytical Services - Kansas City							
Phenolics, Total Recoverable	<b>3.6</b>	mg/kg	1.6	1	05/03/22 14:10	05/04/22 11:41	64743-03-9	M1

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 783048

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury TCLP

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3120942

Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.0020	04/26/22 10:38	

LABORATORY CONTROL SAMPLE: 3122612

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.015	0.015	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3122613 3122614

Parameter	Units	3122613		3122614		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60398001031 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/L	ND	0.015	0.015	0.015	0.015	99	98	75-125	1	20

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 782895

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET TCLP

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3120942

Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	04/25/22 19:10	
Barium	mg/L	ND	2.5	04/25/22 19:10	
Cadmium	mg/L	ND	0.050	04/25/22 19:10	
Chromium	mg/L	ND	0.10	04/25/22 19:10	
Lead	mg/L	ND	0.50	04/25/22 19:10	
Selenium	mg/L	ND	0.50	04/25/22 19:10	
Silver	mg/L	ND	0.10	04/25/22 19:10	

LABORATORY CONTROL SAMPLE: 3122025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	10	9.0	90	80-120	
Barium	mg/L	10	10.5	105	80-120	
Cadmium	mg/L	10	10.1	101	80-120	
Chromium	mg/L	10	9.8	98	80-120	
Lead	mg/L	10	10.2	102	80-120	
Selenium	mg/L	10	10	100	80-120	
Silver	mg/L	5	5.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3122026 3122027

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60398001031 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	mg/L	ND	10	10	9.0	8.8	90	88	75-125	2	20
Barium	mg/L	ND	10	10	10.9	10.8	106	105	75-125	1	20
Cadmium	mg/L	ND	10	10	10.2	10.0	102	100	75-125	2	20
Chromium	mg/L	ND	10	10	9.9	9.6	99	96	75-125	3	20
Lead	mg/L	ND	10	10	10.3	10.3	103	103	75-125	0	20
Selenium	mg/L	ND	10	10	9.9	9.7	99	97	75-125	2	20
Silver	mg/L	ND	5	5	5.0	5.0	100	100	75-125	1	20

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil  
Pace Project No.: 60398062

QC Batch: 783808	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV TCLP
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3125560 Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	04/29/22 00:27	
1,2-Dichloroethane	ug/L	ND	50.0	04/29/22 00:27	
2-Butanone (MEK)	ug/L	ND	1000	04/29/22 00:27	
Benzene	ug/L	ND	50.0	04/29/22 00:27	
Carbon tetrachloride	ug/L	ND	50.0	04/29/22 00:27	
Chlorobenzene	ug/L	ND	50.0	04/29/22 00:27	
Chloroform	ug/L	ND	200	04/29/22 00:27	
Tetrachloroethene	ug/L	ND	50.0	04/29/22 00:27	
Trichloroethene	ug/L	ND	50.0	04/29/22 00:27	
Vinyl chloride	ug/L	ND	50.0	04/29/22 00:27	
1,2-Dichlorobenzene-d4 (S)	%	97	80-120	04/29/22 00:27	
4-Bromofluorobenzene (S)	%	98	80-120	04/29/22 00:27	
Toluene-d8 (S)	%	106	80-120	04/29/22 00:27	

METHOD BLANK: 3122668 Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	04/29/22 00:42	
1,2-Dichloroethane	ug/L	ND	50.0	04/29/22 00:42	
2-Butanone (MEK)	ug/L	ND	1000	04/29/22 00:42	
Benzene	ug/L	ND	50.0	04/29/22 00:42	
Carbon tetrachloride	ug/L	ND	50.0	04/29/22 00:42	
Chlorobenzene	ug/L	ND	50.0	04/29/22 00:42	
Chloroform	ug/L	ND	200	04/29/22 00:42	
Tetrachloroethene	ug/L	ND	50.0	04/29/22 00:42	
Trichloroethene	ug/L	ND	50.0	04/29/22 00:42	
Vinyl chloride	ug/L	ND	50.0	04/29/22 00:42	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120	04/29/22 00:42	
4-Bromofluorobenzene (S)	%	101	80-120	04/29/22 00:42	
Toluene-d8 (S)	%	112	80-120	04/29/22 00:42	

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

METHOD BLANK: 3123805

Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	04/29/22 00:58	
1,2-Dichloroethane	ug/L	ND	50.0	04/29/22 00:58	
2-Butanone (MEK)	ug/L	ND	1000	04/29/22 00:58	
Benzene	ug/L	ND	50.0	04/29/22 00:58	
Carbon tetrachloride	ug/L	ND	50.0	04/29/22 00:58	
Chlorobenzene	ug/L	ND	50.0	04/29/22 00:58	
Chloroform	ug/L	ND	200	04/29/22 00:58	
Tetrachloroethene	ug/L	ND	50.0	04/29/22 00:58	
Trichloroethene	ug/L	ND	50.0	04/29/22 00:58	
Vinyl chloride	ug/L	ND	50.0	04/29/22 00:58	
1,2-Dichlorobenzene-d4 (S)	%	98	80-120	04/29/22 00:58	
4-Bromofluorobenzene (S)	%	100	80-120	04/29/22 00:58	
Toluene-d8 (S)	%	105	80-120	04/29/22 00:58	

LABORATORY CONTROL SAMPLE: 3125559

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	200	197	99	77-130	
1,2-Dichloroethane	ug/L	200	213	107	75-125	
2-Butanone (MEK)	ug/L	1000	1020	102	54-145	
Benzene	ug/L	200	201	100	80-120	
Carbon tetrachloride	ug/L	200	199	100	70-130	
Chlorobenzene	ug/L	200	201	100	80-120	
Chloroform	ug/L	200	192J	96	80-120	
Tetrachloroethene	ug/L	200	207	104	78-128	
Trichloroethene	ug/L	200	219	110	80-120	
Vinyl chloride	ug/L	200	196	98	50-138	
1,2-Dichlorobenzene-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE SAMPLE: 3125600

Parameter	Units	60398473001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	200	212	106	35-136	
1,2-Dichloroethane	ug/L	ND	200	210	105	55-135	
2-Butanone (MEK)	ug/L	ND	1000	1030	103	35-140	
Benzene	ug/L	ND	200	210	105	55-145	
Carbon tetrachloride	ug/L	ND	200	224	112	50-150	
Chlorobenzene	ug/L	ND	200	203	101	65-135	
Chloroform	ug/L	ND	200	207	103	65-135	
Tetrachloroethene	ug/L	ND	200	214	107	55-135	

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

MATRIX SPIKE SAMPLE:		3125600					
Parameter	Units	60398473001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	ND	200	220	110	55-130	
Vinyl chloride	ug/L	ND	200	199	99	10-150	
1,2-Dichlorobenzene-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				100	80-120	

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 782201

Analysis Method: EPA 8082

QC Batch Method: EPA 3546

Analysis Description: 8082 GCS PCB

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3119502

Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	32.1	04/22/22 10:19	CH
PCB-1221 (Aroclor 1221)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1232 (Aroclor 1232)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1242 (Aroclor 1242)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1248 (Aroclor 1248)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1254 (Aroclor 1254)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1260 (Aroclor 1260)	ug/kg	ND	32.1	04/22/22 10:19	CH
Decachlorobiphenyl (S)	%	88	35-120	04/22/22 10:19	

LABORATORY CONTROL SAMPLE: 3119503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	164	173	106	65-120	CH
PCB-1260 (Aroclor 1260)	ug/kg	164	175	107	65-120	CH
Decachlorobiphenyl (S)	%			78	35-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119504 3119505

Parameter	Units	60398001031 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result						
PCB-1016 (Aroclor 1016)	ug/kg	ND	190	188	200	178	105	95	30-130	11	40	
PCB-1260 (Aroclor 1260)	ug/kg	ND	190	188	236	190	118	95	15-155	22	40	
Decachlorobiphenyl (S)	%						70	64	35-120		50	CL

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 783057

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 TCLP MSSV

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3120943

Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	04/26/22 10:35	
2,4,5-Trichlorophenol	ug/L	ND	500	04/26/22 10:35	
2,4,6-Trichlorophenol	ug/L	ND	100	04/26/22 10:35	
2,4-Dinitrotoluene	ug/L	ND	100	04/26/22 10:35	
2-Methylphenol(o-Cresol)	ug/L	ND	100	04/26/22 10:35	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	04/26/22 10:35	
Hexachloro-1,3-butadiene	ug/L	ND	100	04/26/22 10:35	
Hexachlorobenzene	ug/L	ND	100	04/26/22 10:35	
Hexachloroethane	ug/L	ND	100	04/26/22 10:35	
Nitrobenzene	ug/L	ND	100	04/26/22 10:35	
Pentachlorophenol	ug/L	ND	500	04/26/22 10:35	
Pyridine	ug/L	ND	500	04/26/22 10:35	
2,4,6-Tribromophenol (S)	%	108	57-110	04/26/22 10:35	
2-Fluorobiphenyl (S)	%	84	56-97	04/26/22 10:35	
2-Fluorophenol (S)	%	79	47-94	04/26/22 10:35	
Nitrobenzene-d5 (S)	%	87	57-101	04/26/22 10:35	
Phenol-d6 (S)	%	79	52-95	04/26/22 10:35	
Terphenyl-d14 (S)	%	96	67-106	04/26/22 10:35	

METHOD BLANK: 3121861

Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	04/26/22 11:20	
2,4,5-Trichlorophenol	ug/L	ND	500	04/26/22 11:20	
2,4,6-Trichlorophenol	ug/L	ND	100	04/26/22 11:20	
2,4-Dinitrotoluene	ug/L	ND	100	04/26/22 11:20	
2-Methylphenol(o-Cresol)	ug/L	ND	100	04/26/22 11:20	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	04/26/22 11:20	
Hexachloro-1,3-butadiene	ug/L	ND	100	04/26/22 11:20	
Hexachlorobenzene	ug/L	ND	100	04/26/22 11:20	
Hexachloroethane	ug/L	ND	100	04/26/22 11:20	
Nitrobenzene	ug/L	ND	100	04/26/22 11:20	
Pentachlorophenol	ug/L	ND	500	04/26/22 11:20	
Pyridine	ug/L	ND	500	04/26/22 11:20	
2,4,6-Tribromophenol (S)	%	102	57-110	04/26/22 11:20	
2-Fluorobiphenyl (S)	%	81	56-97	04/26/22 11:20	
2-Fluorophenol (S)	%	77	47-94	04/26/22 11:20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

METHOD BLANK: 3121861

Matrix: Water

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrobenzene-d5 (S)	%	86	57-101	04/26/22 11:20	
Phenol-d6 (S)	%	76	52-95	04/26/22 11:20	
Terphenyl-d14 (S)	%	92	67-106	04/26/22 11:20	

LABORATORY CONTROL SAMPLE: 3122643

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	364	73	48-95	
2,4,5-Trichlorophenol	ug/L	500	455J	91	63-112	
2,4,6-Trichlorophenol	ug/L	500	463	93	60-110	
2,4-Dinitrotoluene	ug/L	500	460	92	44-107	
2-Methylphenol(o-Cresol)	ug/L	500	395	79	52-103	
3&4-Methylphenol(m&p Cresol)	ug/L	500	398	80	53-104	
Hexachloro-1,3-butadiene	ug/L	500	362	72	42-97	
Hexachlorobenzene	ug/L	500	435	87	60-108	
Hexachloroethane	ug/L	500	339	68	39-91	
Nitrobenzene	ug/L	500	420	84	50-116	
Pentachlorophenol	ug/L	500	537	107	47-127	
Pyridine	ug/L	500	357J	71	10-116	
2,4,6-Tribromophenol (S)	%			98	57-110	
2-Fluorobiphenyl (S)	%			82	56-97	
2-Fluorophenol (S)	%			74	47-94	
Nitrobenzene-d5 (S)	%			81	57-101	
Phenol-d6 (S)	%			73	52-95	
Terphenyl-d14 (S)	%			93	67-106	

MATRIX SPIKE SAMPLE: 3122644

Parameter	Units	60398177001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	500	345	69	49-91	
2,4,5-Trichlorophenol	ug/L	ND	500	428J	86	53-119	
2,4,6-Trichlorophenol	ug/L	ND	500	427	85	50-117	
2,4-Dinitrotoluene	ug/L	ND	500	406	81	43-109	
2-Methylphenol(o-Cresol)	ug/L	ND	500	365	73	52-102	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	424	72	49-105	
Hexachloro-1,3-butadiene	ug/L	ND	500	355	71	43-95	
Hexachlorobenzene	ug/L	ND	500	390	78	50-110	
Hexachloroethane	ug/L	ND	500	334	67	40-89	
Nitrobenzene	ug/L	ND	500	402	80	48-115	
Pentachlorophenol	ug/L	ND	500	510	102	37-142	
Pyridine	ug/L	ND	500	220J	44	10-118	
2,4,6-Tribromophenol (S)	%				93	57-110	

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

MATRIX SPIKE SAMPLE:		3122644					
Parameter	Units	60398177001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
2-Fluorobiphenyl (S)	%				81	56-97	
2-Fluorophenol (S)	%				75	47-94	
Nitrobenzene-d5 (S)	%				83	57-101	
Phenol-d6 (S)	%				72	52-95	
Terphenyl-d14 (S)	%				88	67-106	

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 782637

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3121083

Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/21/22 14:17	

SAMPLE DUPLICATE: 3121084

Parameter	Units	60397678107 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.8	23.8	14	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 253767	Analysis Method: EPA 9034
QC Batch Method: EPA 9030B	Analysis Description: 9034 Sulfide Solid
	Laboratory: Pace Analytical Services - New Orleans

Associated Lab Samples: 60398001031

METHOD BLANK: 1206482 Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/kg	ND	50.0	04/26/22 15:30	

LABORATORY CONTROL SAMPLE: 1206483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/kg	1000	882	88	80-120	

MATRIX SPIKE SAMPLE: 1206485

Parameter	Units	60398001031 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/kg	ND	1150	1010	84	75-125	H3

SAMPLE DUPLICATE: 1206484

Parameter	Units	60398001031 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/kg	ND	ND		20	H3

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 782253

Analysis Method: EPA 9045

QC Batch Method: EPA 9045

Analysis Description: 9045 pH

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

SAMPLE DUPLICATE: 3119636

Parameter	Units	60397654001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.2	0	3	

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 786350

Analysis Method: EPA 9095

QC Batch Method: EPA 9095

Analysis Description: 9095 PAINT FILTER LIQUID TEST

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

SAMPLE DUPLICATE: 3134619

Parameter	Units	60398001031 Result	Dup Result	RPD	Max RPD	Qualifiers
Free Liquids		Negative	Negative			

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 784086

Analysis Method: ASTM D92

QC Batch Method: ASTM D92

Analysis Description: Flashpoint, Open Cup

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

SAMPLE DUPLICATE: 3126537

Parameter	Units	60397925001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>212	>212			N3

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 783249

Analysis Method: SM 4500-CN-E

QC Batch Method: SM 4500-CN-E

Analysis Description: 4500CNE Cyanide, Total

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3123289

Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/kg	ND	0.0050	04/28/22 15:06	

LABORATORY CONTROL SAMPLE: 3123290

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg	0.1	0.10	105	72-115	

MATRIX SPIKE SAMPLE: 3123291

Parameter	Units	60397926001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/kg		1.5	4.3	4.2	62	10-128

SAMPLE DUPLICATE: 3123292

Parameter	Units	60397926002 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/kg	0.59	.52J		35	

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**QUALITY CONTROL DATA**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

QC Batch: 783680

Analysis Method: EPA 9056

QC Batch Method: EPA 9056

Analysis Description: 9056 IC Anions

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3125097

Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/kg	ND	100	04/28/22 13:52	

LABORATORY CONTROL SAMPLE: 3125098

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/kg	500	491	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3125099 3125100

Parameter	Units	60398001031		3125100		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfate	mg/kg	ND	570	570	609	614	91	92	80-120	1	15

SAMPLE DUPLICATE: 3125101

Parameter	Units	10605515001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/kg	217	217	0	15	

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### QUALITY CONTROL DATA

Project: GSA Goodfellow Waste Char.Soil  
Pace Project No.: 60398062

QC Batch: 784357	Analysis Method: EPA 9066
QC Batch Method: EPA 9066	Analysis Description: 9066 Phenolics
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001031

METHOD BLANK: 3127555 Matrix: Solid

Associated Lab Samples: 60398001031

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	mg/kg	ND	0.050	05/04/22 11:39	

LABORATORY CONTROL SAMPLE: 3127556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	mg/kg	0.25	0.23	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3127557 3127558

Parameter	Units	60398001031		3127557		3127558		% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec				
Phenolics, Total Recoverable	mg/kg	3.6	8.5	8.6	12.1	14.2	101	124	90-110	16	20 M1

SAMPLE DUPLICATE: 3127559

Parameter	Units	60398697015 Result	Dup Result	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	mg/kg	197	215	9	20	

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## QUALIFIERS

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

H3 Sample was received or analysis requested beyond the recognized method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N3 Accreditation is not offered by the relevant laboratory accrediting body for this parameter.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: GSA Goodfellow Waste Char.Soil

Pace Project No.: 60398062

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60398001031	IDW SOIL 04142022	EPA 3546	782201	EPA 8082	782472
60398001031	IDW SOIL 04142022	EPA 3010	782895	EPA 6010	782932
60398001031	IDW SOIL 04142022	EPA 7470	783048	EPA 7470	783191
60398001031	IDW SOIL 04142022	EPA 3510	783057	EPA 8270	783273
60398001031	IDW SOIL 04142022	EPA 8260	783808		
60398001031	IDW SOIL 04142022	ASTM D2974	782637		
60398001031	IDW SOIL 04142022	EPA 9030B	253767	EPA 9034	253797
60398001031	IDW SOIL 04142022	EPA 9045	782253		
60398001031	IDW SOIL 04142022	EPA 9095	786350		
60398001031	IDW SOIL 04142022	ASTM D92	784086		
60398001031	IDW SOIL 04142022	SM 4500-CN-E	783249	SM 4500-CN-E	783955
60398001031	IDW SOIL 04142022	EPA 9056	783680	EPA 9056	784132
60398001031	IDW SOIL 04142022	EPA 9066	784357	EPA 9066	784828

**REPORT OF LABORATORY ANALYSIS**

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WO#: 60398001



	DC#_Title: ENV-FRM-LENE-0009_Sa	
	Revision: 2	Effective Date: 01/12/2022

Client Name: Swas & Mc Donnell

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2pic

Thermometer Used: TJOL Type of Ice: Wet Blue  None

Cooler Temperature (°C): As-read 1.5 Corr. Factor 1.0 Corrected 0.5

Date and initials of person examining contents: 04.19.2022 cu

Temperature should be above freezing to 6°C 1.9, 3.2 0.9, 2.2

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>No test marked on COC</u>
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>ERB cont. BPSN &amp; 3UG9H</u>
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>received RAS volume for</u>
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>3-11AA/1-2</u> (b) (6) <u>4.19.22</u>
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT/SL</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	(b) (6) <u>4.19.22</u>
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>+ Dgo ID69H in coolers 1st</u>
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_



### Request for Chemical Analysis and Chain of Custody Record

**Burns & McDonnell Engineering**  
9400 Ward Parkway  
Kansas City, Missouri 64114  
Phone: (816) 333-9400 Fax: (816) 822-3494

**Laboratory:** Pace Analytical  
**Address:** 9608 Loriet Blvd.  
**City/State/Zip:** Lenexa, KS 66219  
**Telephone:** 913-563-1408, jeff.shopper@pacelabs.com

**Document Control No:** 143702-0442022-004

**Lab. Reference No. or Episode No.:**

**Attention:** Justin Carter

**Project Number:** 143702

**Client Name:** GSA Goodfellow Waste Char. Soil

10409-17

Matrix

60398001

Number of Containers

Sample Number

106-501 0442022

Gas

Solid

Liquid

9

Sulfate / EOx

Cyanide / Sulfide

9066 Phenols / Flash Point

8082 PCBs / pH

TCLP Pesticides/Herbicides

TCLP SVOCs & Metals

TCLP VOCs

X

X

X

X

X

X

X

X

X

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Pace Analytical Services, LLC

2231 W. Altorfer Drive

Peoria, IL 61615

(800)752-6651

April 22, 2022

Alice Spiller  
Pace Analytical - Lenexa  
9608 Loiret Blvd  
Lenexa, KS 66219

RE: Pace Lenexa 60398001 TCLP Pest Herb

Dear Alice Spiller:

Please find enclosed the analytical results for the **1** sample(s) the laboratory received on **4/20/22 10:48 am** and logged in under work order **FD03406**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of Pace Analytical Services, LLC.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

Pace Analytical Services appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or [lisa.grant@pacelabs.com](mailto:lisa.grant@pacelabs.com).

(b) (6)

A large black rectangular redaction box covers the majority of the text in this section. The text "(b) (6)" is printed in red at the top left corner of the redacted area.

Lisa Grant  
Director of Client Services  
(309)683-1764  
[lisa.grant@pacelabs.com](mailto:lisa.grant@pacelabs.com)



**SAMPLE RECEIPT CHECK LIST**

Items not applicable will be marked as in compliance

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Work Order    FD03406

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YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
NO	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers received undamaged
YES	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
NO	Current PDC COC submitted
NO	Case narrative provided



ANALYTICAL RESULTS

Sample: FD03406-01
Name: IDW Soil 04142022
Alias: 60398001031

Sampled: 04/14/22 17:10
Received: 04/20/22 10:48
Matrix: Solid

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Rows include Herbicides (2,4-D, Silvex), Pesticides (gamma-BHC, Chlordane, Endrin, Heptachlor, Heptachlor epoxide, Methoxychlor, Toxaphene), and TCLP Metals (Final pH).



NOTES

Specifications regarding method revisions, method modifications, and calculations used for analysis are available upon request. Please contact your project manager.

\* Not a TNI accredited analyte

**Certifications**

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

(b) (6)



Certified by: Lisa Grant, Director of Client Services

FDO 3406

# Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: MO  
Cert. Needed:  Yes  No

Workorder: 60398001    Workorder Name: 143702 GSA GOODFELLOW SOIL SAMOWNER Received Date: 4/16/2022    Results Requested By: 4/28/2022



Report To		Subcontract To		Requested Analysis			
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665		Pace Analytical Hazelwood 944 Anglum Rd. Hazelwood, MO 63042 Phone (800)333-3278		TCLP Herbicides 8151 TCLP Pesticides 8081			
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	LAB USE ONLY
1	IDW SOIL 04142022	PS	4/14/2022 17:10	60398001031	Solid	Unpreserved 1	X
2							
3							
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	[Redacted]	4/19/22 18:00	[Redacted]	4/22/22 08:55		Y	Y	N
2	[Redacted]							
3								

Cooler Temperature on Receipt 11 °C    Custody Seal Y    Received on Ice Y    Samples Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

## Pace Analytical - Lenexa, KS

Sample Delivery Group: L1484554  
Samples Received: 04/20/2022  
Project Number: 60398001  
Description: 143702 GSA Goodfellow Soil Sam  
Site: 001  
Report To: Alic Spille  
9608 Loiret Boulevard  
Lenexa, KS 66219

Entire Report Reviewed By:



Nancy McLain  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	<sup>1</sup> Cp
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	<sup>2</sup> Tc
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	<sup>3</sup> Ss
<b>IDW SOIL 04142022 L1484554-01</b>	5	
<b>Qc: Quality Control Summary</b>	6	<sup>4</sup> Cn
<b>Total Solids by Method 2540 G-2011</b>	6	<sup>5</sup> Sr
<b>Wet Chemistry by Method 9023</b>	7	
<b>Gl: Glossary of Terms</b>	8	<sup>6</sup> Qc
<b>Al: Accreditations &amp; Locations</b>	9	<sup>7</sup> Gl
<b>Sc: Sample Chain of Custody</b>	10	<sup>8</sup> Al
		<sup>9</sup> Sc

# SAMPLE SUMMARY

IDW SOIL 04142022 L1484554-01 Solid

Collected by: \_\_\_\_\_ Collected date/time: 04/14/22 17:10 Received date/time: 04/20/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1851974	1	04/22/22 11:03	04/22/22 11:24	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9023	WG1852402	1	04/21/22 16:23	04/22/22 12:02	GJA	Mt. Juliet, TN

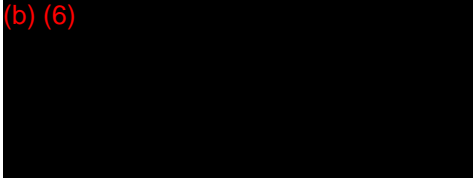
- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Sr
- <sup>6</sup> Qc
- <sup>7</sup> Gl
- <sup>8</sup> Al
- <sup>9</sup> Sc



# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

(b) (6)



Nancy McLain  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.0		1	04/22/2022 11:24	<a href="#">WG1851974</a>

Wet Chemistry by Method 9023

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Extracted TOX	U		39.0	130	1	04/22/2022 12:02	<a href="#">WG1852402</a>

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3784277-1 04/22/22 11:24

Analyte	MB Result %	<u>MB Qualifier</u>	MB MDL %	MB RDL %
Total Solids	0.00100			

1 Cp

2 Tc

3 Ss

L1484547-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1484547-16 04/22/22 11:24 • (DUP) R3784277-3 04/22/22 11:24

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits
Total Solids	78.0	78.6	1	0.727		10

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3784277-2 04/22/22 11:24

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Total Solids	50.0	50.0	100	85.0-115	

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3784043-1 04/22/22 10:07

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Extracted TOX	U		30.0	100

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3784043-2 04/22/22 10:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	mg/kg	mg/kg	%	%	
Extracted TOX	250	269	107	85.0-115	

4 Cn

5 Sr

L1483882-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1483882-01 04/22/22 10:30 • (MS) R3784043-3 04/22/22 10:51 • (MSD) R3784043-4 04/22/22 11:01

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
	mg/kg				%	%		%			%	%
Extracted TOX	1000	U	1190	1210	105	107	1	80.0-120			1.56	20

6 Qc

7 Gl

8 Al

9 Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

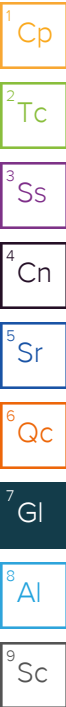
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

### Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

### Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> Wastewater n/a Accreditation not applicable

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: MO

Cert. Needed:  Yes  No

Workorder: 60398001    Workorder Name: 143702 GSA GOODFELLOW SOIL SAM    Owner Received Date: 4/16/2022    Results Requested By: 4/28/2022

Report To		Subcontract To					Requested Analysis																																																																																									
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858					<div style="text-align: right;"> <p>1153</p> <p>LAB USE ONLY</p> <p>11454554</p> <p>-01</p> </div>																																																																																									
																	<table border="1"> <thead> <tr> <th colspan="10">Preserved Containers</th> </tr> <tr> <th>Unpreserved</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Preserved Containers										Unpreserved										1										2										3										4										5									
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Transfers	Released By	Date/Time	Received By	Date/Time
1	(b) (6)	4/19/22 18:00	(b) (6)	4/19 9:00
2				
3				

Cooler Temperature on Receipt    °C    Custody Seal Y or N    Received on Ice Y or N    Samples Intact Y or N

\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Temp 5.2+0=5.2  
trk 53338761401

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N    If Applicable

COC Signed/Accurate:  Y  N    VOA Zero Headspace:  Y  N

Bottles arrive intact:  Y  N    Pres. Correct/Check:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

RAP Screen <0.5 mR/hr:  Y  N

**APPENDIX F – WASTE PROFILE AND MANIFEST**





**ILLINI**  
**Environmental, Inc.**

8895 California Drive, PO Box 387  
Caseyville, IL 62232  
Phone: 618-397-1234  
Fax: 618-397-3234

For Office Use Only	MGMT Code:
Rec'd By:	
Approved By:	
Approval Date:	
Recert Date:	
Approval #:	

V.112019

GENERATOR INFORMATION (Material Origin)	
Generator Name:	General Services Administration
Generator Address:	2300 Main St., FMD 7th Floor - 6PM
Generator City:	Kansas City
Generator State:	MO
Generator Zipcode:	64108
Is the waste generated at the above address?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If No, Please List Address:	4300 Goodfellow Blvd, St. Louis, MO 63120
Hours of Operation:	N/A
Contact Name:	Edward Hubert
Work Phone #:	816-890-7108
Cell Phone #:	
Fax Number:	
Email:	<a href="mailto:edward.hubert@gsa.gov">edward.hubert@gsa.gov</a>
Generator EPA ID:	N/A
Generator State ID:	N/A
Site Location ID Number (if different from above):	

BILLING INFORMATION (same as above) <input type="checkbox"/>	TRANSPORTER INFORMATION
Billing Name:	O6 Environmental Services LLC
Address:	6311 Bartmer Industrial Drive
City: St. Louis	State: MO Zip: 63130
Contact Name:	Andrew Polizzi
Phone Number:	314-862-6671
Fax Number:	314-862-6672
Email:	<a href="mailto:a.polizzi@o6env.com">a.polizzi@o6env.com</a>
P.O. Number:	N/A <input type="checkbox"/>
Name:	O6 Environmental Services LLC
Address:	6311 Bartmer Industrial Drive
City: St. Louis	State: MO Zip: 63130
US EPA Hauler ID #:	MOR000558734
IL SWH ID#	5518-1
Sales Representative:	Andrew Polizzi
Contact Number:	314-862-6671
Email:	<a href="mailto:a.polizzi@o6env.com">a.polizzi@o6env.com</a>

CHARACTERIZATION OF MATERIAL / WASTE (Material Information)					
Name of Material / Waste:			IDW Soil / Plastic Sheetting		
Process Generating Material / Waste: Sampling					
Physical State:	Liquid: <input type="checkbox"/>	Solid: <input checked="" type="checkbox"/>	Sludge: <input type="checkbox"/>	Powder: <input type="checkbox"/>	Other: <input type="checkbox"/>
Viscosity:	Low: <input type="checkbox"/>	Med: <input type="checkbox"/>	High: <input type="checkbox"/>	N/A: <input checked="" type="checkbox"/>	Odor: Mild <input type="checkbox"/> Strong <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Free Liquids:	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	Free Liquids:	0	
Specific Gravity:	Total Solids:		100		
Layering:	Single: <input checked="" type="checkbox"/>	Bi-layer: <input type="checkbox"/>	Multi: <input type="checkbox"/>	Is the pH within Illini's 3 - 11 range?	
Color:	Brown		Yes <input checked="" type="checkbox"/> No (please explain) <input type="checkbox"/>		
Flash Point:			Exact:		
<73°: <input type="checkbox"/>			73° - <140°: <input type="checkbox"/>		
			>140°: <input checked="" type="checkbox"/>		

CHEMICAL COMPOSITION	RANGE			
IDW Soil	80	to 90	%	to %
Plastic Sheeting	10	to 20	%	to %
		to	%	to %
		to	%	to %
		to	%	to %
		to	%	to %
	<b>TOTAL:</b>	<b>100</b>		<b>TOTAL:</b>

ANALYTICAL DATA				
Do you have analytical data for the waste stream?			Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If Yes, please check all that apply:			TCLP <input type="checkbox"/>	Totals <input type="checkbox"/>
			BTEX <input type="checkbox"/>	Other <input checked="" type="checkbox"/> See Attached
Please Check Yes or No In Regards to Metals:				
Arsenic	>5.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Barium	>100 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Cadmium	>1.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Chromium	>5.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Lead	>5.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Mercury	>0.2 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Selenium	>1.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Silver	>5.0 ppm	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

SHIPPING INFORMATION				
Packaging:	Drum: <input checked="" type="checkbox"/>	Tote: <input type="checkbox"/>	CYB: <input type="checkbox"/>	Bulk: <input type="checkbox"/> Lab-Pack <input type="checkbox"/>
Frequency:	One-Time: <input type="checkbox"/>	Ongoing: <input checked="" type="checkbox"/>	Anticipated Volume: 3 - 55gal Drums	
Is this waste considered a US DOT Hazardous Material? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>				
U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number and Packing Group):				
Shipping Name:	NON-HAZARDOUS, NON-RCRA, NON-DOT REGULATED (IDW Soil / Plastic Sheeting)			
Hazard Class:	N/A			
ID Number:	N/A			
Packing Group:	N/A			
Does this waste contain Federal / State EPA Hazardous Waste Codes: Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>				
List all Waste Codes (If Any):				

Has the non-hazardous waste stream been declassified by the EPA?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
--	------------------------------	--

If "No", please complete the non-hazardous waste code section.

### NON-HAZARDOUS WASTE CODES

Each waste stream itemized on the e-manifest is to be accompanied by a waste code. Non-hazardous special waste codes to be used are identified below. Please check which code applies to the waste stream being identified above.

IL01 - Leaking underground storage tank contaminated soil, sand and clay	<input type="checkbox"/>
IL02 - Other contaminated soil, sand and clay	<input checked="" type="checkbox"/>
IL03 - Other contaminated materials	<input type="checkbox"/>
IL04 - PCB solids such as capacitors/carcasses	<input type="checkbox"/>
IL05 - PCB liquids such as transformer & capacitor oils	<input type="checkbox"/>
IL06 - Lab packs	<input type="checkbox"/>
IL07 - Leachate	<input type="checkbox"/>
IL08 - Ashes, incinerator or boiler	<input type="checkbox"/>
IL09 - Municipal WW treatment sludges	<input type="checkbox"/>
IL10 - Industrial WW treatment sludges	<input type="checkbox"/>
IL11 - Food processing waste, off-spec food products	<input type="checkbox"/>
IL12 - Antifreeze	<input type="checkbox"/>
IL13 - Waste/used oil	<input type="checkbox"/>
IL14 - Other organic liquids	<input type="checkbox"/>
IL15 - Other organic solids or sludges	<input type="checkbox"/>
IL16 - Liquids with other metals	<input type="checkbox"/>
IL17 - Solids or sludges with other metals	<input type="checkbox"/>
IL18 - Other inorganic liquids	<input type="checkbox"/>
IL19 - Other inorganic solids or sludges	<input type="checkbox"/>
IL20 - Containerized gas	<input type="checkbox"/>
IL21 - Household hazardous waste from collections	<input type="checkbox"/>

**GENERATOR CERTIFICATION:**

<b>Does this waste contain any of the following? (Check All That Apply):</b>		
PCBs <input type="checkbox"/>	Radioactive <input type="checkbox"/>	Benzene <input type="checkbox"/>
Asbestos <input type="checkbox"/>	Listed Waste <input type="checkbox"/>	Reactive Cyanide/Sulfide <input type="checkbox"/>
Explosives <input type="checkbox"/>	Pesticide <input type="checkbox"/>	Infectious/Sanitation Waste <input type="checkbox"/>
Halogens <input type="checkbox"/>	Herbicide <input type="checkbox"/>	<b>NONE</b> <input checked="" type="checkbox"/>
Phenolics <input type="checkbox"/>	TCLP Toxics <input type="checkbox"/>	
Is the waste represented by the profile a Hazardous Waste? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
How has the generator determined this waste material? (Check all that apply)		
Generator Knowledge <input checked="" type="checkbox"/> MSDS (attached) <input type="checkbox"/> Analytical (Attached) <input checked="" type="checkbox"/> No Attachments <input type="checkbox"/>		
Are there any specific disposal restrictions / handling requirements / requests / exemptions? Explain.		
<p>I hereby confirm that I am familiar with the information contained in this and attached documents. The information contained herein is true, accurate and complete. No material fact has been omitted as to make this information misleading. I understand that others may rely on these representations for the safe and legal handling and processing of the materials described herein. I certify that the sample (if submitted) is representative of the actual material in all respects. I will notify Illini Environmental, Inc, in writing, of any waste generating process changes and/or changes to the aboved profiled material prior to shipment. As Generator or Generator's representative, I understand there may be significant penalties for misrepresenting or failure to correctly identify a waste's characteristics.</p>		
<div style="background-color: black; color: red; padding: 2px;">(b) (6)</div>		6/2/2022
<b>SIGNATURE (type name for e-signature)</b>		<b>DATE</b>
Edward W. Hubert		Regional Environmental Prog. Manager
<b>PRINT NAME</b>		<b>COMPANY / TITLE</b>

**NOTES**

- \* All fields are required to be completed before an approval is granted.
- \* A sample with all profiles is preferred, but not required. The only time a sample would be required is at the Technical Service Manager's request.
- \* A complete and executed copy of the profile must be obtained prior to delivering material to Illini Environmental, Inc.
- \* Profiles cannot be approved without all necessary federal and state ID #s issued.
- \* This profile will expire one year from the day that it is approved at Illini Environmental, Inc.
- \* THE INFORMATION CONTAINED HEREIN SHALL BE INCORPORATED BY REFERENCE IN AND SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED IN THE SIGNED, APPROVED "PROPOSAL".

# NON-SPECIAL WASTE CERTIFICATION FORM

Describe or identify the waste:  IDW Soil / Plastic Sheeting

- Is the waste a hazardous waste? (1) Yes  No
- Is the waste a liquid waste? (2) Yes  No
- Does the waste contain regulated asbestos? (3) Yes  No
- Does the waste contain polychlorinated biphenyls (PCBs)? (4) Yes  No
- Is the waste generated by shredding recyclable metals? (5) Yes  No
- Is the waste a hazardous waste that has been treated or rendered non-hazardous? Yes  No

*If you have answered yes to any of the above questions the waste cannot be certified nonspecial.*

I certify that  IDW Soil / Plastic Sheeting is not a special waste. This document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly collect and evaluate the information gathered. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted herein is true, accurate and complete. I have used knowledge of the processes generating the waste and the attached supporting documentation to determine that the waste in question is not a special waste. I am aware that there are significant penalties for knowingly and falsely certifying that a waste is not a special waste, including the possibility of fine and imprisonment.

Signature: (b) (6) Date: 6/2/2022  
(owner/operator/duty authorized agent)

Printed name: Edward W. Hubert Title: Reg. Environmental Prog. Mgr

**Attach all required information used to make this certification** (i.e., determination the waste is neither hazardous nor liquid; description of the process generating the waste; relevant MSDSs; analytical test results (signed and dated by person who completed the analysis), or reason why testing was not necessary.

(1) You may use generator knowledge or analytical testing to make this determination. The determination must be made in accordance with the requirements of 35 Illinois Administrative Code 722.111. Testing must be in accordance with methods set forth in 35 Illinois Administrative Code 721, Subpart C.

(2) Liquid wastes may be determined by using paint-filter test SW-846 Method 9095

(3) As defined in 40 Code of Federal Regulations, Part 761

(4) As regulated in accordance with 40 Code of Federal Regulations, Part 761

(5) Waste materials generated by processing recyclable metals by shredding (e.g., auto fluff) must be managed under Section 22.29 of the [Illinois] Environmental Protection Act.

Please print or type.

Form Approved. OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 844-862-6671	4. Manifest Tracking Number 015911715 FLE				
5. Generator's Name and Mailing Address General Services Administration 2300 Main St. FMD 7th Floor Kansas City, MO 64108 816-890-7108				Generator's Site Address (if different than mailing address) 4300 Goodfellow Blvd. St. Louis, MO 63120					
6. Transporter 1 Company Name O6 Environmental				U.S. EPA ID Number MOR000552734					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address Illini Environmental 8845 California Dr. Caseyville IL 62232 618-397-1234				U.S. EPA ID Number ILR000107086					
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		1. Non-RCRA, Non-DOT, Non-Regulated Material (IDW soil)		03	DM	700	P	IL02	
		2. Non-RCRA, Non-DOT, Non-Regulated Material (IDW water)		03	DM	900	P	IL16	
		3.							
		4.							
14. Special Handling Instructions and Additional Information Invoice O6 ENV 2) 22-157-1 LFD 1) 22-154-4 LFD									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offeror's Printed/Typed Name				Signature (b) (6)		Month	Day	Year	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S:									
17. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Yonan Saab				Signature (b) (6)		Month	Day	Year 8 23 22	
Transporter 2 Printed/Typed Name				Signature		Month	Day	Year	
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number:									
18b. Alternate Facility (or Generator) U.S. EPA ID Number									
Facility's Phone:									
18c. Signature of Alternate Facility (or Generator)							Month	Day	Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1.	2.	3.	4.						
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name Bradley Cox				Signature (b) (6)		Month	Day	Year 6 23 22	

**APPENDIX G – ANALYTICAL LABORATORY TEST REPORTS FOR SOIL**

April 27, 2022

Justin Carter  
Burns & McDonnell  
9400 Ward Parkway  
Kansas City, MO 64114

RE: Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

Dear Justin Carter:

Enclosed are the analytical results for sample(s) received by the laboratory on April 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

(b) (6)

Heather Wilson for  
Alice Spiller  
alice.spiller@pacelabs.com  
(913)599-5665  
PM Lab Management

Enclosures

cc: SHAUNA LAWRENCE, BURNS & MCDONNELL  
Jacquelin Lee, Burns & McDonnell



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

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### **Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 20-020-0

Arkansas Drinking Water

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212020-2

Oklahoma Certification #: 9205/9935

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212019-9

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60397740001	GB-64/9-10	Solid	04/11/22 10:50	04/13/22 10:23
60397740002	GB-64/9-10D	Solid	04/11/22 10:50	04/13/22 10:23
60397740003	GB-64/13-14	Solid	04/11/22 10:52	04/13/22 10:23
60397740004	GB-64A/3-4	Solid	04/11/22 11:21	04/13/22 10:23
60397740005	GB-64A/5-6	Solid	04/11/22 11:23	04/13/22 10:23
60397740006	GB-64B/1.5-2.5	Solid	04/11/22 11:44	04/13/22 10:23
60397740007	GB-64B/7.5-8.5	Solid	04/11/22 11:52	04/13/22 10:23
60397740008	GB-64C/2.5-3.5	Solid	04/11/22 12:08	04/13/22 10:23
60397740009	GB-64C/4-5	Solid	04/11/22 12:09	04/13/22 10:23
60397740010	GB-62A/1-2	Solid	04/11/22 13:27	04/13/22 10:23
60397740011	GB-62A/3-4	Solid	04/11/22 13:28	04/13/22 10:23
60397740012	GB-62C/1-2	Solid	04/11/22 13:42	04/13/22 10:23
60397740013	GB-62C/3-4	Solid	04/11/22 13:45	04/13/22 10:23
60397740014	GB-62B/2.5-3.5	Solid	04/11/22 14:59	04/13/22 10:23
60397740015	GB-62B/5-6	Solid	04/11/22 15:10	04/13/22 10:23
60397740016	GB-40/15-16	Solid	04/11/22 16:39	04/13/22 10:23
60397740017	GB-40/19-20	Solid	04/11/22 16:48	04/13/22 10:23
60397740018	GB-40A/1-2	Solid	04/12/22 08:29	04/13/22 10:23
60397740019	GB-40A/3-4	Solid	04/12/22 08:30	04/13/22 10:23
60397740020	GB-40B/1-2	Solid	04/12/22 08:51	04/13/22 10:23
60397740021	GB-40B/5-6	Solid	04/12/22 08:53	04/13/22 10:23
60397740022	GB-40C/0.5-1.5	Solid	04/12/22 09:20	04/13/22 10:23
60397740023	GB-40C/5.5-6.5	Solid	04/12/22 09:22	04/13/22 10:23
60397740024	GB-59/12-13	Solid	04/12/22 10:38	04/13/22 10:23
60397740025	GB-59/12-13D	Solid	04/12/22 10:38	04/13/22 10:23
60397740026	GB-59/14-15	Solid	04/12/22 10:41	04/13/22 10:23
60397740027	GB-45C/0.5-1.5	Solid	04/12/22 11:24	04/13/22 10:23
60397740028	GB-45C/0.5-1.5D	Solid	04/12/22 11:24	04/13/22 10:23
60397740029	GB-45C/2.5-3.5	Solid	04/12/22 11:26	04/13/22 10:23
60397740030	GB-45B/1-2	Solid	04/12/22 11:53	04/13/22 10:23
60397740031	GB-45B/3-4	Solid	04/12/22 11:54	04/13/22 10:23
60397740032	GB-45A/1-2	Solid	04/12/22 12:08	04/13/22 10:23
60397740033	GB-45A/3-4	Solid	04/12/22 12:09	04/13/22 10:23
60397740034	DPTS-2/9-10	Solid	04/12/22 13:34	04/13/22 10:23
60397740035	DPTS-2/13-14	Solid	04/12/22 13:37	04/13/22 10:23
60397740036	GB-19B/2.5-3.5	Solid	04/12/22 14:17	04/13/22 10:23
60397740037	GB-19B/4-5	Solid	04/12/22 14:19	04/13/22 10:23

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60397740038	GB-19A/0.5-1.5	Solid	04/12/22 14:38	04/13/22 10:23
60397740039	GB-19A/5.5-6.5	Solid	04/12/22 14:40	04/13/22 10:23
60397740040	GB-19C/1-2	Solid	04/12/22 15:00	04/13/22 10:23
60397740041	GB-19C/1-2D	Solid	04/12/22 15:00	04/13/22 10:23
60397740042	GB-19C/2-3	Solid	04/12/22 15:03	04/13/22 10:23
60397740043	ERB04122022	Water	04/12/22 15:47	04/13/22 10:23
60397740044	GB-13B/0.5-1.5	Solid	04/12/22 16:09	04/13/22 10:23
60397740045	GB-13B/2-3	Solid	04/12/22 16:11	04/13/22 10:23
60397740046	GB-13A/0.5-1.5	Solid	04/12/22 16:28	04/13/22 10:23
60397740047	GB-13A/5-6	Solid	04/12/22 16:30	04/13/22 10:23
60397740048	GB-13/7-8	Solid	04/12/22 16:51	04/13/22 10:23
60397740049	GB-13/11-12	Solid	04/12/22 16:53	04/13/22 10:23
60397740050	GB-13C/1-2	Solid	04/12/22 17:12	04/13/22 10:23
60397740051	GB-13C/5-6	Solid	04/12/22 17:15	04/13/22 10:23
60397740052	ERB04112022	Water	04/12/22 08:00	04/13/22 10:23
60397740053	TRIP BLANK	Water	04/12/22 08:00	04/13/22 10:23

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### SAMPLE ANALYTE COUNT

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60397740001	GB-64/9-10	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740002	GB-64/9-10D	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740003	GB-64/13-14	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740004	GB-64A/3-4	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740005	GB-64A/5-6	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740006	GB-64B/1.5-2.5	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740007	GB-64B/7.5-8.5	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740008	GB-64C/2.5-3.5	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740009	GB-64C/4-5	EPA 6020	JGP	1	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740010	GB-62A/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740011	GB-62A/3-4	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740012	GB-62C/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740013	GB-62C/3-4	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740014	GB-62B/2.5-3.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740015	GB-62B/5-6	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740016	GB-40/15-16	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740017	GB-40/19-20	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740018	GB-40A/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740019	GB-40A/3-4	EPA 8270 by SIM	JMT	18	PASI-K

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60397740020	GB-40B/1-2	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740021	GB-40B/5-6	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740022	GB-40C/0.5-1.5	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740023	GB-40C/5.5-6.5	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740024	GB-59/12-13	ASTM D2974	DWC	1	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
60397740025	GB-59/12-13D	ASTM D2974	DWC	1	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
60397740026	GB-59/14-15	ASTM D2974	DWC	1	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
60397740027	GB-45C/0.5-1.5	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740028	GB-45C/0.5-1.5D	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740029	GB-45C/2.5-3.5	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740030	GB-45B/1-2	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740031	GB-45B/3-4	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740032	GB-45A/1-2	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740033	GB-45A/3-4	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60397740034	DPTS-2/9-10	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K

### REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60397740035	DPTS-2/13-14	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740036	GB-19B/2.5-3.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740037	GB-19B/4-5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740038	GB-19A/0.5-1.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740039	GB-19A/5.5-6.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740040	GB-19C/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740041	GB-19C/1-2D	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740042	GB-19C/2-3	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740043	ERB04122022	EPA 8270	NAW	5	PASI-K
		EPA 8270C by SIM	JMT, NAW	18	PASI-K
		EPA 5030B/8260	HM1	95	PASI-K
		EPA 8260	HM1	5	PASI-K
60397740044	GB-13B/0.5-1.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740045	GB-13B/2-3	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740046	GB-13A/0.5-1.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740047	GB-13A/5-6	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740048	GB-13/7-8	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740049	GB-13/11-12	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740050	GB-13C/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740051	GB-13C/5-6	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60397740052	ERB04112022	EPA 6020	JGP	1	PASI-K

**REPORT OF LABORATORY ANALYSIS**

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### SAMPLE ANALYTE COUNT

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60397740053	TRIP BLANK	EPA 8270C by SIM	JMT	18	PASI-K
		EPA 5030B/8260	HM1	95	PASI-K
		EPA 8260	HM1	5	PASI-K

PASI-K = Pace Analytical Services - Kansas City

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 6020

**Description:** 6020 MET ICPMS

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

10 samples were analyzed for EPA 6020 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

### General Information:

38 samples were analyzed for EPA 8270 by SIM by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

QC Batch: 781706

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- GB-19C/1-2 (Lab ID: 60397740040)

QC Batch: 781704

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- GB-40B/1-2 (Lab ID: 60397740020)
- GB-45C/0.5-1.5 (Lab ID: 60397740027)
- GB-45C/0.5-1.5D (Lab ID: 60397740028)

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 781706

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- GB-19C/1-2 (Lab ID: 60397740040)
  - 2-Fluorobiphenyl (S)
  - Terphenyl-d14 (S)

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 781706

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397740033

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3117676)
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Dibenzo(a,h)anthracene
  - Fluoranthene
  - Fluorene
  - Indeno(1,2,3-cd)pyrene
  - Naphthalene
  - Phenanthrene
  - Pyrene
- MSD (Lab ID: 3117677)
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Fluoranthene
  - Indeno(1,2,3-cd)pyrene
  - Phenanthrene
  - Pyrene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3117677)
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

QC Batch: 781706

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397740033

R1: RPD value was outside control limits.

- Chrysene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

### Additional Comments:

Analyte Comments:

QC Batch: 781706

D4: Sample was diluted due to the presence of high levels of target analytes.

- GB-19C/1-2 (Lab ID: 60397740040)
- 2-Fluorobiphenyl (S)

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8270

**Description:** 8270 MSSV DRO/ORO

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

4 samples were analyzed for EPA 8270 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

2 samples were analyzed for EPA 8270C by SIM by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: 781708

1e: Analyte recovery in the laboratory control sample (LCS) was below QC limits, confirmed by re-analysis. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 3117684)
- Benzo(a)pyrene

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8260B

**Description:** 8260 MSV 5035A VOA

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

3 samples were analyzed for EPA 8260B by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035A/5030 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 782793

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 3121604)
  - 1,4-Dioxane (p-Dioxane)
  - 2-Methylnaphthalene
  - trans-1,4-Dichloro-2-butene

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 782793

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397740026

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3121605)

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8260B

**Description:** 8260 MSV 5035A VOA

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

QC Batch: 782793

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397740026

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- 1,1,2,2-Tetrachloroethane
- 2-Butanone (MEK)
- 2-Hexanone
- Methyl acetate
- Trichloroethene
- MSD (Lab ID: 3121606)
  - 1,1,2,2-Tetrachloroethane
  - 1,1-Dichloroethene
  - 2-Butanone (MEK)
  - 2-Hexanone
  - Acetone
  - Cyclohexanone
  - Methyl acetate
  - Trichloroethene

### Additional Comments:

Analyte Comments:

QC Batch: 782793

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3121603)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-59/12-13 (Lab ID: 60397740024)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-59/12-13D (Lab ID: 60397740025)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-59/14-15 (Lab ID: 60397740026)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- LCS (Lab ID: 3121604)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- MS (Lab ID: 3121605)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- MSD (Lab ID: 3121606)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

### General Information:

2 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 782422

S0: Surrogate recovery outside laboratory control limits.

- ERB04122022 (Lab ID: 60397740043)
  - Toluene-d8 (S)
- TRIP BLANK (Lab ID: 60397740053)
  - Toluene-d8 (S)

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

Analyte Comments:

QC Batch: 782422

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- ERB04122022 (Lab ID: 60397740043)
  - 1,1,2-Trichlorotrifluoroethane

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

Analyte Comments:

QC Batch: 782422

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- LCS (Lab ID: 3120315)
  - 1,1,2-Trichlorotrifluoroethane
- TRIP BLANK (Lab ID: 60397740053)
  - 1,1,2-Trichlorotrifluoroethane

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8260

**Description:** 8260 MSV GRO and Oxygenates

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

2 samples were analyzed for EPA 8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 782424

S0: Surrogate recovery outside laboratory control limits.

- ERB04122022 (Lab ID: 60397740043)
  - Toluene-d8 (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

- BLANK (Lab ID: 3120318)
  - Toluene-d8 (S)

QC Batch: 783312

S0: Surrogate recovery outside laboratory control limits.

- TRIP BLANK (Lab ID: 60397740053)
  - Toluene-d8 (S)

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

---

**Method:** EPA 8260

**Description:** 8260 MSV GRO and Oxygenates

**Client:** BURNS & MCDONNELL

**Date:** April 27, 2022

**General Information:**

3 samples were analyzed for EPA 8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64/9-10**      **Lab ID: 60397740001**      Collected: 04/11/22 10:50      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>9.2</b>	mg/kg	1.2	10	04/21/22 10:30	04/22/22 14:31	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>18.3</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64/9-10D**      **Lab ID: 60397740002**      Collected: 04/11/22 10:50      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>15.6</b>	mg/kg	1.2	10	04/21/22 10:30	04/22/22 14:35	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>19.6</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

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**Sample: GB-64/13-14**      **Lab ID: 60397740003**      Collected: 04/11/22 10:52      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	<b>2.1</b>	mg/kg	1.2	10	04/21/22 10:30	04/22/22 14:38	7440-38-2	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	<b>19.2</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64A/3-4**      **Lab ID: 60397740004**      Collected: 04/11/22 11:21      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>13.3</b>	mg/kg	1.1	10	04/21/22 10:30	04/22/22 14:45	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>20.6</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64A/5-6**      **Lab ID: 60397740005**      Collected: 04/11/22 11:23      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>10.5</b>	mg/kg	1.0	10	04/21/22 10:30	04/22/22 14:49	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>21.2</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64B/1.5-2.5**      **Lab ID: 60397740006**      Collected: 04/11/22 11:44      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>4.8</b>	mg/kg	1.1	10	04/21/22 10:30	04/22/22 14:52	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>17.6</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64B/7.5-8.5**      **Lab ID: 60397740007**      Collected: 04/11/22 11:52      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	<b>3.7</b>	mg/kg	1.2	10	04/21/22 10:30	04/22/22 14:59	7440-38-2	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	<b>19.5</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64C/2.5-3.5**      **Lab ID: 60397740008**      Collected: 04/11/22 12:08      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>	Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City							
Arsenic	<b>7.5</b>	mg/kg	1.0	10	04/21/22 10:30	04/22/22 15:09	7440-38-2	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City							
Percent Moisture	<b>20.7</b>	%	0.50	1		04/15/22 13:26		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-64C/4-5**      **Lab ID: 60397740009**      Collected: 04/11/22 12:09      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020    Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	<b>11.4</b>	mg/kg	1.2	10	04/21/22 10:30	04/22/22 15:13	7440-38-2	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	<b>20.4</b>	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-62A/1-2**      **Lab ID: 60397740010**      Collected: 04/11/22 13:27      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	208-96-8	
Anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	207-08-9	
Chrysene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	53-70-3	
Fluoranthene	<b>5.3</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	91-20-3	
Phenanthrene	<b>5.7</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	85-01-8	
Pyrene	<b>4.7</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:01	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	40-120	1	04/15/22 15:55	04/18/22 18:01	321-60-8	
Terphenyl-d14 (S)	101	%	45-130	1	04/15/22 15:55	04/18/22 18:01	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.1</b>	%	0.50	1		04/15/22 13:27		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-62A/3-4**      **Lab ID: 60397740011**      Collected: 04/11/22 13:28      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	85-01-8	
Pyrene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:19	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	65	%	40-120	1	04/15/22 15:55	04/18/22 18:19	321-60-8	
Terphenyl-d14 (S)	81	%	45-130	1	04/15/22 15:55	04/18/22 18:19	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.6</b>	%	0.50	1		04/15/22 13:27		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

**Sample: GB-62C/1-2**      **Lab ID: 60397740012**      Collected: 04/11/22 13:42      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	120-12-7	
Benzo(a)anthracene	<b>5.9</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	50-32-8	
Benzo(b)fluoranthene	<b>11.0</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	205-99-2	
Benzo(g,h,i)perylene	<b>4.6</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	191-24-2	
Benzo(k)fluoranthene	<b>4.1</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	207-08-9	
Chrysene	<b>5.6</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	53-70-3	
Fluoranthene	<b>12.3</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>4.0</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	91-20-3	
Phenanthrene	<b>8.3</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	85-01-8	
Pyrene	<b>13.2</b>	ug/kg	4.0	1	04/15/22 15:55	04/18/22 18:37	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	77	%	40-120	1	04/15/22 15:55	04/18/22 18:37	321-60-8	
Terphenyl-d14 (S)	94	%	45-130	1	04/15/22 15:55	04/18/22 18:37	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>20.1</b>	%		0.50	1		04/15/22 13:27	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-62C/3-4**      **Lab ID: 60397740013**      Collected: 04/11/22 13:45      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	208-96-8	
Anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	207-08-9	
Chrysene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	53-70-3	
Fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	91-20-3	
Phenanthrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	85-01-8	
Pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 18:55	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	68	%	40-120	1	04/15/22 15:55	04/18/22 18:55	321-60-8	
Terphenyl-d14 (S)	85	%	45-130	1	04/15/22 15:55	04/18/22 18:55	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.6</b>	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-62B/2.5-3.5**      **Lab ID: 60397740014**      Collected: 04/11/22 14:59      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	208-96-8	
Anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	120-12-7	
Benzo(a)anthracene	<b>4.9</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	50-32-8	
Benzo(b)fluoranthene	<b>7.9</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	207-08-9	
Chrysene	<b>5.7</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	53-70-3	
Fluoranthene	<b>15.7</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	91-20-3	
Phenanthrene	<b>9.0</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	85-01-8	
Pyrene	<b>14.0</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:13	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	87	%	40-120	1	04/15/22 15:55	04/18/22 19:13	321-60-8	
Terphenyl-d14 (S)	110	%	45-130	1	04/15/22 15:55	04/18/22 19:13	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.2</b>	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-62B/5-6**      **Lab ID: 60397740015**      Collected: 04/11/22 15:10      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	208-96-8	
Anthracene	<b>4.5</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	120-12-7	
Benzo(a)anthracene	<b>20.7</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	56-55-3	
Benzo(a)pyrene	<b>16.2</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	50-32-8	
Benzo(b)fluoranthene	<b>34.4</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	205-99-2	
Benzo(g,h,i)perylene	<b>12.1</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	191-24-2	
Benzo(k)fluoranthene	<b>15.9</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	207-08-9	
Chrysene	<b>25.0</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	53-70-3	
Fluoranthene	<b>56.1</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>10.1</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	91-20-3	
Phenanthrene	<b>24.0</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	85-01-8	
Pyrene	<b>50.6</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 19:31	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	83	%	40-120	1	04/15/22 15:55	04/18/22 19:31	321-60-8	
Terphenyl-d14 (S)	107	%	45-130	1	04/15/22 15:55	04/18/22 19:31	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.9</b>	%	0.50	1		04/15/22 13:27		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40/15-16**      **Lab ID: 60397740016**      Collected: 04/11/22 16:39      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	83-32-9	
Acenaphthylene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	208-96-8	
Anthracene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	207-08-9	
Chrysene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	53-70-3	
Fluoranthene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	206-44-0	
Fluorene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	193-39-5	
Naphthalene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	91-20-3	
Phenanthrene	<b>3.9</b>	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	85-01-8	
Pyrene	ND	ug/kg	3.8	1	04/15/22 15:55	04/18/22 19:49	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	60	%	40-120	1	04/15/22 15:55	04/18/22 19:49	321-60-8	
Terphenyl-d14 (S)	75	%	45-130	1	04/15/22 15:55	04/18/22 19:49	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>18.3</b>	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40/19-20**      **Lab ID: 60397740017**      Collected: 04/11/22 16:48      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	208-96-8	
Anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	120-12-7	
Benzo(a)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	56-55-3	
Benzo(a)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	207-08-9	
Chrysene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	53-70-3	
Fluoranthene	<b>6.3</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	91-20-3	
Phenanthrene	<b>8.0</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	85-01-8	
Pyrene	<b>5.6</b>	ug/kg	3.9	1	04/15/22 15:55	04/18/22 20:08	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	86	%	40-120	1	04/15/22 15:55	04/18/22 20:08	321-60-8	
Terphenyl-d14 (S)	109	%	45-130	1	04/15/22 15:55	04/18/22 20:08	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>15.7</b>	%	0.50	1		04/15/22 13:27		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40A/1-2**      **Lab ID: 60397740018**      Collected: 04/12/22 08:29      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	36.7	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	83-32-9	
Acenaphthylene	5.4	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	208-96-8	
Anthracene	111	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	120-12-7	
Benzo(a)anthracene	324	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	56-55-3	
Benzo(a)pyrene	280	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	50-32-8	
Benzo(b)fluoranthene	442	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	205-99-2	
Benzo(g,h,i)perylene	145	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	191-24-2	
Benzo(k)fluoranthene	139	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	207-08-9	
Chrysene	335	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	218-01-9	
Dibenz(a,h)anthracene	35.5	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	53-70-3	
Fluoranthene	728	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	206-44-0	
Fluorene	31.2	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	86-73-7	
Indeno(1,2,3-cd)pyrene	133	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	193-39-5	
Naphthalene	ND	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	91-20-3	
Phenanthrene	395	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	85-01-8	
Pyrene	627	ug/kg	3.7	1	04/15/22 15:55	04/19/22 08:50	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	94	%	40-120	1	04/15/22 15:55	04/19/22 08:50	321-60-8	
Terphenyl-d14 (S)	126	%	45-130	1	04/15/22 15:55	04/19/22 08:50	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	14.7	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40A/3-4**      **Lab ID: 60397740019**      Collected: 04/12/22 08:30      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	12.6	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	208-96-8	
Anthracene	14.6	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	120-12-7	
Benzo(a)anthracene	17.8	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	56-55-3	
Benzo(a)pyrene	9.7	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	50-32-8	
Benzo(b)fluoranthene	16.7	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	205-99-2	
Benzo(g,h,i)perylene	7.4	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	191-24-2	
Benzo(k)fluoranthene	7.3	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	207-08-9	
Chrysene	15.4	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	53-70-3	
Fluoranthene	77.8	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	206-44-0	
Fluorene	10.8	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	86-73-7	
Indeno(1,2,3-cd)pyrene	5.3	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	91-20-3	
Phenanthrene	71.1	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	85-01-8	
Pyrene	69.9	ug/kg	4.0	1	04/15/22 15:55	04/19/22 09:08	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	90	%	40-120	1	04/15/22 15:55	04/19/22 09:08	321-60-8	
Terphenyl-d14 (S)	114	%	45-130	1	04/15/22 15:55	04/19/22 09:08	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	19.8	%	0.50	1		04/15/22 13:27		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40B/1-2**      **Lab ID: 60397740020**      Collected: 04/12/22 08:51      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	83-32-9	
Acenaphthylene	ND	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	208-96-8	
Anthracene	<b>28.0</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	120-12-7	
Benzo(a)anthracene	<b>113</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	56-55-3	
Benzo(a)pyrene	<b>87.5</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	50-32-8	
Benzo(b)fluoranthene	<b>162</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	205-99-2	
Benzo(g,h,i)perylene	<b>54.5</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	191-24-2	
Benzo(k)fluoranthene	<b>50.6</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	207-08-9	
Chrysene	<b>109</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	53-70-3	
Fluoranthene	<b>237</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	206-44-0	
Fluorene	ND	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>41.5</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	193-39-5	
Naphthalene	ND	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	91-20-3	
Phenanthrene	<b>79.1</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	85-01-8	
Pyrene	<b>277</b>	ug/kg	19.1	1	04/15/22 15:55	04/19/22 09:26	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	89	%	40-120	1	04/15/22 15:55	04/19/22 09:26	321-60-8	P3
Terphenyl-d14 (S)	111	%	45-130	1	04/15/22 15:55	04/19/22 09:26	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>16.3</b>	%	0.50	1		04/15/22 13:27		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40B/5-6**      **Lab ID: 60397740021**      Collected: 04/12/22 08:53      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	83-32-9	
Acenaphthylene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	208-96-8	
Anthracene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	120-12-7	
Benzo(a)anthracene	<b>16.5</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	50-32-8	
Benzo(b)fluoranthene	<b>21.5</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	191-24-2	
Benzo(k)fluoranthene	<b>11.1</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	207-08-9	
Chrysene	<b>21.7</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	53-70-3	
Fluoranthene	<b>43.3</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	206-44-0	
Fluorene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	193-39-5	
Naphthalene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	91-20-3	
Phenanthrene	ND	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	85-01-8	
Pyrene	<b>54.9</b>	ug/kg	4.3	1	04/15/22 15:55	04/19/22 09:44	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	60	%	40-120	1	04/15/22 15:55	04/19/22 09:44	321-60-8	
Terphenyl-d14 (S)	78	%	45-130	1	04/15/22 15:55	04/19/22 09:44	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>25.3</b>	%		0.50	1		04/15/22 14:14	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40C/0.5-1.5**      **Lab ID: 60397740022**      Collected: 04/12/22 09:20      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	208-96-8	
Anthracene	<b>6.3</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	120-12-7	
Benzo(a)anthracene	<b>25.9</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	56-55-3	
Benzo(a)pyrene	<b>19.3</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	50-32-8	
Benzo(b)fluoranthene	<b>40.3</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	205-99-2	
Benzo(g,h,i)perylene	<b>12.5</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	191-24-2	
Benzo(k)fluoranthene	<b>12.4</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	207-08-9	
Chrysene	<b>26.8</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	53-70-3	
Fluoranthene	<b>58.6</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>10.9</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	91-20-3	
Phenanthrene	<b>28.0</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	85-01-8	
Pyrene	<b>58.9</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:03	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	74	%	40-120	1	04/15/22 15:55	04/19/22 10:03	321-60-8	
Terphenyl-d14 (S)	100	%	45-130	1	04/15/22 15:55	04/19/22 10:03	1718-51-0	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	<b>23.8</b>	%		0.50		04/15/22 14:14		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-40C/5.5-6.5**      **Lab ID: 60397740023**      Collected: 04/12/22 09:22      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	50-32-8	
Benzo(b)fluoranthene	<b>6.3</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	207-08-9	
Chrysene	<b>4.3</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	53-70-3	
Fluoranthene	<b>10.6</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	91-20-3	
Phenanthrene	<b>7.2</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	85-01-8	
Pyrene	<b>9.7</b>	ug/kg	4.1	1	04/15/22 15:55	04/19/22 10:21	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	78	%	40-120	1	04/15/22 15:55	04/19/22 10:21	321-60-8	
Terphenyl-d14 (S)	105	%	45-130	1	04/15/22 15:55	04/19/22 10:21	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.4</b>	%		0.50	1		04/15/22 14:14	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-59/12-13** Lab ID: **60397740024** Collected: 04/12/22 10:38 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
TPH-ORO	ND	mg/kg	55.3	1	04/15/22 20:26	04/19/22 16:53		
TPH-DRO	ND	mg/kg	55.3	1	04/15/22 20:26	04/19/22 16:53		
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	72	%	35-120	1	04/15/22 20:26	04/19/22 16:53	4165-60-0	
2-Fluorobiphenyl (S)	78	%	50-120	1	04/15/22 20:26	04/19/22 16:53	321-60-8	
Terphenyl-d14 (S)	89	%	45-120	1	04/15/22 20:26	04/19/22 16:53	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	ND	ug/kg	21.8	1	04/22/22 10:34	04/22/22 14:37	67-64-1	
Acetonitrile	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	75-05-8	
Acrolein	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	107-02-8	
Acrylonitrile	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	994-05-8	
Benzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	71-43-2	
Bromobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-86-1	
Bromochloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	74-97-5	
Bromodichloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-27-4	
Bromoform	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-25-2	
Bromomethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	75-65-0	
n-Butylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	135-98-8	
tert-Butylbenzene	ND	ug/kg	27.2	1	04/22/22 10:34	04/22/22 14:37	98-06-6	
Carbon disulfide	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	56-23-5	
Chlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-90-7	
Chloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	110-75-8	
Chloroform	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	67-66-3	
Chloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	106-43-4	
Cyclohexane	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	110-82-7	
Cyclohexanone	ND	ug/kg	21.8	1	04/22/22 10:34	04/22/22 14:37	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	96-12-8	
Dibromochloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	106-93-4	
Dibromomethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	21.8	1	04/22/22 10:34	04/22/22 14:37	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-71-8	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-59/12-13** Lab ID: **60397740024** Collected: 04/12/22 10:38 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,1-Dichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	60-29-7	
Diisopropyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	123-91-1	L2
Ethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	637-92-3	
n-Heptane	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	87-68-3	
n-Hexane	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	110-54-3	
2-Hexanone	ND	ug/kg	21.8	1	04/22/22 10:34	04/22/22 14:37	591-78-6	
Iodomethane	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	99-87-6	
Methyl acetate	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	79-20-9	
Methylcyclohexane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-87-2	
Methylene Chloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	1634-04-4	
Naphthalene	ND	ug/kg	10.9	1	04/22/22 10:34	04/22/22 14:37	91-20-3	
n-Propylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	103-65-1	
Styrene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	79-34-5	
Tetrachloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	127-18-4	
Tetrahydrofuran	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	109-99-9	N2
Toluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	79-00-5	
Trichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-69-4	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-59/12-13**      **Lab ID: 60397740024**      Collected: 04/12/22 10:38      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	108-67-8	
Vinyl acetate	ND	ug/kg	109	1	04/22/22 10:34	04/22/22 14:37	108-05-4	
Vinyl chloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	75-01-4	
Xylene (Total)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	1330-20-7	
m&p-Xylene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	179601-23-1	
o-Xylene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 14:37	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:37	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 14:37	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.54	1	04/22/22 10:34	04/22/22 14:37		
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	78-122	1	04/22/22 10:34	04/22/22 14:37	2037-26-5	
4-Bromofluorobenzene (S)	100	%	69-133	1	04/22/22 10:34	04/22/22 14:37	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 14:37	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.2</b>	%	0.50	1		04/26/22 17:23		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-59/12-13D** Lab ID: **60397740025** Collected: 04/12/22 10:38 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
TPH-ORO	ND	mg/kg	51.1	1	04/15/22 20:26	04/19/22 17:12		
TPH-DRO	ND	mg/kg	51.1	1	04/15/22 20:26	04/19/22 17:12		
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	71	%	35-120	1	04/15/22 20:26	04/19/22 17:12	4165-60-0	
2-Fluorobiphenyl (S)	78	%	50-120	1	04/15/22 20:26	04/19/22 17:12	321-60-8	
Terphenyl-d14 (S)	85	%	45-120	1	04/15/22 20:26	04/19/22 17:12	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	ND	ug/kg	31.7	1	04/22/22 10:34	04/22/22 14:53	67-64-1	
Acetonitrile	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	75-05-8	
Acrolein	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	107-02-8	
Acrylonitrile	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	994-05-8	
Benzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	71-43-2	
Bromobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-86-1	
Bromochloromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	74-97-5	
Bromodichloromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-27-4	
Bromoform	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-25-2	
Bromomethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	74-83-9	
2-Butanone (MEK)	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	75-65-0	
n-Butylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	104-51-8	
sec-Butylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	135-98-8	
tert-Butylbenzene	ND	ug/kg	39.6	1	04/22/22 10:34	04/22/22 14:53	98-06-6	
Carbon disulfide	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-15-0	
Carbon tetrachloride	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	56-23-5	
Chlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-90-7	
Chloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	110-75-8	
Chloroform	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	67-66-3	
Chloromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	74-87-3	
2-Chlorotoluene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	95-49-8	
4-Chlorotoluene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	106-43-4	
Cyclohexane	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	110-82-7	
Cyclohexanone	ND	ug/kg	31.7	1	04/22/22 10:34	04/22/22 14:53	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	96-12-8	
Dibromochloromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	106-93-4	
Dibromomethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	31.7	1	04/22/22 10:34	04/22/22 14:53	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-71-8	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-59/12-13D** Lab ID: **60397740025** Collected: 04/12/22 10:38 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,1-Dichloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-34-3	
1,2-Dichloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	540-59-0	
1,1-Dichloroethene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	156-60-5	
1,2-Dichloropropane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	78-87-5	
1,3-Dichloropropane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	142-28-9	
2,2-Dichloropropane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	594-20-7	
1,1-Dichloropropene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	60-29-7	
Diisopropyl ether	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	123-91-1	L2
Ethylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	637-92-3	
n-Heptane	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	87-68-3	
n-Hexane	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	110-54-3	
2-Hexanone	ND	ug/kg	31.7	1	04/22/22 10:34	04/22/22 14:53	591-78-6	
Iodomethane	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	98-82-8	
p-Isopropyltoluene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	99-87-6	
Methyl acetate	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	79-20-9	
Methylcyclohexane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-87-2	
Methylene Chloride	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-09-2	
1-Methylnaphthalene	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	90-12-0	
2-Methylnaphthalene	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	1634-04-4	
Naphthalene	ND	ug/kg	15.8	1	04/22/22 10:34	04/22/22 14:53	91-20-3	
n-Propylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	103-65-1	
Styrene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	79-34-5	
Tetrachloroethene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	127-18-4	
Tetrahydrofuran	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	109-99-9	N2
Toluene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	79-00-5	
Trichloroethene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	79-01-6	
Trichlorofluoromethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-69-4	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-59/12-13D**      **Lab ID: 60397740025**      Collected: 04/12/22 10:38      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trichloropropane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	108-67-8	
Vinyl acetate	ND	ug/kg	158	1	04/22/22 10:34	04/22/22 14:53	108-05-4	
Vinyl chloride	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	75-01-4	
Xylene (Total)	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	1330-20-7	
m&p-Xylene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	179601-23-1	
o-Xylene	ND	ug/kg	7.9	1	04/22/22 10:34	04/22/22 14:53	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:53	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:53	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 14:53	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.79	1	04/22/22 10:34	04/22/22 14:53		
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	78-122	1	04/22/22 10:34	04/22/22 14:53	2037-26-5	
4-Bromofluorobenzene (S)	100	%	69-133	1	04/22/22 10:34	04/22/22 14:53	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 14:53	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.6</b>	%	0.50	1		04/26/22 17:23		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-59/14-15**      **Lab ID: 60397740026**      Collected: 04/12/22 10:41      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	ND	mg/kg	56.1	1	04/15/22 20:26	04/19/22 17:31		
TPH-DRO	ND	mg/kg	56.1	1	04/15/22 20:26	04/19/22 17:31		
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	80	%	35-120	1	04/15/22 20:26	04/19/22 17:31	4165-60-0	
2-Fluorobiphenyl (S)	90	%	50-120	1	04/15/22 20:26	04/19/22 17:31	321-60-8	
Terphenyl-d14 (S)	100	%	45-120	1	04/15/22 20:26	04/19/22 17:31	1718-51-0	
<b>8260 MSV 5035A VOA</b>								
Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030								
Pace Analytical Services - Kansas City								
Dichlorodifluoromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-71-8	
Chloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	74-87-3	
Vinyl chloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-01-4	
Bromomethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	74-83-9	
Chloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-00-3	
Trichlorofluoromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-69-4	
Methylene Chloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-09-2	
1,1-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-35-4	M1
trans-1,2-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	156-60-5	
1,1-Dichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-34-3	
2,2-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	594-20-7	
cis-1,2-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	156-59-2	
Chloroform	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	67-66-3	
Bromochloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	74-97-5	
1,1,1-Trichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	71-55-6	
Carbon tetrachloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	56-23-5	
1,1-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	563-58-6	
Benzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	71-43-2	
1,2-Dichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	107-06-2	
Trichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	79-01-6	M1
1,2-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	78-87-5	
Bromodichloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-27-4	
Dibromomethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	74-95-3	
trans-1,3-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	10061-02-6	
Toluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-88-3	
cis-1,3-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	10061-01-5	
1,1,2-Trichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	79-00-5	
Tetrachloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	127-18-4	
1,3-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	142-28-9	
Dibromochloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	106-93-4	
Chlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	630-20-6	
Ethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	100-41-4	
m&p-Xylene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	179601-23-1	
Xylene (Total)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	1330-20-7	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: GB-59/14-15 Lab ID: 60397740026 Collected: 04/12/22 10:41 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
o-Xylene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	95-47-6	
Styrene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	100-42-5	
Bromoform	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-25-2	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	98-82-8	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	79-34-5	M1
Bromobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-86-1	
1,2,3-Trichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	96-18-4	
n-Propylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	103-65-1	
2-Chlorotoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	95-49-8	
1,3,5-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-67-8	
4-Chlorotoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	106-43-4	
tert-Butylbenzene	ND	ug/kg	25.6	1	04/22/22 10:34	04/22/22 15:09	98-06-6	
1,2,4-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	95-63-6	
sec-Butylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	135-98-8	
p-Isopropyltoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	99-87-6	
1,3-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	106-46-7	
n-Butylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	104-51-8	
1,2-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	95-50-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	96-12-8	
1,2,4-Trichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	120-82-1	
Hexachloro-1,3-butadiene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	87-68-3	
Naphthalene	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	91-20-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	87-61-6	
1,2-Dichloroethene (Total)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	540-59-0	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	123-91-1	L2
2-Butanone (MEK)	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	78-93-3	M1
2-Chloroethylvinyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	110-75-8	
2-Hexanone	ND	ug/kg	20.5	1	04/22/22 10:34	04/22/22 15:09	591-78-6	M1
2-Methylnaphthalene	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	91-57-6	L2
Carbon disulfide	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	75-15-0	
Acetone	ND	ug/kg	20.5	1	04/22/22 10:34	04/22/22 15:09	67-64-1	M1
Acrolein	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	107-02-8	
Acrylonitrile	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	107-13-1	
Cyclohexane	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	110-82-7	
Diethyl ether (Ethyl ether)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	60-29-7	
Diisopropyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-20-3	
Iodomethane	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	74-88-4	
Methyl-tert-butyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	1634-04-4	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	108-10-1	
n-Hexane	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	110-54-3	
trans-1,4-Dichloro-2-butene	ND	ug/kg	20.5	1	04/22/22 10:34	04/22/22 15:09	110-57-6	L2
Tetrahydrofuran	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	109-99-9	N2
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	76-13-1	N2
Vinyl acetate	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	108-05-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-59/14-15**      **Lab ID: 60397740026**      Collected: 04/12/22 10:41      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
tert-Amylmethyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	994-05-8	
tert-Butyl Alcohol	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	75-65-0	
Ethyl-tert-butyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	637-92-3	
1,2,3-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	526-73-8	
1-Methylnaphthalene	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	90-12-0	
n-Heptane	ND	ug/kg	10.3	1	04/22/22 10:34	04/22/22 15:09	142-82-5	
Acetonitrile	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	75-05-8	
Cyclohexanone	ND	ug/kg	20.5	1	04/22/22 10:34	04/22/22 15:09	108-94-1	M1
Methyl acetate	ND	ug/kg	103	1	04/22/22 10:34	04/22/22 15:09	79-20-9	M1
Methylcyclohexane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 15:09	108-87-2	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 15:09	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 15:09	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 15:09	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.51	1	04/22/22 10:34	04/22/22 15:09		
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	78-122	1	04/22/22 10:34	04/22/22 15:09	2037-26-5	
4-Bromofluorobenzene (S)	102	%	69-133	1	04/22/22 10:34	04/22/22 15:09	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 15:09	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>20.6</b>	%	0.50	1		04/26/22 17:23		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-45C/0.5-1.5** Lab ID: **60397740027** Collected: 04/12/22 11:24 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	83-32-9	
Acenaphthylene	<b>68.3</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	208-96-8	
Anthracene	<b>133</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	120-12-7	
Benzo(a)anthracene	<b>513</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	56-55-3	
Benzo(a)pyrene	<b>474</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	50-32-8	
Benzo(b)fluoranthene	<b>769</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	205-99-2	
Benzo(g,h,i)perylene	<b>259</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	191-24-2	
Benzo(k)fluoranthene	<b>349</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	207-08-9	
Chrysene	<b>440</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	218-01-9	
Dibenz(a,h)anthracene	<b>65.4</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	53-70-3	
Fluoranthene	<b>889</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	206-44-0	
Fluorene	ND	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>231</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	193-39-5	
Naphthalene	ND	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	91-20-3	
Phenanthrene	<b>203</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	85-01-8	
Pyrene	<b>907</b>	ug/kg	19.4	1	04/15/22 15:55	04/19/22 10:39	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	89	%	40-120	1	04/15/22 15:55	04/19/22 10:39	321-60-8	P3
Terphenyl-d14 (S)	111	%	45-130	1	04/15/22 15:55	04/19/22 10:39	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>15.8</b>	%	0.50	1		04/15/22 14:14		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

**Sample: GB-45C/0.5-1.5D**      **Lab ID: 60397740028**      Collected: 04/12/22 11:24      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	83-32-9	
Acenaphthylene	ND	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	208-96-8	
Anthracene	<b>23.8</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	120-12-7	
Benzo(a)anthracene	<b>159</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	56-55-3	
Benzo(a)pyrene	<b>163</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	50-32-8	
Benzo(b)fluoranthene	<b>318</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	205-99-2	
Benzo(g,h,i)perylene	<b>133</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	191-24-2	
Benzo(k)fluoranthene	<b>136</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	207-08-9	
Chrysene	<b>193</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	218-01-9	
Dibenz(a,h)anthracene	<b>24.7</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	53-70-3	
Fluoranthene	<b>363</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	206-44-0	
Fluorene	ND	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>97.8</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	193-39-5	
Naphthalene	ND	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	91-20-3	
Phenanthrene	<b>134</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	85-01-8	
Pyrene	<b>357</b>	ug/kg	19.5	1	04/15/22 15:55	04/19/22 10:57	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	85	%	40-120	1	04/15/22 15:55	04/19/22 10:57	321-60-8	P3
Terphenyl-d14 (S)	102	%	45-130	1	04/15/22 15:55	04/19/22 10:57	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>17.1</b>	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-45C/2.5-3.5**      **Lab ID: 60397740029**      Collected: 04/12/22 11:26      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	208-96-8	
Anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	207-08-9	
Chrysene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	53-70-3	
Fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	206-44-0	
Fluorene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	91-20-3	
Phenanthrene	<b>4.7</b>	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	85-01-8	
Pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:15	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	81	%	40-120	1	04/15/22 15:55	04/19/22 11:15	321-60-8	
Terphenyl-d14 (S)	104	%	45-130	1	04/15/22 15:55	04/19/22 11:15	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>22.2</b>	%	0.50	1		04/15/22 14:15		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-45B/1-2**      **Lab ID: 60397740030**      Collected: 04/12/22 11:53      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	83-32-9	
Acenaphthylene	ND	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	208-96-8	
Anthracene	<b>12.1</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	120-12-7	
Benzo(a)anthracene	<b>92.7</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	56-55-3	
Benzo(a)pyrene	<b>91.0</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	50-32-8	
Benzo(b)fluoranthene	<b>169</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	205-99-2	
Benzo(g,h,i)perylene	<b>58.5</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	191-24-2	
Benzo(k)fluoranthene	<b>74.9</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	207-08-9	
Chrysene	<b>99.8</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	218-01-9	
Dibenz(a,h)anthracene	<b>15.3</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	53-70-3	
Fluoranthene	<b>141</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	206-44-0	
Fluorene	ND	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>51.5</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	193-39-5	
Naphthalene	<b>18.3</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	91-20-3	
Phenanthrene	<b>38.0</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	85-01-8	
Pyrene	<b>165</b>	ug/kg	3.8	1	04/15/22 15:55	04/19/22 11:33	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	68	%	40-120	1	04/15/22 15:55	04/19/22 11:33	321-60-8	
Terphenyl-d14 (S)	93	%	45-130	1	04/15/22 15:55	04/19/22 11:33	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.1</b>	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-45B/3-4**      **Lab ID: 60397740031**      Collected: 04/12/22 11:54      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	208-96-8	
Anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	207-08-9	
Chrysene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	53-70-3	
Fluoranthene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	206-44-0	
Fluorene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	91-20-3	
Phenanthrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	85-01-8	
Pyrene	ND	ug/kg	4.2	1	04/15/22 15:55	04/19/22 11:51	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	76	%	40-120	1	04/15/22 15:55	04/19/22 11:51	321-60-8	
Terphenyl-d14 (S)	98	%	45-130	1	04/15/22 15:55	04/19/22 11:51	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.9</b>	%	0.50	1		04/15/22 14:15		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-45A/1-2**      **Lab ID: 60397740032**      Collected: 04/12/22 12:08      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	47.2	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	83-32-9	
Acenaphthylene	6.5	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	208-96-8	
Anthracene	116	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	120-12-7	
Benzo(a)anthracene	292	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	56-55-3	
Benzo(a)pyrene	236	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	50-32-8	
Benzo(b)fluoranthene	424	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	205-99-2	
Benzo(g,h,i)perylene	124	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	191-24-2	
Benzo(k)fluoranthene	119	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	207-08-9	
Chrysene	276	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	218-01-9	
Dibenz(a,h)anthracene	30.3	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	53-70-3	
Fluoranthene	631	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	206-44-0	
Fluorene	41.2	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	86-73-7	
Indeno(1,2,3-cd)pyrene	110	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	193-39-5	
Naphthalene	18.2	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	91-20-3	
Phenanthrene	472	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	85-01-8	
Pyrene	587	ug/kg	3.9	1	04/15/22 15:55	04/19/22 12:09	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	79	%	40-120	1	04/15/22 15:55	04/19/22 12:09	321-60-8	
Terphenyl-d14 (S)	108	%	45-130	1	04/15/22 15:55	04/19/22 12:09	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	17.6	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-45A/3-4**      **Lab ID: 60397740033**      Collected: 04/12/22 12:09      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	6.7	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	83-32-9	M1,R1
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	208-96-8	M1,R1
Anthracene	22.1	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	120-12-7	M1,R1
Benzo(a)anthracene	59.3	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	56-55-3	M1,R1
Benzo(a)pyrene	49.5	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	50-32-8	M1,R1
Benzo(b)fluoranthene	79.8	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	205-99-2	M1,R1
Benzo(g,h,i)perylene	27.7	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	191-24-2	M1,R1
Benzo(k)fluoranthene	22.7	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	207-08-9	M1,R1
Chrysene	53.6	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	218-01-9	M1,R1
Dibenz(a,h)anthracene	6.9	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	53-70-3	M1,R1
Fluoranthene	127	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	206-44-0	M1,R1
Fluorene	8.2	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	86-73-7	M1,R1
Indeno(1,2,3-cd)pyrene	24.7	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	193-39-5	M1,R1
Naphthalene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	91-20-3	M1,R1
Phenanthrene	99.2	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	85-01-8	M1,R1
Pyrene	129	ug/kg	4.0	1	04/15/22 18:28	04/19/22 13:54	129-00-0	M1,R1
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	72	%	40-120	1	04/15/22 18:28	04/19/22 13:54	321-60-8	
Terphenyl-d14 (S)	94	%	45-130	1	04/15/22 18:28	04/19/22 13:54	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	18.5	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: DPTS-2/9-10**      **Lab ID: 60397740034**      Collected: 04/12/22 13:34      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	85-01-8	
Pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:12	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	40-120	1	04/15/22 18:28	04/19/22 14:12	321-60-8	
Terphenyl-d14 (S)	82	%	45-130	1	04/15/22 18:28	04/19/22 14:12	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.3</b>	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: DPTS-2/13-14**      **Lab ID: 60397740035**      Collected: 04/12/22 13:37      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	207-08-9	
Chrysene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	53-70-3	
Fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	91-20-3	
Phenanthrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	85-01-8	
Pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 14:30	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	75	%	40-120	1	04/15/22 18:28	04/19/22 14:30	321-60-8	
Terphenyl-d14 (S)	98	%	45-130	1	04/15/22 18:28	04/19/22 14:30	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.7</b>	%		0.50	1		04/15/22 14:15	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19B/2.5-3.5**      **Lab ID: 60397740036**      Collected: 04/12/22 14:17      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	120-12-7	
Benzo(a)anthracene	<b>11.4</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	56-55-3	
Benzo(a)pyrene	<b>8.7</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	50-32-8	
Benzo(b)fluoranthene	<b>16.3</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	205-99-2	
Benzo(g,h,i)perylene	<b>5.1</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	191-24-2	
Benzo(k)fluoranthene	<b>5.0</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	207-08-9	
Chrysene	<b>10.5</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	53-70-3	
Fluoranthene	<b>28.1</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>4.4</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	91-20-3	
Phenanthrene	<b>14.0</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	85-01-8	
Pyrene	<b>27.2</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 14:48	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	75	%	40-120	1	04/15/22 18:28	04/19/22 14:48	321-60-8	
Terphenyl-d14 (S)	97	%	45-130	1	04/15/22 18:28	04/19/22 14:48	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>20.1</b>	%		0.50	1		04/15/22 14:15	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19B/4-5**      **Lab ID: 60397740037**      Collected: 04/12/22 14:19      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	85-01-8	
Pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 15:06	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	86	%	40-120	1	04/15/22 18:28	04/19/22 15:06	321-60-8	
Terphenyl-d14 (S)	114	%	45-130	1	04/15/22 18:28	04/19/22 15:06	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>18.9</b>	%	0.50	1		04/15/22 14:15		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19A/0.5-1.5**      **Lab ID: 60397740038**      Collected: 04/12/22 14:38      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	160	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	83-32-9	
Acenaphthylene	35.8	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	208-96-8	
Anthracene	470	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	120-12-7	
Benzo(a)anthracene	1270	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	56-55-3	
Benzo(a)pyrene	1020	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	50-32-8	
Benzo(b)fluoranthene	1790	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	205-99-2	
Benzo(g,h,i)perylene	644	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	191-24-2	
Benzo(k)fluoranthene	663	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	207-08-9	
Chrysene	1290	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	218-01-9	
Dibenz(a,h)anthracene	162	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	53-70-3	
Fluoranthene	2930	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	206-44-0	
Fluorene	139	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	86-73-7	
Indeno(1,2,3-cd)pyrene	599	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	193-39-5	
Naphthalene	11.4	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:24	91-20-3	
Phenanthrene	1480	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	85-01-8	
Pyrene	2120	ug/kg	75.1	20	04/15/22 18:28	04/20/22 13:51	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	90	%	40-120	1	04/15/22 18:28	04/19/22 15:24	321-60-8	
Terphenyl-d14 (S)	130	%	45-130	1	04/15/22 18:28	04/19/22 15:24	1718-51-0	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	17.1	%	0.50	1		04/15/22 14:15		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19A/5.5-6.5**      **Lab ID: 60397740039**      Collected: 04/12/22 14:40      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	39.9	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	83-32-9	
Acenaphthylene	ND	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	208-96-8	
Anthracene	71.7	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	120-12-7	
Benzo(a)anthracene	89.2	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	56-55-3	
Benzo(a)pyrene	66.3	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	50-32-8	
Benzo(b)fluoranthene	111	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	205-99-2	
Benzo(g,h,i)perylene	31.8	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	191-24-2	
Benzo(k)fluoranthene	30.5	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	207-08-9	
Chrysene	80.0	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	218-01-9	
Dibenz(a,h)anthracene	8.3	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	53-70-3	
Fluoranthene	223	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	206-44-0	
Fluorene	39.1	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	86-73-7	
Indeno(1,2,3-cd)pyrene	29.9	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	193-39-5	
Naphthalene	6.1	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	91-20-3	
Phenanthrene	229	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	85-01-8	
Pyrene	183	ug/kg	3.8	1	04/15/22 18:28	04/19/22 15:43	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	86	%	40-120	1	04/15/22 18:28	04/19/22 15:43	321-60-8	
Terphenyl-d14 (S)	111	%	45-130	1	04/15/22 18:28	04/19/22 15:43	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	14.2	%	0.50	1		04/15/22 14:15		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19C/1-2**      **Lab ID: 60397740040**      Collected: 04/12/22 15:00      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>14600</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	83-32-9	
Acenaphthylene	<b>1400</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	208-96-8	
Anthracene	<b>28400</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	120-12-7	
Benzo(a)anthracene	<b>37000</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	56-55-3	
Benzo(a)pyrene	<b>27100</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	50-32-8	
Benzo(b)fluoranthene	<b>51800</b>	ug/kg	1950	100	04/15/22 18:28	04/20/22 14:09	205-99-2	
Benzo(g,h,i)perylene	<b>12900</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	191-24-2	
Benzo(k)fluoranthene	<b>10400</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	207-08-9	
Chrysene	<b>31000</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	218-01-9	
Dibenz(a,h)anthracene	<b>3480</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	53-70-3	
Fluoranthene	<b>117000</b>	ug/kg	1950	100	04/15/22 18:28	04/20/22 14:09	206-44-0	
Fluorene	<b>13600</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>12100</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	193-39-5	
Naphthalene	<b>13900</b>	ug/kg	195	10	04/15/22 18:28	04/19/22 16:01	91-20-3	
Phenanthrene	<b>135000</b>	ug/kg	1950	100	04/15/22 18:28	04/20/22 14:09	85-01-8	
Pyrene	<b>92200</b>	ug/kg	1950	100	04/15/22 18:28	04/20/22 14:09	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	0	%	40-120	10	04/15/22 18:28	04/19/22 16:01	321-60-8	D4,P3, S4
Terphenyl-d14 (S)	0	%	45-130	10	04/15/22 18:28	04/19/22 16:01	1718-51-0	S4
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>17.4</b>	%	0.50	1		04/15/22 14:15		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19C/1-2D**      **Lab ID: 60397740041**      Collected: 04/12/22 15:00      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>26.7</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	83-32-9	
Acenaphthylene	<b>11.8</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	208-96-8	
Anthracene	<b>68.6</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	120-12-7	
Benzo(a)anthracene	<b>196</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	56-55-3	
Benzo(a)pyrene	<b>171</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	50-32-8	
Benzo(b)fluoranthene	<b>309</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	205-99-2	
Benzo(g,h,i)perylene	<b>97.0</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	191-24-2	
Benzo(k)fluoranthene	<b>66.5</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	207-08-9	
Chrysene	<b>180</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	218-01-9	
Dibenz(a,h)anthracene	<b>23.6</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	53-70-3	
Fluoranthene	<b>406</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	206-44-0	
Fluorene	<b>22.7</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>87.2</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	193-39-5	
Naphthalene	<b>9.5</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	91-20-3	
Phenanthrene	<b>293</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	85-01-8	
Pyrene	<b>387</b>	ug/kg	3.9	1	04/15/22 18:28	04/19/22 16:19	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	63	%	40-120	1	04/15/22 18:28	04/19/22 16:19	321-60-8	
Terphenyl-d14 (S)	81	%	45-130	1	04/15/22 18:28	04/19/22 16:19	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>16.7</b>	%	0.50	1		04/15/22 14:16		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-19C/2-3**      **Lab ID: 60397740042**      Collected: 04/12/22 15:03      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>34.4</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	83-32-9	
Acenaphthylene	<b>9.6</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	208-96-8	
Anthracene	<b>82.7</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	120-12-7	
Benzo(a)anthracene	<b>274</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	56-55-3	
Benzo(a)pyrene	<b>253</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	50-32-8	
Benzo(b)fluoranthene	<b>459</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	205-99-2	
Benzo(g,h,i)perylene	<b>173</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	191-24-2	
Benzo(k)fluoranthene	<b>113</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	207-08-9	
Chrysene	<b>272</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	218-01-9	
Dibenz(a,h)anthracene	<b>39.5</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	53-70-3	
Fluoranthene	<b>571</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	206-44-0	
Fluorene	<b>27.7</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>151</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	193-39-5	
Naphthalene	<b>8.6</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	91-20-3	
Phenanthrene	<b>374</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	85-01-8	
Pyrene	<b>551</b>	ug/kg	3.8	1	04/15/22 18:28	04/19/22 16:37	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	40-120	1	04/15/22 18:28	04/19/22 16:37	321-60-8	
Terphenyl-d14 (S)	80	%	45-130	1	04/15/22 18:28	04/19/22 16:37	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>17.0</b>	%	0.50	1		04/15/22 14:16		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: ERB0412202	Lab ID: 60397740043	Collected: 04/12/22 15:47	Received: 04/13/22 10:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270 Preparation Method: EPA 3510C								
Pace Analytical Services - Kansas City								
TPH-ORO	ND	mg/L	0.91	1	04/15/22 19:16	04/18/22 09:01		
TPH-DRO	ND	mg/L	0.91	1	04/15/22 19:16	04/18/22 09:01		
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	61	%	25-120	1	04/15/22 19:16	04/18/22 09:01	4165-60-0	
2-Fluorobiphenyl (S)	62	%	25-120	1	04/15/22 19:16	04/18/22 09:01	321-60-8	
Terphenyl-d14 (S)	72	%	35-120	1	04/15/22 19:16	04/18/22 09:01	1718-51-0	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	83-32-9	
Acenaphthylene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	208-96-8	
Anthracene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	50-32-8	L2
Benzo(b)fluoranthene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	207-08-9	
Chrysene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	53-70-3	
Fluoranthene	ND	ug/L	0.45	1	04/15/22 19:16	04/18/22 13:11	206-44-0	
Fluorene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	193-39-5	
Naphthalene	ND	ug/L	0.45	1	04/15/22 19:16	04/18/22 13:11	91-20-3	
Phenanthrene	ND	ug/L	0.45	1	04/15/22 19:16	04/18/22 13:11	85-01-8	
Pyrene	ND	ug/L	0.091	1	04/15/22 19:16	04/18/22 13:11	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	62	%	37-109	1	04/15/22 19:16	04/18/22 09:01	321-60-8	
Terphenyl-d14 (S)	72	%	34-120	1	04/15/22 19:16	04/18/22 09:01	1718-51-0	
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Acetone	ND	ug/L	10.0	1		04/20/22 22:35	67-64-1	
Acetonitrile	ND	ug/L	10.0	1		04/20/22 22:35	75-05-8	
Acrolein	ND	ug/L	50.0	1		04/20/22 22:35	107-02-8	
Acrylonitrile	ND	ug/L	20.0	1		04/20/22 22:35	107-13-1	
tert-Amylmethyl ether	ND	ug/L	1.0	1		04/20/22 22:35	994-05-8	
Benzene	ND	ug/L	1.0	1		04/20/22 22:35	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		04/20/22 22:35	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		04/20/22 22:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/20/22 22:35	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/20/22 22:35	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/20/22 22:35	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/20/22 22:35	78-93-3	
tert-Butyl Alcohol	ND	ug/L	10.0	1		04/20/22 22:35	75-65-0	
n-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	135-98-8	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: ERB04122022	Lab ID: 60397740043	Collected: 04/12/22 15:47	Received: 04/13/22 10:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
tert-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		04/20/22 22:35	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/20/22 22:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/20/22 22:35	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		04/20/22 22:35	110-75-8	c2
Chloroform	7.1	ug/L	1.0	1		04/20/22 22:35	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/20/22 22:35	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		04/20/22 22:35	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		04/20/22 22:35	106-43-4	
Cyclohexane	ND	ug/L	1.0	1		04/20/22 22:35	110-82-7	
Cyclohexanone	ND	ug/L	20.0	1		04/20/22 22:35	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		04/20/22 22:35	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/20/22 22:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/20/22 22:35	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/20/22 22:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	20.0	1		04/20/22 22:35	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	1		04/20/22 22:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/20/22 22:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/20/22 22:35	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		04/20/22 22:35	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:35	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:35	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	1.0	1		04/20/22 22:35	60-29-7	
Diisopropyl ether	ND	ug/L	1.0	1		04/20/22 22:35	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	100	1		04/20/22 22:35	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1.0	1		04/20/22 22:35	637-92-3	
n-Heptane	ND	ug/L	10.0	1		04/20/22 22:35	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		04/20/22 22:35	87-68-3	
n-Hexane	ND	ug/L	10.0	1		04/20/22 22:35	110-54-3	
2-Hexanone	ND	ug/L	10.0	1		04/20/22 22:35	591-78-6	
Iodomethane	ND	ug/L	10.0	1		04/20/22 22:35	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/20/22 22:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		04/20/22 22:35	99-87-6	
Methyl acetate	ND	ug/L	1.0	1		04/20/22 22:35	79-20-9	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: ERB04122022	Lab ID: 60397740043	Collected: 04/12/22 15:47	Received: 04/13/22 10:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Methylcyclohexane	ND	ug/L	1.0	1		04/20/22 22:35	108-87-2	
Methylene Chloride	ND	ug/L	1.0	1		04/20/22 22:35	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		04/20/22 22:35	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		04/20/22 22:35	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/20/22 22:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/20/22 22:35	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		04/20/22 22:35	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	103-65-1	
Styrene	ND	ug/L	1.0	1		04/20/22 22:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/20/22 22:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/20/22 22:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/20/22 22:35	127-18-4	
Tetrahydrofuran	ND	ug/L	5.0	1		04/20/22 22:35	109-99-9	
Toluene	ND	ug/L	1.0	1		04/20/22 22:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/20/22 22:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/20/22 22:35	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/20/22 22:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/20/22 22:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		04/20/22 22:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		04/20/22 22:35	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:35	108-67-8	
Vinyl acetate	ND	ug/L	20.0	1		04/20/22 22:35	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/20/22 22:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		04/20/22 22:35	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/20/22 22:35	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		04/20/22 22:35	95-47-6	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	114	%	80-120	1		04/20/22 22:35	460-00-4	
Toluene-d8 (S)	123	%	80-120	1		04/20/22 22:35	2037-26-5	S0
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1		04/20/22 22:35	2199-69-1	
Preservation pH	1.0		0.10	1		04/20/22 22:35		
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260						
		Pace Analytical Services - Kansas City						
TPH-GRO	ND	ug/L	500	1		04/21/22 03:24		
<b>Surrogates</b>								
Toluene-d8 (S)	127	%	80-120	1		04/21/22 03:24	2037-26-5	S0
4-Bromofluorobenzene (S)	111	%	80-120	1		04/21/22 03:24	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1		04/21/22 03:24	2199-69-1	
Preservation pH	1.0		0.10	1		04/21/22 03:24		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13B/0.5-1.5**      **Lab ID: 60397740044**      Collected: 04/12/22 16:09      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	6.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	208-96-8	
Anthracene	8.9	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	120-12-7	
Benzo(a)anthracene	19.9	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	56-55-3	
Benzo(a)pyrene	17.3	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	50-32-8	
Benzo(b)fluoranthene	33.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	205-99-2	
Benzo(g,h,i)perylene	10.8	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	191-24-2	
Benzo(k)fluoranthene	7.5	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	207-08-9	
Chrysene	19.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	53-70-3	
Fluoranthene	47.8	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	206-44-0	
Fluorene	6.9	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	86-73-7	
Indeno(1,2,3-cd)pyrene	9.2	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	91-20-3	
Phenanthrene	33.8	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	85-01-8	
Pyrene	45.9	ug/kg	4.2	1	04/15/22 18:28	04/19/22 16:55	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	78	%	40-120	1	04/15/22 18:28	04/19/22 16:55	321-60-8	
Terphenyl-d14 (S)	99	%	45-130	1	04/15/22 18:28	04/19/22 16:55	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	23.7	%	0.50	1		04/15/22 14:16		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13B/2-3**      **Lab ID: 60397740045**      Collected: 04/12/22 16:11      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	208-96-8	
Anthracene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	207-08-9	
Chrysene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	53-70-3	
Fluoranthene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	206-44-0	
Fluorene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	91-20-3	
Phenanthrene	<b>4.8</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	85-01-8	
Pyrene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:13	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	51	%	40-120	1	04/15/22 18:28	04/19/22 17:13	321-60-8	
Terphenyl-d14 (S)	66	%	45-130	1	04/15/22 18:28	04/19/22 17:13	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>22.2</b>	%	0.50	1		04/15/22 16:00		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: **GB-13A/0.5-1.5** Lab ID: **60397740046** Collected: 04/12/22 16:28 Received: 04/13/22 10:23 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	208-96-8	
Anthracene	4.6	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	120-12-7	
Benzo(a)anthracene	12.7	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	56-55-3	
Benzo(a)pyrene	11.5	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	50-32-8	
Benzo(b)fluoranthene	20.5	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	205-99-2	
Benzo(g,h,i)perylene	9.2	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	191-24-2	
Benzo(k)fluoranthene	6.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	207-08-9	
Chrysene	12.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	53-70-3	
Fluoranthene	29.1	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	206-44-0	
Fluorene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	86-73-7	
Indeno(1,2,3-cd)pyrene	7.2	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	91-20-3	
Phenanthrene	17.4	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	85-01-8	
Pyrene	28.0	ug/kg	4.2	1	04/15/22 18:28	04/19/22 17:31	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	88	%	40-120	1	04/15/22 18:28	04/19/22 17:31	321-60-8	
Terphenyl-d14 (S)	109	%	45-130	1	04/15/22 18:28	04/19/22 17:31	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	23.3	%	0.50	1		04/15/22 16:00		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13A/5-6**      **Lab ID: 60397740047**      Collected: 04/12/22 16:30      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	207-08-9	
Chrysene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	53-70-3	
Fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	91-20-3	
Phenanthrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	85-01-8	
Pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 17:49	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	73	%	40-120	1	04/15/22 18:28	04/19/22 17:49	321-60-8	
Terphenyl-d14 (S)	93	%	45-130	1	04/15/22 18:28	04/19/22 17:49	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.2</b>	%		0.50	1		04/15/22 16:01	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13/7-8**      **Lab ID: 60397740048**      Collected: 04/12/22 16:51      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	25.1	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	83-32-9	
Acenaphthylene	55.4	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	208-96-8	
Anthracene	96.1	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	120-12-7	
Benzo(a)anthracene	308	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	56-55-3	
Benzo(a)pyrene	317	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	50-32-8	
Benzo(b)fluoranthene	560	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	205-99-2	
Benzo(g,h,i)perylene	337	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	191-24-2	
Benzo(k)fluoranthene	170	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	207-08-9	
Chrysene	316	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	218-01-9	
Dibenz(a,h)anthracene	63.8	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	53-70-3	
Fluoranthene	661	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	206-44-0	
Fluorene	23.8	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	86-73-7	
Indeno(1,2,3-cd)pyrene	245	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	193-39-5	
Naphthalene	6.7	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	91-20-3	
Phenanthrene	356	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	85-01-8	
Pyrene	652	ug/kg	3.9	1	04/15/22 18:28	04/19/22 18:07	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	89	%	40-120	1	04/15/22 18:28	04/19/22 18:07	321-60-8	
Terphenyl-d14 (S)	116	%	45-130	1	04/15/22 18:28	04/19/22 18:07	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	20.4	%	0.50	1		04/15/22 16:01		

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13/11-12**      **Lab ID: 60397740049**      Collected: 04/12/22 16:53      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	208-96-8	
Anthracene	<b>4.1</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	53-70-3	
Fluoranthene	<b>9.1</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	91-20-3	
Phenanthrene	<b>13.8</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	85-01-8	
Pyrene	<b>7.5</b>	ug/kg	4.0	1	04/15/22 18:28	04/19/22 18:25	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	68	%	40-120	1	04/15/22 18:28	04/19/22 18:25	321-60-8	
Terphenyl-d14 (S)	89	%	45-130	1	04/15/22 18:28	04/19/22 18:25	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>22.1</b>	%	0.50	1		04/15/22 16:01		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13C/1-2**      **Lab ID: 60397740050**      Collected: 04/12/22 17:12      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>34.9</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	208-96-8	
Anthracene	<b>103</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	120-12-7	
Benzo(a)anthracene	<b>388</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	56-55-3	
Benzo(a)pyrene	<b>323</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	50-32-8	
Benzo(b)fluoranthene	<b>649</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	205-99-2	
Benzo(g,h,i)perylene	<b>194</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	191-24-2	
Benzo(k)fluoranthene	<b>152</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	207-08-9	
Chrysene	<b>397</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	218-01-9	
Dibenz(a,h)anthracene	<b>46.4</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	53-70-3	
Fluoranthene	<b>1120</b>	ug/kg	21.2	5	04/15/22 18:28	04/20/22 14:27	206-44-0	
Fluorene	<b>34.4</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>175</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	91-20-3	
Phenanthrene	<b>536</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	85-01-8	
Pyrene	<b>842</b>	ug/kg	4.2	1	04/15/22 18:28	04/19/22 18:43	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	81	%	40-120	1	04/15/22 18:28	04/19/22 18:43	321-60-8	
Terphenyl-d14 (S)	112	%	45-130	1	04/15/22 18:28	04/19/22 18:43	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>22.4</b>	%	0.50	1		04/15/22 16:01		

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

**Sample: GB-13C/5-6**      **Lab ID: 60397740051**      Collected: 04/12/22 17:15      Received: 04/13/22 10:23      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	207-08-9	
Chrysene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	53-70-3	
Fluoranthene	<b>11.0</b>	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	91-20-3	
Phenanthrene	<b>12.7</b>	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	85-01-8	
Pyrene	<b>9.8</b>	ug/kg	4.1	1	04/15/22 18:28	04/19/22 19:01	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	86	%	40-120	1	04/15/22 18:28	04/19/22 19:01	321-60-8	
Terphenyl-d14 (S)	110	%	45-130	1	04/15/22 18:28	04/19/22 19:01	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>20.2</b>	%		0.50	1		04/15/22 16:01	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: ERB04112022      Lab ID: 60397740052      Collected: 04/12/22 08:00      Received: 04/13/22 10:23      Matrix: Water</b>								
<b>6020 MET ICPMS</b>								
Analytical Method: EPA 6020    Preparation Method: EPA 3010 Pace Analytical Services - Kansas City								
Arsenic	ND	ug/L	1.0	1	04/20/22 09:19	04/21/22 15:44	7440-38-2	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270C by SIM    Preparation Method: EPA 3510C Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	83-32-9	
Acenaphthylene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	208-96-8	
Anthracene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	120-12-7	
Benzo(a)anthracene	0.11	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	50-32-8	
Benzo(b)fluoranthene	0.17	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	207-08-9	
Chrysene	0.093	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	53-70-3	
Fluoranthene	ND	ug/L	0.45	1	04/15/22 19:07	04/18/22 10:16	206-44-0	
Fluorene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	193-39-5	
Naphthalene	ND	ug/L	0.45	1	04/15/22 19:07	04/18/22 10:16	91-20-3	
Phenanthrene	ND	ug/L	0.45	1	04/15/22 19:07	04/18/22 10:16	85-01-8	
Pyrene	0.18	ug/L	0.091	1	04/15/22 19:07	04/18/22 10:16	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	67	%	37-109	1	04/15/22 19:07	04/18/22 10:16	321-60-8	
Terphenyl-d14 (S)	73	%	34-120	1	04/15/22 19:07	04/18/22 10:16	1718-51-0	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: TRIP BLANK	Lab ID: 60397740053	Collected: 04/12/22 08:00	Received: 04/13/22 10:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Acetone	ND	ug/L	10.0	1		04/20/22 22:50	67-64-1	
Acetonitrile	ND	ug/L	10.0	1		04/20/22 22:50	75-05-8	
Acrolein	ND	ug/L	50.0	1		04/20/22 22:50	107-02-8	
Acrylonitrile	ND	ug/L	20.0	1		04/20/22 22:50	107-13-1	
tert-Amylmethyl ether	ND	ug/L	1.0	1		04/20/22 22:50	994-05-8	
Benzene	ND	ug/L	1.0	1		04/20/22 22:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		04/20/22 22:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		04/20/22 22:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/20/22 22:50	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/20/22 22:50	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/20/22 22:50	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/20/22 22:50	78-93-3	
tert-Butyl Alcohol	ND	ug/L	10.0	1		04/20/22 22:50	75-65-0	
n-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		04/20/22 22:50	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/20/22 22:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/20/22 22:50	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		04/20/22 22:50	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		04/20/22 22:50	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/20/22 22:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		04/20/22 22:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		04/20/22 22:50	106-43-4	
Cyclohexane	ND	ug/L	1.0	1		04/20/22 22:50	110-82-7	
Cyclohexanone	ND	ug/L	20.0	1		04/20/22 22:50	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		04/20/22 22:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/20/22 22:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/20/22 22:50	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/20/22 22:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	20.0	1		04/20/22 22:50	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	1		04/20/22 22:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/20/22 22:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/20/22 22:50	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		04/20/22 22:50	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:50	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/20/22 22:50	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		04/20/22 22:50	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:50	563-58-6	

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### ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Sample: TRIP BLANK	Lab ID: 60397740053	Collected: 04/12/22 08:00	Received: 04/13/22 10:23	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/20/22 22:50	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	1.0	1		04/20/22 22:50	60-29-7	
Diisopropyl ether	ND	ug/L	1.0	1		04/20/22 22:50	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	100	1		04/20/22 22:50	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1.0	1		04/20/22 22:50	637-92-3	
n-Heptane	ND	ug/L	10.0	1		04/20/22 22:50	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		04/20/22 22:50	87-68-3	
n-Hexane	ND	ug/L	10.0	1		04/20/22 22:50	110-54-3	
2-Hexanone	ND	ug/L	10.0	1		04/20/22 22:50	591-78-6	
Iodomethane	ND	ug/L	10.0	1		04/20/22 22:50	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/20/22 22:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		04/20/22 22:50	99-87-6	
Methyl acetate	ND	ug/L	1.0	1		04/20/22 22:50	79-20-9	
Methylcyclohexane	ND	ug/L	1.0	1		04/20/22 22:50	108-87-2	
Methylene Chloride	ND	ug/L	1.0	1		04/20/22 22:50	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		04/20/22 22:50	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		04/20/22 22:50	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/20/22 22:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/20/22 22:50	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		04/20/22 22:50	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	103-65-1	
Styrene	ND	ug/L	1.0	1		04/20/22 22:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/20/22 22:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/20/22 22:50	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/20/22 22:50	127-18-4	
Tetrahydrofuran	ND	ug/L	5.0	1		04/20/22 22:50	109-99-9	
Toluene	ND	ug/L	1.0	1		04/20/22 22:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		04/20/22 22:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/20/22 22:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/20/22 22:50	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/20/22 22:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/20/22 22:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		04/20/22 22:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		04/20/22 22:50	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		04/20/22 22:50	108-67-8	
Vinyl acetate	ND	ug/L	20.0	1		04/20/22 22:50	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/20/22 22:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		04/20/22 22:50	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/20/22 22:50	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		04/20/22 22:50	95-47-6	

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## ANALYTICAL RESULTS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

<b>Sample: TRIP BLANK</b>		<b>Lab ID: 60397740053</b>	Collected: 04/12/22 08:00	Received: 04/13/22 10:23	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	116	%	80-120	1		04/20/22 22:50	460-00-4	
Toluene-d8 (S)	128	%	80-120	1		04/20/22 22:50	2037-26-5	S0
1,2-Dichlorobenzene-d4 (S)	99	%	80-120	1		04/20/22 22:50	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		04/20/22 22:50		
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260						
		Pace Analytical Services - Kansas City						
TPH-GRO	ND	ug/L	500	1		04/20/22 22:50		
<b>Surrogates</b>								
Toluene-d8 (S)	128	%	80-120	1		04/20/22 22:50	2037-26-5	S0
4-Bromofluorobenzene (S)	116	%	80-120	1		04/20/22 22:50	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120	1		04/20/22 22:50	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		04/20/22 22:50		

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**QUALITY CONTROL DATA**

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch:	782468	Analysis Method:	EPA 6020
QC Batch Method:	EPA 3050	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740001, 60397740002, 60397740003, 60397740004, 60397740005, 60397740006, 60397740007, 60397740008, 60397740009

METHOD BLANK: 3120456 Matrix: Solid

Associated Lab Samples: 60397740001, 60397740002, 60397740003, 60397740004, 60397740005, 60397740006, 60397740007, 60397740008, 60397740009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	0.94	04/22/22 14:26	

LABORATORY CONTROL SAMPLE: 3120457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	95.3	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3120458 3120459

Parameter	Units	60397740007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	3.7	124	117	117	120	91	99	75-125	3	20	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

QC Batch: 782261	Analysis Method: EPA 6020
QC Batch Method: EPA 3010	Analysis Description: 6020 MET
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740052

METHOD BLANK: 3119666 Matrix: Water

Associated Lab Samples: 60397740052

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	04/21/22 15:13	

LABORATORY CONTROL SAMPLE: 3119667

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	40.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119668 3119669

Parameter	Units	60397394001		3119669		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	ug/L	2.9	40	40	43.0	43.1	100	100	75-125	0	20

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

QC Batch: 782793 Analysis Method: EPA 8260B  
QC Batch Method: EPA 5035A/5030 Analysis Description: 8260 MSV 5035A Volatile Organics  
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740024, 60397740025, 60397740026

METHOD BLANK: 3121603 Matrix: Solid

Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,1-Trichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2-Trichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.0	04/22/22 10:17	N2
1,1-Dichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
1,1-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	04/22/22 10:17	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,3-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,3-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,4-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	100	04/22/22 10:17	
1-Methylnaphthalene	ug/kg	ND	10.0	04/22/22 10:17	
2,2-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
2-Butanone (MEK)	ug/kg	ND	10.0	04/22/22 10:17	
2-Chloroethylvinyl ether	ug/kg	ND	5.0	04/22/22 10:17	
2-Chlorotoluene	ug/kg	ND	5.0	04/22/22 10:17	
2-Hexanone	ug/kg	ND	20.0	04/22/22 10:17	
2-Methylnaphthalene	ug/kg	ND	10.0	04/22/22 10:17	
4-Chlorotoluene	ug/kg	ND	5.0	04/22/22 10:17	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	04/22/22 10:17	
Acetone	ug/kg	ND	20.0	04/22/22 10:17	
Acetonitrile	ug/kg	ND	100	04/22/22 10:17	
Acrolein	ug/kg	ND	100	04/22/22 10:17	
Acrylonitrile	ug/kg	ND	100	04/22/22 10:17	
Benzene	ug/kg	ND	5.0	04/22/22 10:17	
Bromobenzene	ug/kg	ND	5.0	04/22/22 10:17	
Bromochloromethane	ug/kg	ND	5.0	04/22/22 10:17	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

METHOD BLANK: 3121603

Matrix: Solid

Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/kg	ND	5.0	04/22/22 10:17	
Bromoform	ug/kg	ND	5.0	04/22/22 10:17	
Bromomethane	ug/kg	ND	5.0	04/22/22 10:17	
Carbon disulfide	ug/kg	ND	5.0	04/22/22 10:17	
Carbon tetrachloride	ug/kg	ND	5.0	04/22/22 10:17	
Chlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
Chloroethane	ug/kg	ND	5.0	04/22/22 10:17	
Chloroform	ug/kg	ND	5.0	04/22/22 10:17	
Chloromethane	ug/kg	ND	5.0	04/22/22 10:17	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	
Cyclohexane	ug/kg	ND	10.0	04/22/22 10:17	
Cyclohexanone	ug/kg	ND	20.0	04/22/22 10:17	
Dibromochloromethane	ug/kg	ND	5.0	04/22/22 10:17	
Dibromomethane	ug/kg	ND	5.0	04/22/22 10:17	
Dichlorodifluoromethane	ug/kg	ND	5.0	04/22/22 10:17	
Diethyl ether (Ethyl ether)	ug/kg	ND	5.0	04/22/22 10:17	
Diisopropyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Ethyl-tert-butyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Ethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	04/22/22 10:17	
Iodomethane	ug/kg	ND	10.0	04/22/22 10:17	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	04/22/22 10:17	
m&p-Xylene	ug/kg	ND	5.0	04/22/22 10:17	
Methyl acetate	ug/kg	ND	100	04/22/22 10:17	
Methyl-tert-butyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Methylcyclohexane	ug/kg	ND	5.0	04/22/22 10:17	
Methylene Chloride	ug/kg	ND	5.0	04/22/22 10:17	
n-Butylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
n-Heptane	ug/kg	ND	10.0	04/22/22 10:17	
n-Hexane	ug/kg	ND	10.0	04/22/22 10:17	
n-Propylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Naphthalene	ug/kg	ND	10.0	04/22/22 10:17	
o-Xylene	ug/kg	ND	5.0	04/22/22 10:17	
p-Isopropyltoluene	ug/kg	ND	5.0	04/22/22 10:17	
sec-Butylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Styrene	ug/kg	ND	5.0	04/22/22 10:17	
tert-Amylmethyl ether	ug/kg	ND	5.0	04/22/22 10:17	
tert-Butyl Alcohol	ug/kg	ND	10.0	04/22/22 10:17	
tert-Butylbenzene	ug/kg	ND	25.0	04/22/22 10:17	
Tetrachloroethene	ug/kg	ND	5.0	04/22/22 10:17	
Tetrahydrofuran	ug/kg	ND	5.0	04/22/22 10:17	N2
Toluene	ug/kg	ND	5.0	04/22/22 10:17	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

METHOD BLANK: 3121603 Matrix: Solid

Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/kg	ND	20.0	04/22/22 10:17	
Trichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
Trichlorofluoromethane	ug/kg	ND	5.0	04/22/22 10:17	
Vinyl acetate	ug/kg	ND	100	04/22/22 10:17	
Vinyl chloride	ug/kg	ND	5.0	04/22/22 10:17	
Xylene (Total)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	04/22/22 10:17	
4-Bromofluorobenzene (S)	%	103	80-120	04/22/22 10:17	
Toluene-d8 (S)	%	102	80-120	04/22/22 10:17	

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	94.9	95	80-130	
1,1,1-Trichloroethane	ug/kg	100	99.0	99	75-130	
1,1,2,2-Tetrachloroethane	ug/kg	100	84.2	84	75-120	
1,1,2-Trichloroethane	ug/kg	100	89.9	90	80-120	
1,1,2-Trichlorotrifluoroethane	ug/kg	100	104	104	80-120	N2
1,1-Dichloroethane	ug/kg	100	93.0	93	75-125	
1,1-Dichloroethene	ug/kg	100	106	106	70-130	
1,1-Dichloropropene	ug/kg	100	98.8	99	60-140	
1,2,3-Trichlorobenzene	ug/kg	100	90.6	91	80-125	
1,2,3-Trichloropropane	ug/kg	100	86.8	87	80-120	
1,2,3-Trimethylbenzene	ug/kg	100	90.4	90	80-120	
1,2,4-Trichlorobenzene	ug/kg	100	93.0	93	80-125	
1,2,4-Trimethylbenzene	ug/kg	100	91.7	92	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	81.3	81	75-135	
1,2-Dibromoethane (EDB)	ug/kg	100	97.4	97	80-125	
1,2-Dichlorobenzene	ug/kg	100	92.3	92	80-120	
1,2-Dichloroethane	ug/kg	100	89.4	89	80-120	
1,2-Dichloroethene (Total)	ug/kg	200	195	98	80-120	
1,2-Dichloropropane	ug/kg	100	90.2	90	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	92.7	93	80-125	
1,3-Dichlorobenzene	ug/kg	100	92.8	93	80-120	
1,3-Dichloropropane	ug/kg	100	94.1	94	80-120	
1,4-Dichlorobenzene	ug/kg	100	91.8	92	80-120	
1,4-Dioxane (p-Dioxane)	ug/kg	500	359	72	75-120	L2
1-Methylnaphthalene	ug/kg	100	89.1	89	80-120	
2,2-Dichloropropane	ug/kg	100	92.0	92	75-130	
2-Butanone (MEK)	ug/kg	500	480	96	60-135	
2-Chloroethylvinyl ether	ug/kg	500	599	120	70-125	
2-Chlorotoluene	ug/kg	100	85.8	86	80-120	
2-Hexanone	ug/kg	500	505	101	70-135	
2-Methylnaphthalene	ug/kg	100	78.7	79	80-120	L2

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Chlorotoluene	ug/kg	100	94.0	94	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	419	84	75-130	
Acetone	ug/kg	500	461	92	50-150	
Acetonitrile	ug/kg	500	456	91	50-120	
Acrolein	ug/kg		396			
Acrylonitrile	ug/kg	500	442	88	80-120	
Benzene	ug/kg	100	93.2	93	80-120	
Bromobenzene	ug/kg	100	89.2	89	80-120	
Bromochloromethane	ug/kg	100	92.7	93	75-120	
Bromodichloromethane	ug/kg	100	88.5	88	80-125	
Bromoform	ug/kg	100	91.4	91	80-135	
Bromomethane	ug/kg	100	115	115	35-135	
Carbon disulfide	ug/kg	100	102	102	65-140	
Carbon tetrachloride	ug/kg	100	99.5	99	75-140	
Chlorobenzene	ug/kg	100	97.1	97	80-120	
Chloroethane	ug/kg	100	95.4	95	50-135	
Chloroform	ug/kg	100	87.1	87	80-120	
Chloromethane	ug/kg	100	92.1	92	15-155	
cis-1,2-Dichloroethene	ug/kg	100	96.4	96	80-120	
cis-1,3-Dichloropropene	ug/kg	100	89.4	89	80-125	
Cyclohexane	ug/kg	100	96.4	96	80-120	
Cyclohexanone	ug/kg	500	421	84	80-120	
Dibromochloromethane	ug/kg	100	93.4	93	80-130	
Dibromomethane	ug/kg	100	91.5	92	80-120	
Dichlorodifluoromethane	ug/kg	100	97.5	98	10-160	
Diethyl ether (Ethyl ether)	ug/kg	100	91.5	92	80-120	
Diisopropyl ether	ug/kg	100	88.9	89	75-135	
Ethyl-tert-butyl ether	ug/kg	100	85.4	85	70-125	
Ethylbenzene	ug/kg	100	97.6	98	80-120	
Hexachloro-1,3-butadiene	ug/kg	100	85.1	85	80-135	
Iodomethane	ug/kg	100	104	104	65-145	
Isopropylbenzene (Cumene)	ug/kg	100	100	100	75-135	
m&p-Xylene	ug/kg	200	202	101	80-125	
Methyl acetate	ug/kg	500	430	86	80-120	
Methyl-tert-butyl ether	ug/kg	100	83.8	84	75-130	
Methylcyclohexane	ug/kg	100	96.6	97	80-120	
Methylene Chloride	ug/kg	100	89.3	89	65-120	
n-Butylbenzene	ug/kg	100	101	101	80-135	
n-Heptane	ug/kg	100	99.2	99	80-120	
n-Hexane	ug/kg	100	94.5	94	55-150	
n-Propylbenzene	ug/kg	100	93.1	93	80-125	
Naphthalene	ug/kg	100	90.1	90	80-120	
o-Xylene	ug/kg	100	99.1	99	80-125	
p-Isopropyltoluene	ug/kg	100	93.7	94	65-145	
sec-Butylbenzene	ug/kg	100	95.7	96	80-135	
Styrene	ug/kg	100	101	101	85-125	
tert-Amylmethyl ether	ug/kg	100	83.3	83	80-125	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/kg	500	367	73	65-130	
tert-Butylbenzene	ug/kg	100	92.8	93	80-125	
Tetrachloroethene	ug/kg	100	93.4	93	80-130	
Tetrahydrofuran	ug/kg	500	425	85	80-120	N2
Toluene	ug/kg	100	94.8	95	80-120	
trans-1,2-Dichloroethene	ug/kg	100	98.7	99	75-125	
trans-1,3-Dichloropropene	ug/kg	100	91.9	92	80-130	
trans-1,4-Dichloro-2-butene	ug/kg	100	76.3	76	80-120	L2
Trichloroethene	ug/kg	100	93.3	93	80-125	
Trichlorofluoromethane	ug/kg	100	103	103	65-135	
Vinyl acetate	ug/kg		93.9J			
Vinyl chloride	ug/kg	100	99.7	100	35-145	
Xylene (Total)	ug/kg	300	301	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			90	80-120	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121605 3121606

Parameter	Units	60397740026		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
1,1,1,2-Tetrachloroethane	ug/kg	ND	107	106	86.0	97.3	81	92	25-130	12	35		
1,1,1-Trichloroethane	ug/kg	ND	107	106	89.9	99.1	84	94	45-120	10	35		
1,1,2,2-Tetrachloroethane	ug/kg	ND	107	106	ND	ND	0	0	10-145		35	M1	
1,1,2-Trichloroethane	ug/kg	ND	107	106	73.6	74.9	69	71	25-130	2	35		
1,1,2-Trichloroethane	ug/kg	ND	107	106	95.3	104	89	98	35-120	9	35	N2	
Trichlorotrifluoroethane													
1,1-Dichloroethane	ug/kg	ND	107	106	86.3	95.6	81	90	40-120	10	35		
1,1-Dichloroethene	ug/kg	ND	107	106	115	135	108	128	35-120	16	35	M1	
1,1-Dichloropropene	ug/kg	ND	107	106	88.9	98.6	83	93	40-125	10	35		
1,2,3-Trichlorobenzene	ug/kg	ND	107	106	78.9	94.5	74	89	10-125	18	50		
1,2,3-Trichloropropane	ug/kg	ND	107	106	86.7	102	81	96	25-135	16	35		
1,2,3-Trimethylbenzene	ug/kg	ND	107	106	77.3	88.5	73	84	35-120	13	35		
1,2,4-Trichlorobenzene	ug/kg	ND	107	106	79.3	92.9	74	88	10-125	16	50		
1,2,4-Trimethylbenzene	ug/kg	ND	107	106	78.5	88.4	74	83	35-120	12	35		
1,2-Dibromo-3-chloropropane	ug/kg	ND	107	106	65.3	69.5	61	66	10-145	6	35		
1,2-Dibromoethane (EDB)	ug/kg	ND	107	106	99.5	110	93	103	30-140	10	35		
1,2-Dichlorobenzene	ug/kg	ND	107	106	80.8	94.1	76	89	10-125	15	35		
1,2-Dichloroethane	ug/kg	ND	107	106	89.5	101	84	95	35-120	12	35		
1,2-Dichloroethene (Total)	ug/kg	ND	213	212	181	201	85	95	40-120	10	35		
1,2-Dichloropropane	ug/kg	ND	107	106	85.3	97.2	80	92	35-120	13	35		
1,3,5-Trimethylbenzene	ug/kg	ND	107	106	77.1	88.1	72	83	15-130	13	35		
1,3-Dichlorobenzene	ug/kg	ND	107	106	79.4	89.9	75	85	10-125	12	37		
1,3-Dichloropropane	ug/kg	ND	107	106	95.0	106	89	100	30-120	11	35		
1,4-Dichlorobenzene	ug/kg	ND	107	106	80.0	90.9	75	86	10-125	13	35		

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**QUALITY CONTROL DATA**

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121605 3121606												
Parameter	Units	60397740026		MS	MSD	3121606		% Rec	% Rec	% Rec	Max	Qual
		Result	Conc.	Spike	Spike	Result	Result					
1,4-Dioxane (p-Dioxane)	ug/kg	ND	533	529	427	513	80	97	10-200	18	35	
1-Methylnaphthalene	ug/kg	ND	107	106	80.6	102	76	96	35-120	23	35	
2,2-Dichloropropane	ug/kg	ND	107	106	83.2	91.6	78	87	40-120	10	35	
2-Butanone (MEK)	ug/kg	ND	533	529	898	1010	168	190	20-145	11	35	M1
2-Chloroethylvinyl ether	ug/kg	ND	533	529	624	698	117	132	20-155	11	35	
2-Chlorotoluene	ug/kg	ND	107	106	73.2	82.9	69	78	15-125	12	35	
2-Hexanone	ug/kg	ND	533	529	959	1110	180	210	15-150	15	35	M1
2-Methylnaphthalene	ug/kg	ND	107	106	71.1	91.3	67	86	35-120	25	35	
4-Chlorotoluene	ug/kg	ND	107	106	78.7	90.3	74	85	10-125	14	35	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	533	529	593	678	111	128	30-140	14	35	
Acetone	ug/kg	ND	533	529	847	933	156	174	10-165	10	35	M1
Acetonitrile	ug/kg	ND	533	529	413	451	78	85	35-120	9	35	
Acrolein	ug/kg	ND			477	524				9	60	
Acrylonitrile	ug/kg	ND	533	529	432	478	81	90	10-145	10	35	
Benzene	ug/kg	ND	107	106	82.8	93.5	78	88	35-120	12	35	
Bromobenzene	ug/kg	ND	107	106	78.5	91.5	74	86	15-125	15	35	
Bromochloromethane	ug/kg	ND	107	106	92.8	104	87	98	35-120	12	35	
Bromodichloromethane	ug/kg	ND	107	106	80.8	89.2	76	84	30-130	10	35	
Bromoform	ug/kg	ND	107	106	92.7	105	87	100	15-135	13	35	
Bromomethane	ug/kg	ND	107	106	94.2	103	88	97	10-120	8	35	
Carbon disulfide	ug/kg	ND	107	106	84.2	94.9	79	90	20-120	12	35	
Carbon tetrachloride	ug/kg	ND	107	106	89.7	99.9	84	94	40-125	11	35	
Chlorobenzene	ug/kg	ND	107	106	85.9	96.3	81	91	20-125	11	35	
Chloroethane	ug/kg	ND	107	106	93.7	104	88	98	25-120	10	35	
Chloroform	ug/kg	ND	107	106	81.7	91.4	77	86	40-125	11	35	
Chloromethane	ug/kg	ND	107	106	87.9	101	82	95	10-120	14	35	
cis-1,2-Dichloroethene	ug/kg	ND	107	106	89.8	99.3	84	94	35-120	10	35	
cis-1,3-Dichloropropene	ug/kg	ND	107	106	81.8	91.1	77	86	20-130	11	35	
Cyclohexane	ug/kg	ND	107	106	87.1	93.4	82	88	35-120	7	35	
Cyclohexanone	ug/kg	ND	533	529	582	695	109	131	35-120	18	35	M1
Dibromochloromethane	ug/kg	ND	107	106	88.8	97.6	83	92	25-135	9	35	
Dibromomethane	ug/kg	ND	107	106	92.9	105	87	99	30-125	12	35	
Dichlorodifluoromethane	ug/kg	ND	107	106	98.4	106	92	100	10-120	7	35	
Diethyl ether (Ethyl ether)	ug/kg	ND	107	106	94.4	106	89	100	35-120	12	35	
Diisopropyl ether	ug/kg	ND	107	106	84.0	94.4	79	89	45-135	12	25	
Ethyl-tert-butyl ether	ug/kg	ND	107	106	82.9	94.0	78	89	45-130	13	25	
Ethylbenzene	ug/kg	ND	107	106	85.0	94.5	80	89	35-120	11	35	
Hexachloro-1,3-butadiene	ug/kg	ND	107	106	64.9	76.7	61	72	10-125	17	45	
Iodomethane	ug/kg	ND	107	106	90.2	111	85	105	30-120	21	35	
Isopropylbenzene (Cumene)	ug/kg	ND	107	106	86.4	96.6	81	91	20-135	11	35	
m&p-Xylene	ug/kg	ND	213	212	175	195	82	92	30-145	11	35	
Methyl acetate	ug/kg	ND	533	529	ND	ND	0	0	30-120		35	M1
Methyl-tert-butyl ether	ug/kg	ND	107	106	88.3	100	83	95	35-140	13	35	
Methylcyclohexane	ug/kg	ND	107	106	85.5	96.1	80	91	35-120	12	35	

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**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Parameter	Units	60397740026		3121605		3121606		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Methylene Chloride	ug/kg	ND	107	106	87.1	96.3	81	90	10-135	10	35			
n-Butylbenzene	ug/kg	ND	107	106	79.0	89.6	74	85	10-130	13	35			
n-Heptane	ug/kg	ND	107	106	85.5	96.2	80	91	35-120	12	35			
n-Hexane	ug/kg	ND	107	106	84.2	93.0	79	88	10-150	10	35			
n-Propylbenzene	ug/kg	ND	107	106	78.3	89.3	73	84	20-125	13	35			
Naphthalene	ug/kg	ND	107	106	90.4	109	85	103	10-160	18	35			
o-Xylene	ug/kg	ND	107	106	87.4	98.1	82	93	30-145	12	35			
p-Isopropyltoluene	ug/kg	ND	107	106	77.8	86.9	73	82	10-135	11	35			
sec-Butylbenzene	ug/kg	ND	107	106	79.1	90.1	74	85	15-135	13	35			
Styrene	ug/kg	ND	107	106	91.2	104	86	98	15-130	13	35			
tert-Amylmethyl ether	ug/kg	ND	107	106	84.3	95.2	79	90	45-140	12	35			
tert-Butyl Alcohol	ug/kg	ND	533	529	424	519	79	98	55-130	20	25			
tert-Butylbenzene	ug/kg	ND	107	106	79.1	89.3	74	84	15-135	12	35			
Tetrachloroethene	ug/kg	ND	107	106	79.7	87.6	75	83	30-125	10	35			
Tetrahydrofuran	ug/kg	ND	533	529	472	526	89	99	35-120	11	35	N2		
Toluene	ug/kg	ND	107	106	84.0	93.8	79	89	35-120	11	35			
trans-1,2-Dichloroethene	ug/kg	ND	107	106	91.2	101	86	96	40-120	10	35			
trans-1,3-Dichloropropene	ug/kg	ND	107	106	85.7	94.4	80	89	20-135	10	35			
trans-1,4-Dichloro-2-butene	ug/kg	ND	107	106	74.4	83.7	70	79	15-120	12	35			
Trichloroethene	ug/kg	ND	107	106	155	176	145	166	25-140	12	35	M1		
Trichlorofluoromethane	ug/kg	ND	107	106	94.5	102	89	96	35-120	7	35			
Vinyl acetate	ug/kg	ND			84.5J	93.8J					35			
Vinyl chloride	ug/kg	ND	107	106	95.3	104	89	98	10-120	9	35			
Xylene (Total)	ug/kg	ND	320	317	262	293	82	92	35-120	11	35			
1,2-Dichlorobenzene-d4 (S)	%						102	103	80-120					
4-Bromofluorobenzene (S)	%						92	92	80-120					
Toluene-d8 (S)	%						101	100	80-120					

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 782422

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740043, 60397740053

METHOD BLANK: 3120314

Matrix: Water

Associated Lab Samples: 60397740043, 60397740053

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,1-Dichloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,1-Dichloroethene	ug/L	ND	1.0	04/20/22 20:02	
1,1-Dichloropropene	ug/L	ND	1.0	04/20/22 20:02	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
1,2,3-Trichloropropane	ug/L	ND	2.5	04/20/22 20:02	
1,2,3-Trimethylbenzene	ug/L	ND	1.0	04/20/22 20:02	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	04/20/22 20:02	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	04/20/22 20:02	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/20/22 20:02	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
1,2-Dichloroethane	ug/L	ND	1.0	04/20/22 20:02	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	04/20/22 20:02	
1,2-Dichloropropane	ug/L	ND	1.0	04/20/22 20:02	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	04/20/22 20:02	
1,3-Dichlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
1,3-Dichloropropane	ug/L	ND	1.0	04/20/22 20:02	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
1,4-Dioxane (p-Dioxane)	ug/L	ND	100	04/20/22 20:02	
1-Methylnaphthalene	ug/L	ND	10.0	04/20/22 20:02	
2,2-Dichloropropane	ug/L	ND	1.0	04/20/22 20:02	
2-Butanone (MEK)	ug/L	ND	10.0	04/20/22 20:02	
2-Chloroethylvinyl ether	ug/L	ND	10.0	04/20/22 20:02	
2-Chlorotoluene	ug/L	ND	1.0	04/20/22 20:02	
2-Hexanone	ug/L	ND	10.0	04/20/22 20:02	
2-Methylnaphthalene	ug/L	ND	10.0	04/20/22 20:02	
4-Chlorotoluene	ug/L	ND	1.0	04/20/22 20:02	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/20/22 20:02	
Acetone	ug/L	ND	10.0	04/20/22 20:02	
Acetonitrile	ug/L	ND	10.0	04/20/22 20:02	
Acrolein	ug/L	ND	50.0	04/20/22 20:02	
Acrylonitrile	ug/L	ND	20.0	04/20/22 20:02	
Benzene	ug/L	ND	1.0	04/20/22 20:02	
Bromobenzene	ug/L	ND	1.0	04/20/22 20:02	
Bromochloromethane	ug/L	ND	1.0	04/20/22 20:02	
Bromodichloromethane	ug/L	ND	1.0	04/20/22 20:02	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

METHOD BLANK: 3120314

Matrix: Water

Associated Lab Samples: 60397740043, 60397740053

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromoform	ug/L	ND	1.0	04/20/22 20:02	
Bromomethane	ug/L	ND	5.0	04/20/22 20:02	
Carbon disulfide	ug/L	ND	5.0	04/20/22 20:02	
Carbon tetrachloride	ug/L	ND	1.0	04/20/22 20:02	
Chlorobenzene	ug/L	ND	1.0	04/20/22 20:02	
Chloroethane	ug/L	ND	1.0	04/20/22 20:02	
Chloroform	ug/L	ND	1.0	04/20/22 20:02	
Chloromethane	ug/L	ND	1.0	04/20/22 20:02	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/20/22 20:02	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/20/22 20:02	
Cyclohexane	ug/L	ND	1.0	04/20/22 20:02	
Cyclohexanone	ug/L	ND	20.0	04/20/22 20:02	
Dibromochloromethane	ug/L	ND	1.0	04/20/22 20:02	
Dibromomethane	ug/L	ND	1.0	04/20/22 20:02	
Dichlorodifluoromethane	ug/L	ND	1.0	04/20/22 20:02	
Diethyl ether (Ethyl ether)	ug/L	ND	1.0	04/20/22 20:02	
Ethylbenzene	ug/L	ND	1.0	04/20/22 20:02	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	04/20/22 20:02	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	04/20/22 20:02	
m&p-Xylene	ug/L	ND	2.0	04/20/22 20:02	
Methyl acetate	ug/L	ND	1.0	04/20/22 20:02	
Methyl-tert-butyl ether	ug/L	ND	1.0	04/20/22 20:02	
Methylcyclohexane	ug/L	ND	1.0	04/20/22 20:02	
Methylene Chloride	ug/L	ND	1.0	04/20/22 20:02	
n-Butylbenzene	ug/L	ND	1.0	04/20/22 20:02	
n-Heptane	ug/L	ND	10.0	04/20/22 20:02	
n-Hexane	ug/L	ND	10.0	04/20/22 20:02	
n-Propylbenzene	ug/L	ND	1.0	04/20/22 20:02	
Naphthalene	ug/L	ND	10.0	04/20/22 20:02	
o-Xylene	ug/L	ND	1.0	04/20/22 20:02	
p-Isopropyltoluene	ug/L	ND	1.0	04/20/22 20:02	
sec-Butylbenzene	ug/L	ND	1.0	04/20/22 20:02	
Styrene	ug/L	ND	1.0	04/20/22 20:02	
tert-Butylbenzene	ug/L	ND	1.0	04/20/22 20:02	
Tetrachloroethene	ug/L	ND	1.0	04/20/22 20:02	
Tetrahydrofuran	ug/L	ND	5.0	04/20/22 20:02	
Toluene	ug/L	ND	1.0	04/20/22 20:02	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/20/22 20:02	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/20/22 20:02	
Trichloroethene	ug/L	ND	1.0	04/20/22 20:02	
Trichlorofluoromethane	ug/L	ND	1.0	04/20/22 20:02	
Vinyl chloride	ug/L	ND	1.0	04/20/22 20:02	
Xylene (Total)	ug/L	ND	3.0	04/20/22 20:02	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120	04/20/22 20:02	
4-Bromofluorobenzene (S)	%	109	80-120	04/20/22 20:02	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

METHOD BLANK: 3120314 Matrix: Water

Associated Lab Samples: 60397740043, 60397740053

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene-d8 (S)	%	116	80-120	04/20/22 20:02	

LABORATORY CONTROL SAMPLE: 3120315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.5	97	80-120	
1,1,1-Trichloroethane	ug/L	20	20.7	103	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	75-125	
1,1,2-Trichloroethane	ug/L	20	20.4	102	80-120	
1,1,2-Trichlorotrifluoroethane	ug/L	20	22.8	114	70-130	N2
1,1-Dichloroethane	ug/L	20	19.3	96	75-125	
1,1-Dichloroethene	ug/L	20	22.3	112	80-120	
1,1-Dichloropropene	ug/L	20	21.2	106	80-125	
1,2,3-Trichlorobenzene	ug/L	20	17.7	88	75-125	
1,2,3-Trichloropropane	ug/L	20	16.5	83	80-125	
1,2,3-Trimethylbenzene	ug/L	20	19.0	95	80-125	
1,2,4-Trichlorobenzene	ug/L	20	17.4	87	75-120	
1,2,4-Trimethylbenzene	ug/L	20	19.2	96	80-125	
1,2-Dibromo-3-chloropropane	ug/L	20	17.1	85	70-120	
1,2-Dibromoethane (EDB)	ug/L	20	18.8	94	80-120	
1,2-Dichlorobenzene	ug/L	20	19.1	95	80-120	
1,2-Dichloroethane	ug/L	20	20.0	100	75-120	
1,2-Dichloroethene (Total)	ug/L	40	37.9	95	80-120	
1,2-Dichloropropane	ug/L	20	21.1	106	80-125	
1,3,5-Trimethylbenzene	ug/L	20	19.3	97	80-125	
1,3-Dichlorobenzene	ug/L	20	18.9	94	80-120	
1,3-Dichloropropane	ug/L	20	21.6	108	80-120	
1,4-Dichlorobenzene	ug/L	20	18.8	94	80-120	
1,4-Dioxane (p-Dioxane)	ug/L	100	100	100	10-180	
1-Methylnaphthalene	ug/L	20	16.1	81	40-160	
2,2-Dichloropropane	ug/L	20	17.5	87	60-130	
2-Butanone (MEK)	ug/L	100	106	106	40-150	
2-Chloroethylvinyl ether	ug/L	100	55.4	55	30-165	
2-Chlorotoluene	ug/L	20	18.5	93	80-120	
2-Hexanone	ug/L	100	106	106	45-150	
2-Methylnaphthalene	ug/L	20	15.2	76	55-150	
4-Chlorotoluene	ug/L	20	19.6	98	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	65-140	
Acetone	ug/L	100	137	137	20-175	
Acetonitrile	ug/L	100	94.1	94	25-180	
Acrolein	ug/L		159			
Acrylonitrile	ug/L	100	96.8	97	70-135	
Benzene	ug/L	20	19.8	99	80-120	
Bromobenzene	ug/L	20	18.2	91	80-120	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3120315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromochloromethane	ug/L	20	19.9	100	80-125	
Bromodichloromethane	ug/L	20	22.3	112	80-125	
Bromoform	ug/L	20	16.8	84	60-135	
Bromomethane	ug/L	20	10.4	52	10-165	
Carbon disulfide	ug/L	20	20.1	100	75-135	
Carbon tetrachloride	ug/L	20	20.7	104	80-125	
Chlorobenzene	ug/L	20	19.3	96	80-120	
Chloroethane	ug/L	20	21.4	107	70-130	
Chloroform	ug/L	20	20.8	104	80-120	
Chloromethane	ug/L	20	18.0	90	35-155	
cis-1,2-Dichloroethene	ug/L	20	19.1	95	80-120	
cis-1,3-Dichloropropene	ug/L	20	21.9	110	80-125	
Cyclohexane	ug/L	20	19.7	98	80-130	
Cyclohexanone	ug/L	100	148	148	10-180	
Dibromochloromethane	ug/L	20	17.8	89	70-120	
Dibromomethane	ug/L	20	20.4	102	80-120	
Dichlorodifluoromethane	ug/L	20	20.1	100	50-150	
Diethyl ether (Ethyl ether)	ug/L	20	23.5	117	70-140	
Diisopropyl ether	ug/L	20	21.2	106	65-130	
Ethyl-tert-butyl ether	ug/L	20	21.2	106	65-120	
Ethylbenzene	ug/L	20	19.9	99	80-120	
Hexachloro-1,3-butadiene	ug/L	20	18.0	90	65-135	
Iodomethane	ug/L	20	11.7	58	30-135	
Isopropylbenzene (Cumene)	ug/L	20	21.0	105	80-125	
m&p-Xylene	ug/L	40	40.5	101	75-130	
Methyl acetate	ug/L	100	107	107	45-140	
Methyl-tert-butyl ether	ug/L	20	19.3	97	65-130	
Methylcyclohexane	ug/L	20	18.3	92	80-125	
Methylene Chloride	ug/L	20	21.2	106	75-120	
n-Butylbenzene	ug/L	20	18.0	90	80-125	
n-Heptane	ug/L	20	16.4	82	10-180	
n-Hexane	ug/L	20	16.7	84	60-135	
n-Propylbenzene	ug/L	20	18.3	91	80-120	
Naphthalene	ug/L	20	17.7	89	70-120	
o-Xylene	ug/L	20	20.1	101	75-130	
p-Isopropyltoluene	ug/L	20	18.9	95	80-135	
sec-Butylbenzene	ug/L	20	18.8	94	80-120	
Styrene	ug/L	20	20.9	105	80-120	
tert-Amylmethyl ether	ug/L	20	19.9	100	75-125	
tert-Butyl Alcohol	ug/L	100	87.9	88	50-150	
tert-Butylbenzene	ug/L	20	18.0	90	80-120	
Tetrachloroethene	ug/L	20	20.2	101	80-120	
Tetrahydrofuran	ug/L	100	98.4	98	75-125	
Toluene	ug/L	20	18.7	94	80-120	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	80-120	
trans-1,3-Dichloropropene	ug/L	20	18.1	90	75-120	
trans-1,4-Dichloro-2-butene	ug/L	20	13.9J	70	40-145	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3120315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Trichloroethene	ug/L	20	20.9	105	80-120	
Trichlorofluoromethane	ug/L	20	21.4	107	80-130	
Vinyl acetate	ug/L		17.5J			
Vinyl chloride	ug/L	20	18.2	91	65-130	
Xylene (Total)	ug/L	60	60.7	101	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			107	80-120	
Toluene-d8 (S)	%			102	80-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

QC Batch: 782424	Analysis Method: EPA 8260
QC Batch Method: EPA 8260	Analysis Description: 8260 MSV MO GRO Oxygenates
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740043

METHOD BLANK: 3120318 Matrix: Water

Associated Lab Samples: 60397740043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	ug/L	ND	500	04/21/22 00:37	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120	04/21/22 00:37	
4-Bromofluorobenzene (S)	%	113	80-120	04/21/22 00:37	
Toluene-d8 (S)	%	123	80-120	04/21/22 00:37	S3

LABORATORY CONTROL SAMPLE: 3120319

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	ug/L	4000	4010	100	60-120	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			106	80-120	
Toluene-d8 (S)	%			102	80-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 783312

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV MO GRO Oxygenates

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740053

METHOD BLANK: 3123681

Matrix: Water

Associated Lab Samples: 60397740053

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	ug/L	ND	500	04/20/22 20:02	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120	04/20/22 20:02	
4-Bromofluorobenzene (S)	%	109	80-120	04/20/22 20:02	
Toluene-d8 (S)	%	116	80-120	04/20/22 20:02	

LABORATORY CONTROL SAMPLE: 3123682

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	ug/L	4000	4210	105	60-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			107	80-120	
Toluene-d8 (S)	%			102	80-120	

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### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 782794 Analysis Method: EPA 8260  
 QC Batch Method: EPA 5035 Analysis Description: 8260 MSV GRO and Oxygenates  
 Laboratory: Pace Analytical Services - Kansas City  
 Associated Lab Samples: 60397740024, 60397740025, 60397740026

METHOD BLANK: 3121608 Matrix: Solid  
 Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	0.50	04/22/22 10:17	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	04/22/22 10:17	
4-Bromofluorobenzene (S)	%	103	69-133	04/22/22 10:17	
Toluene-d8 (S)	%	102	78-122	04/22/22 10:17	

LABORATORY CONTROL SAMPLE: 3121609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	4	3.5	87	61-140	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			90	69-133	
Toluene-d8 (S)	%			102	78-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121610 3121611

Parameter	Units	60397619008		3121611		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,2-Dichlorobenzene-d4 (S)	%					102	102	80-120			
4-Bromofluorobenzene (S)	%					91	93	69-133			
Toluene-d8 (S)	%					99	100	78-122			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121612 3121613

Parameter	Units	60397740026		3121613		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
1,2-Dichlorobenzene-d4 (S)	%					102	103	80-120			
4-Bromofluorobenzene (S)	%					92	92	69-133			
Toluene-d8 (S)	%					101	100	78-122			

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch:	781704	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740010, 60397740011, 60397740012, 60397740013, 60397740014, 60397740015, 60397740016, 60397740017, 60397740018, 60397740019, 60397740020, 60397740021, 60397740022, 60397740023, 60397740027, 60397740028, 60397740029, 60397740030, 60397740031, 60397740032

METHOD BLANK: 3117672 Matrix: Solid

Associated Lab Samples: 60397740010, 60397740011, 60397740012, 60397740013, 60397740014, 60397740015, 60397740016, 60397740017, 60397740018, 60397740019, 60397740020, 60397740021, 60397740022, 60397740023, 60397740027, 60397740028, 60397740029, 60397740030, 60397740031, 60397740032

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.2	04/18/22 16:49	
Acenaphthylene	ug/kg	ND	3.2	04/18/22 16:49	
Anthracene	ug/kg	ND	3.2	04/18/22 16:49	
Benzo(a)anthracene	ug/kg	ND	3.2	04/18/22 16:49	
Benzo(a)pyrene	ug/kg	ND	3.2	04/18/22 16:49	
Benzo(b)fluoranthene	ug/kg	ND	3.2	04/18/22 16:49	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	04/18/22 16:49	
Benzo(k)fluoranthene	ug/kg	ND	3.2	04/18/22 16:49	
Chrysene	ug/kg	ND	3.2	04/18/22 16:49	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	04/18/22 16:49	
Fluoranthene	ug/kg	ND	3.2	04/18/22 16:49	
Fluorene	ug/kg	ND	3.2	04/18/22 16:49	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	04/18/22 16:49	
Naphthalene	ug/kg	ND	3.2	04/18/22 16:49	
Phenanthrene	ug/kg	ND	3.2	04/18/22 16:49	
Pyrene	ug/kg	ND	3.2	04/18/22 16:49	
2-Fluorobiphenyl (S)	%	89	40-120	04/18/22 16:49	
Terphenyl-d14 (S)	%	113	45-130	04/18/22 16:49	

LABORATORY CONTROL SAMPLE: 3117673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	31.6	20.7	66	45-120	
Acenaphthylene	ug/kg	31.6	20.7	65	50-120	
Anthracene	ug/kg	31.6	21.3	67	50-120	
Benzo(a)anthracene	ug/kg	31.6	22.4	71	55-125	
Benzo(a)pyrene	ug/kg	31.6	21.5	68	45-120	
Benzo(b)fluoranthene	ug/kg	31.6	23.6	75	50-125	
Benzo(g,h,i)perylene	ug/kg	31.6	20.9	66	40-120	
Benzo(k)fluoranthene	ug/kg	31.6	22.7	72	55-120	
Chrysene	ug/kg	31.6	21.5	68	55-120	
Dibenz(a,h)anthracene	ug/kg	31.6	20.7	65	40-125	
Fluoranthene	ug/kg	31.6	21.6	68	50-125	
Fluorene	ug/kg	31.6	21.2	67	50-120	
Indeno(1,2,3-cd)pyrene	ug/kg	31.6	21.3	67	44-125	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3117673

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	31.6	20.2	64	45-120	
Phenanthrene	ug/kg	31.6	22.1	70	50-125	
Pyrene	ug/kg	31.6	24.8	78	50-125	
2-Fluorobiphenyl (S)	%			65	40-120	
Terphenyl-d14 (S)	%			81	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3117678 3117679

Parameter	Units	MS 60397740010		MSD 3117679		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result						
Acenaphthene	ug/kg	ND	42.1	40.6	26.6	32.9	63	81	10-150	21	42
Acenaphthylene	ug/kg	ND	42.1	40.6	26.5	33.0	63	81	30-125	22	44
Anthracene	ug/kg	ND	42.1	40.6	28.0	34.0	66	84	10-160	19	54
Benzo(a)anthracene	ug/kg	ND	42.1	40.6	29.7	36.2	70	89	10-160	20	62
Benzo(a)pyrene	ug/kg	ND	42.1	40.6	26.9	33.3	64	82	10-150	21	66
Benzo(b)fluoranthene	ug/kg	ND	42.1	40.6	30.5	37.3	66	85	10-165	20	61
Benzo(g,h,i)perylene	ug/kg	ND	42.1	40.6	25.1	30.9	60	76	10-155	21	58
Benzo(k)fluoranthene	ug/kg	ND	42.1	40.6	28.0	35.5	66	87	10-165	24	53
Chrysene	ug/kg	ND	42.1	40.6	28.1	34.0	67	84	10-150	19	57
Dibenz(a,h)anthracene	ug/kg	ND	42.1	40.6	24.5	31.3	58	77	10-175	24	48
Fluoranthene	ug/kg	5.3	42.1	40.6	31.1	36.9	61	78	10-180	17	54
Fluorene	ug/kg	ND	42.1	40.6	27.4	33.9	65	83	20-145	21	39
Indeno(1,2,3-cd)pyrene	ug/kg	ND	42.1	40.6	24.5	29.9	58	74	10-150	20	59
Naphthalene	ug/kg	ND	42.1	40.6	26.1	32.6	62	80	10-165	22	54
Phenanthrene	ug/kg	5.7	42.1	40.6	31.3	36.4	61	76	10-170	15	51
Pyrene	ug/kg	4.7	42.1	40.6	34.6	41.2	71	90	10-180	17	61
2-Fluorobiphenyl (S)	%						63	80	40-120		
Terphenyl-d14 (S)	%						77	96	45-130		

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch:	781706	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740033, 60397740034, 60397740035, 60397740036, 60397740037, 60397740038, 60397740039, 60397740040, 60397740041, 60397740042, 60397740044, 60397740045, 60397740046, 60397740047, 60397740048, 60397740049, 60397740050, 60397740051

METHOD BLANK: 3117674 Matrix: Solid

Associated Lab Samples: 60397740033, 60397740034, 60397740035, 60397740036, 60397740037, 60397740038, 60397740039, 60397740040, 60397740041, 60397740042, 60397740044, 60397740045, 60397740046, 60397740047, 60397740048, 60397740049, 60397740050, 60397740051

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.2	04/19/22 12:27	
Acenaphthylene	ug/kg	ND	3.2	04/19/22 12:27	
Anthracene	ug/kg	ND	3.2	04/19/22 12:27	
Benzo(a)anthracene	ug/kg	ND	3.2	04/19/22 12:27	
Benzo(a)pyrene	ug/kg	ND	3.2	04/19/22 12:27	
Benzo(b)fluoranthene	ug/kg	ND	3.2	04/19/22 12:27	
Benzo(g,h,i)perylene	ug/kg	ND	3.2	04/19/22 12:27	
Benzo(k)fluoranthene	ug/kg	ND	3.2	04/19/22 12:27	
Chrysene	ug/kg	ND	3.2	04/19/22 12:27	
Dibenz(a,h)anthracene	ug/kg	ND	3.2	04/19/22 12:27	
Fluoranthene	ug/kg	ND	3.2	04/19/22 12:27	
Fluorene	ug/kg	ND	3.2	04/19/22 12:27	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.2	04/19/22 12:27	
Naphthalene	ug/kg	ND	3.2	04/19/22 12:27	
Phenanthrene	ug/kg	ND	3.2	04/19/22 12:27	
Pyrene	ug/kg	ND	3.2	04/19/22 12:27	
2-Fluorobiphenyl (S)	%	96	40-120	04/19/22 12:27	
Terphenyl-d14 (S)	%	128	45-130	04/19/22 12:27	

LABORATORY CONTROL SAMPLE: 3117675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	32.9	25.5	77	45-120	
Acenaphthylene	ug/kg	32.9	25.5	78	50-120	
Anthracene	ug/kg	32.9	26.8	81	50-120	
Benzo(a)anthracene	ug/kg	32.9	28.8	87	55-125	
Benzo(a)pyrene	ug/kg	32.9	27.5	83	45-120	
Benzo(b)fluoranthene	ug/kg	32.9	31.0	94	50-125	
Benzo(g,h,i)perylene	ug/kg	32.9	21.6	65	40-120	
Benzo(k)fluoranthene	ug/kg	32.9	29.6	90	55-120	
Chrysene	ug/kg	32.9	26.8	81	55-120	
Dibenz(a,h)anthracene	ug/kg	32.9	23.0	70	40-125	
Fluoranthene	ug/kg	32.9	30.8	93	50-125	
Fluorene	ug/kg	32.9	26.3	80	50-120	
Indeno(1,2,3-cd)pyrene	ug/kg	32.9	23.0	70	44-125	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3117675

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	32.9	24.2	74	45-120	
Phenanthrene	ug/kg	32.9	30.0	91	50-125	
Pyrene	ug/kg	32.9	34.5	105	50-125	
2-Fluorobiphenyl (S)	%			77	40-120	
Terphenyl-d14 (S)	%			99	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3117676 3117677

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		60397740033 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Acenaphthene	ug/kg	6.7	40.6	39.7	97.9	50.8	225	111	10-150	63	42	M1,R1
Acenaphthylene	ug/kg	ND	40.6	39.7	69.1	41.0	163	96	30-125	51	44	M1,R1
Anthracene	ug/kg	22.1	40.6	39.7	238	102	532	200	10-160	80	54	M1,R1
Benzo(a)anthracene	ug/kg	59.3	40.6	39.7	459	211	986	382	10-160	74	62	M1,R1
Benzo(a)pyrene	ug/kg	49.5	40.6	39.7	398	175	859	315	10-150	78	66	M1,R1
Benzo(b)fluoranthene	ug/kg	79.8	40.6	39.7	585	249	1250	426	10-165	80	61	M1,R1
Benzo(g,h,i)perylene	ug/kg	27.7	40.6	39.7	263	102	580	188	10-155	88	58	M1,R1
Benzo(k)fluoranthene	ug/kg	22.7	40.6	39.7	219	108	484	215	10-165	68	53	M1,R1
Chrysene	ug/kg	53.6	40.6	39.7	422	191	907	345	10-150	75	57	M1,R1
Dibenz(a,h)anthracene	ug/kg	6.9	40.6	39.7	85.8	45.6	195	97	10-175	61	48	M1,R1
Fluoranthene	ug/kg	127	40.6	39.7	1050	397	2280	679	10-180	90	54	M1,R1
Fluorene	ug/kg	8.2	40.6	39.7	104	56.5	236	121	20-145	59	39	M1,R1
Indeno(1,2,3-cd)pyrene	ug/kg	24.7	40.6	39.7	229	93.0	504	172	10-150	84	59	M1,R1
Naphthalene	ug/kg	ND	40.6	39.7	117	40.1	282	94	10-165	98	54	M1,R1
Phenanthrene	ug/kg	99.2	40.6	39.7	969	322	2140	559	10-170	100	51	M1,R1
Pyrene	ug/kg	129	40.6	39.7	834	408	1740	701	10-180	69	61	M1,R1
2-Fluorobiphenyl (S)	%						90	81	40-120			
Terphenyl-d14 (S)	%						128	110	45-130			

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 781703	Analysis Method: EPA 8270
QC Batch Method: EPA 3546	Analysis Description: 8270 MSSV TPH ORO
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740024, 60397740025, 60397740026

METHOD BLANK: 3117668 Matrix: Solid

Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	ND	14.8	04/19/22 16:33	
TPH-ORO	mg/kg	ND	14.8	04/19/22 16:33	
2-Fluorobiphenyl (S)	%	81	50-120	04/19/22 16:33	
Nitrobenzene-d5 (S)	%	72	35-120	04/19/22 16:33	
Terphenyl-d14 (S)	%	95	45-120	04/19/22 16:33	

LABORATORY CONTROL SAMPLE: 3117669

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	332	322	97	40-125	
2-Fluorobiphenyl (S)	%			82	50-120	
Nitrobenzene-d5 (S)	%			80	35-120	
Terphenyl-d14 (S)	%			93	45-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3117670 3117671

Parameter	Units	60397740026		3117671		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
TPH-DRO	mg/kg	ND	1210	1170	1180	1160	97	99	40-125	1	38
2-Fluorobiphenyl (S)	%						87	86	50-120		
Nitrobenzene-d5 (S)	%						83	83	35-120		
Terphenyl-d14 (S)	%						94	94	45-120		

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 781707	Analysis Method: EPA 8270
QC Batch Method: EPA 3510C	Analysis Description: 8270 MSSV TPH ORO
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740043

METHOD BLANK: 3117681 Matrix: Water

Associated Lab Samples: 60397740043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/L	ND	1.0	04/18/22 08:03	
TPH-ORO	mg/L	ND	1.0	04/18/22 08:03	
2-Fluorobiphenyl (S)	%	63	25-120	04/18/22 08:03	
Nitrobenzene-d5 (S)	%	61	25-120	04/18/22 08:03	
Terphenyl-d14 (S)	%	61	35-120	04/18/22 08:03	

LABORATORY CONTROL SAMPLE: 3117682

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/L	100	62.8	63	15-120	
2-Fluorobiphenyl (S)	%			61	25-120	
Nitrobenzene-d5 (S)	%			59	25-120	
Terphenyl-d14 (S)	%			71	35-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil  
Pace Project No.: 60397740

QC Batch: 781708	Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C	Analysis Description: 8270 Water PAH by SIM MSSV
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740043

METHOD BLANK: 3117683 Matrix: Water

Associated Lab Samples: 60397740043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.10	04/18/22 12:39	
Acenaphthylene	ug/L	ND	0.10	04/18/22 12:39	
Anthracene	ug/L	ND	0.10	04/18/22 12:39	
Benzo(a)anthracene	ug/L	ND	0.10	04/18/22 12:39	
Benzo(a)pyrene	ug/L	ND	0.10	04/18/22 12:39	
Benzo(b)fluoranthene	ug/L	ND	0.10	04/18/22 12:39	
Benzo(g,h,i)perylene	ug/L	ND	0.10	04/18/22 12:39	
Benzo(k)fluoranthene	ug/L	ND	0.10	04/18/22 12:39	
Chrysene	ug/L	ND	0.10	04/18/22 12:39	
Dibenz(a,h)anthracene	ug/L	ND	0.10	04/18/22 12:39	
Fluoranthene	ug/L	ND	0.50	04/18/22 12:39	
Fluorene	ug/L	ND	0.10	04/18/22 12:39	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.10	04/18/22 12:39	
Naphthalene	ug/L	ND	0.50	04/18/22 12:39	
Phenanthrene	ug/L	ND	0.50	04/18/22 12:39	
Pyrene	ug/L	ND	0.10	04/18/22 12:39	
2-Fluorobiphenyl (S)	%	63	37-109	04/18/22 08:03	
Terphenyl-d14 (S)	%	61	34-120	04/18/22 08:03	

LABORATORY CONTROL SAMPLE: 3117684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	10	5.6	56	46-102	
Acenaphthylene	ug/L	10	6.0	60	48-112	
Anthracene	ug/L	10	5.8	58	50-114	
Benzo(a)anthracene	ug/L	10	6.2	62	52-124	
Benzo(a)pyrene	ug/L	10	5.3	53	56-119	1e
Benzo(b)fluoranthene	ug/L	10	6.1	61	49-116	
Benzo(g,h,i)perylene	ug/L	10	6.0	60	43-120	
Benzo(k)fluoranthene	ug/L	10	5.9	59	48-110	
Chrysene	ug/L	10	5.7	57	53-105	
Dibenz(a,h)anthracene	ug/L	10	5.6	56	39-127	
Fluoranthene	ug/L	10	6.7	67	54-122	
Fluorene	ug/L	10	6.0	60	47-109	
Indeno(1,2,3-cd)pyrene	ug/L	10	5.8	58	47-124	
Naphthalene	ug/L	10	5.5	55	42-103	
Phenanthrene	ug/L	10	5.5	55	47-107	
Pyrene	ug/L	10	4.8	48	44-104	
2-Fluorobiphenyl (S)	%			71	37-109	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

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LABORATORY CONTROL SAMPLE: 3117684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			56	34-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 781734

Analysis Method: EPA 8270C by SIM

QC Batch Method: EPA 3510C

Analysis Description: 8270 Water PAH by SIM MSSV

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740052

METHOD BLANK: 3117745

Matrix: Water

Associated Lab Samples: 60397740052

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.10	04/18/22 12:07	
Acenaphthylene	ug/L	ND	0.10	04/18/22 12:07	
Anthracene	ug/L	ND	0.10	04/18/22 12:07	
Benzo(a)anthracene	ug/L	ND	0.10	04/18/22 12:07	
Benzo(a)pyrene	ug/L	ND	0.10	04/18/22 12:07	
Benzo(b)fluoranthene	ug/L	ND	0.10	04/18/22 12:07	
Benzo(g,h,i)perylene	ug/L	ND	0.10	04/18/22 12:07	
Benzo(k)fluoranthene	ug/L	ND	0.10	04/18/22 12:07	
Chrysene	ug/L	ND	0.10	04/18/22 12:07	
Dibenz(a,h)anthracene	ug/L	ND	0.10	04/18/22 12:07	
Fluoranthene	ug/L	ND	0.50	04/18/22 12:07	
Fluorene	ug/L	ND	0.10	04/18/22 12:07	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.10	04/18/22 12:07	
Naphthalene	ug/L	ND	0.50	04/18/22 12:07	
Phenanthrene	ug/L	ND	0.50	04/18/22 12:07	
Pyrene	ug/L	ND	0.10	04/18/22 12:07	
2-Fluorobiphenyl (S)	%	72	37-109	04/18/22 12:07	
Terphenyl-d14 (S)	%	71	34-120	04/18/22 12:07	

LABORATORY CONTROL SAMPLE: 3117746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	10	5.6	56	46-102	
Acenaphthylene	ug/L	10	5.9	59	48-112	
Anthracene	ug/L	10	6.5	65	50-114	
Benzo(a)anthracene	ug/L	10	6.8	68	52-124	
Benzo(a)pyrene	ug/L	10	5.8	58	56-119	
Benzo(b)fluoranthene	ug/L	10	6.7	67	49-116	
Benzo(g,h,i)perylene	ug/L	10	5.9	59	43-120	
Benzo(k)fluoranthene	ug/L	10	6.1	61	48-110	
Chrysene	ug/L	10	6.2	62	53-105	
Dibenz(a,h)anthracene	ug/L	10	5.3	53	39-127	
Fluoranthene	ug/L	10	7.9	79	54-122	
Fluorene	ug/L	10	6.1	61	47-109	
Indeno(1,2,3-cd)pyrene	ug/L	10	5.5	55	47-124	
Naphthalene	ug/L	10	5.4	54	42-103	
Phenanthrene	ug/L	10	6.2	62	47-107	
Pyrene	ug/L	10	5.8	58	44-104	
2-Fluorobiphenyl (S)	%			63	37-109	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

LABORATORY CONTROL SAMPLE: 3117746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			59	34-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3117747 3117748

Parameter	Units	60397793001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Acenaphthene	ug/L	ND	11.1	11.1	6.6	6.3	59	57	42-109	4	42		
Acenaphthylene	ug/L	ND	11.1	11.1	7.0	6.7	63	60	51-110	4	33		
Anthracene	ug/L	0.096	11.1	11.1	7.3	7.1	65	63	50-118	3	38		
Benzo(a)anthracene	ug/L	0.19	11.1	11.1	7.3	7.2	64	63	34-140	2	33		
Benzo(a)pyrene	ug/L	0.14	11.1	11.1	6.5	6.2	57	55	34-133	4	35		
Benzo(b)fluoranthene	ug/L	0.19	11.1	11.1	7.3	7.2	64	63	31-133	1	33		
Benzo(g,h,i)perylene	ug/L	ND	11.1	11.1	6.8	6.3	61	56	21-137	8	37		
Benzo(k)fluoranthene	ug/L	0.10	11.1	11.1	6.8	6.6	60	58	30-121	3	42		
Chrysene	ug/L	0.17	11.1	11.1	6.9	6.6	60	58	35-116	4	33		
Dibenz(a,h)anthracene	ug/L	ND	11.1	11.1	6.3	5.7	57	51	24-148	10	45		
Fluoranthene	ug/L	0.48	11.1	11.1	8.6	8.4	73	71	44-133	2	37		
Fluorene	ug/L	ND	11.1	11.1	7.0	6.8	63	61	44-113	3	35		
Indeno(1,2,3-cd)pyrene	ug/L	ND	11.1	11.1	6.5	6.0	58	53	21-149	9	50		
Naphthalene	ug/L	ND	11.1	11.1	6.5	6.0	58	54	35-107	7	36		
Phenanthrene	ug/L	ND	11.1	11.1	6.9	6.6	60	57	41-110	5	37		
Pyrene	ug/L	0.30	11.1	11.1	6.4	6.1	55	53	26-114	3	35		
2-Fluorobiphenyl (S)	%						68	63	37-109				
Terphenyl-d14 (S)	%						60	57	34-120				

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

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QC Batch:	781650	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740001, 60397740002, 60397740003, 60397740004, 60397740005, 60397740006, 60397740007, 60397740008, 60397740009, 60397740010, 60397740011, 60397740012, 60397740013, 60397740014, 60397740015, 60397740016, 60397740017, 60397740018, 60397740019, 60397740020

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METHOD BLANK: 3117383 Matrix: Solid

Associated Lab Samples: 60397740001, 60397740002, 60397740003, 60397740004, 60397740005, 60397740006, 60397740007, 60397740008, 60397740009, 60397740010, 60397740011, 60397740012, 60397740013, 60397740014, 60397740015, 60397740016, 60397740017, 60397740018, 60397740019, 60397740020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/15/22 13:26	

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SAMPLE DUPLICATE: 3117384

Parameter	Units	60397740007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.5	19.6	1	20	

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### QUALITY CONTROL DATA

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

QC Batch: 783359	Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60397740024, 60397740025, 60397740026

METHOD BLANK: 3123911 Matrix: Solid

Associated Lab Samples: 60397740024, 60397740025, 60397740026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/26/22 17:22	

SAMPLE DUPLICATE: 3123912

Parameter	Units	60397740026 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.6	20.6	0	20	

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## QUALIFIERS

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

1e Analyte recovery in the laboratory control sample (LCS) was below QC limits, confirmed by re-analysis. Results for this analyte in associated samples may be biased low.

D4 Sample was diluted due to the presence of high levels of target analytes.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

R1 RPD value was outside control limits.

S0 Surrogate recovery outside laboratory control limits.

S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

c2 Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60397740001	GB-64/9-10	EPA 3050	782468	EPA 6020	782669
60397740002	GB-64/9-10D	EPA 3050	782468	EPA 6020	782669
60397740003	GB-64/13-14	EPA 3050	782468	EPA 6020	782669
60397740004	GB-64A/3-4	EPA 3050	782468	EPA 6020	782669
60397740005	GB-64A/5-6	EPA 3050	782468	EPA 6020	782669
60397740006	GB-64B/1.5-2.5	EPA 3050	782468	EPA 6020	782669
60397740007	GB-64B/7.5-8.5	EPA 3050	782468	EPA 6020	782669
60397740008	GB-64C/2.5-3.5	EPA 3050	782468	EPA 6020	782669
60397740009	GB-64C/4-5	EPA 3050	782468	EPA 6020	782669
60397740052	ERB04112022	EPA 3010	782261	EPA 6020	782340
60397740010	GB-62A/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740011	GB-62A/3-4	EPA 3546	781704	EPA 8270 by SIM	781921
60397740012	GB-62C/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740013	GB-62C/3-4	EPA 3546	781704	EPA 8270 by SIM	781921
60397740014	GB-62B/2.5-3.5	EPA 3546	781704	EPA 8270 by SIM	781921
60397740015	GB-62B/5-6	EPA 3546	781704	EPA 8270 by SIM	781921
60397740016	GB-40/15-16	EPA 3546	781704	EPA 8270 by SIM	781921
60397740017	GB-40/19-20	EPA 3546	781704	EPA 8270 by SIM	781921
60397740018	GB-40A/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740019	GB-40A/3-4	EPA 3546	781704	EPA 8270 by SIM	781921
60397740020	GB-40B/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740021	GB-40B/5-6	EPA 3546	781704	EPA 8270 by SIM	781921
60397740022	GB-40C/0.5-1.5	EPA 3546	781704	EPA 8270 by SIM	781921
60397740023	GB-40C/5.5-6.5	EPA 3546	781704	EPA 8270 by SIM	781921
60397740027	GB-45C/0.5-1.5	EPA 3546	781704	EPA 8270 by SIM	781921
60397740028	GB-45C/0.5-1.5D	EPA 3546	781704	EPA 8270 by SIM	781921
60397740029	GB-45C/2.5-3.5	EPA 3546	781704	EPA 8270 by SIM	781921
60397740030	GB-45B/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740031	GB-45B/3-4	EPA 3546	781704	EPA 8270 by SIM	781921
60397740032	GB-45A/1-2	EPA 3546	781704	EPA 8270 by SIM	781921
60397740033	GB-45A/3-4	EPA 3546	781706	EPA 8270 by SIM	782050
60397740034	DPTS-2/9-10	EPA 3546	781706	EPA 8270 by SIM	782050
60397740035	DPTS-2/13-14	EPA 3546	781706	EPA 8270 by SIM	782050
60397740036	GB-19B/2.5-3.5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740037	GB-19B/4-5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740038	GB-19A/0.5-1.5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740039	GB-19A/5.5-6.5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740040	GB-19C/1-2	EPA 3546	781706	EPA 8270 by SIM	782050
60397740041	GB-19C/1-2D	EPA 3546	781706	EPA 8270 by SIM	782050
60397740042	GB-19C/2-3	EPA 3546	781706	EPA 8270 by SIM	782050
60397740044	GB-13B/0.5-1.5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740045	GB-13B/2-3	EPA 3546	781706	EPA 8270 by SIM	782050
60397740046	GB-13A/0.5-1.5	EPA 3546	781706	EPA 8270 by SIM	782050
60397740047	GB-13A/5-6	EPA 3546	781706	EPA 8270 by SIM	782050
60397740048	GB-13/7-8	EPA 3546	781706	EPA 8270 by SIM	782050
60397740049	GB-13/11-12	EPA 3546	781706	EPA 8270 by SIM	782050
60397740050	GB-13C/1-2	EPA 3546	781706	EPA 8270 by SIM	782050

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60397740051	GB-13C/5-6	EPA 3546	781706	EPA 8270 by SIM	782050
60397740024	GB-59/12-13	EPA 3546	781703	EPA 8270	782119
60397740025	GB-59/12-13D	EPA 3546	781703	EPA 8270	782119
60397740026	GB-59/14-15	EPA 3546	781703	EPA 8270	782119
60397740043	ERB04122022	EPA 3510C	781707	EPA 8270	781797
60397740043	ERB04122022	EPA 3510C	781708	EPA 8270C by SIM	781834
60397740052	ERB04112022	EPA 3510C	781734	EPA 8270C by SIM	781832
60397740024	GB-59/12-13	EPA 5035A/5030	782793	EPA 8260B	782810
60397740025	GB-59/12-13D	EPA 5035A/5030	782793	EPA 8260B	782810
60397740026	GB-59/14-15	EPA 5035A/5030	782793	EPA 8260B	782810
60397740043	ERB04122022	EPA 5030B/8260	782422		
60397740053	TRIP BLANK	EPA 5030B/8260	782422		
60397740043	ERB04122022	EPA 8260	782424		
60397740053	TRIP BLANK	EPA 8260	783312		
60397740024	GB-59/12-13	EPA 5035	782794	EPA 8260	782804
60397740025	GB-59/12-13D	EPA 5035	782794	EPA 8260	782804
60397740026	GB-59/14-15	EPA 5035	782794	EPA 8260	782804
60397740001	GB-64/9-10	ASTM D2974	781650		
60397740002	GB-64/9-10D	ASTM D2974	781650		
60397740003	GB-64/13-14	ASTM D2974	781650		
60397740004	GB-64A/3-4	ASTM D2974	781650		
60397740005	GB-64A/5-6	ASTM D2974	781650		
60397740006	GB-64B/1.5-2.5	ASTM D2974	781650		
60397740007	GB-64B/7.5-8.5	ASTM D2974	781650		
60397740008	GB-64C/2.5-3.5	ASTM D2974	781650		
60397740009	GB-64C/4-5	ASTM D2974	781650		
60397740010	GB-62A/1-2	ASTM D2974	781650		
60397740011	GB-62A/3-4	ASTM D2974	781650		
60397740012	GB-62C/1-2	ASTM D2974	781650		
60397740013	GB-62C/3-4	ASTM D2974	781650		
60397740014	GB-62B/2.5-3.5	ASTM D2974	781650		
60397740015	GB-62B/5-6	ASTM D2974	781650		
60397740016	GB-40/15-16	ASTM D2974	781650		
60397740017	GB-40/19-20	ASTM D2974	781650		
60397740018	GB-40A/1-2	ASTM D2974	781650		
60397740019	GB-40A/3-4	ASTM D2974	781650		
60397740020	GB-40B/1-2	ASTM D2974	781650		
60397740021	GB-40B/5-6	ASTM D2974	781652		
60397740022	GB-40C/0.5-1.5	ASTM D2974	781652		
60397740023	GB-40C/5.5-6.5	ASTM D2974	781652		
60397740024	GB-59/12-13	ASTM D2974	783359		
60397740025	GB-59/12-13D	ASTM D2974	783359		
60397740026	GB-59/14-15	ASTM D2974	783359		

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 143702 GSA Goodfellow Soil

Pace Project No.: 60397740

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60397740027	GB-45C/0.5-1.5	ASTM D2974	781652		
60397740028	GB-45C/0.5-1.5D	ASTM D2974	781652		
60397740029	GB-45C/2.5-3.5	ASTM D2974	781652		
60397740030	GB-45B/1-2	ASTM D2974	781652		
60397740031	GB-45B/3-4	ASTM D2974	781652		
60397740032	GB-45A/1-2	ASTM D2974	781652		
60397740033	GB-45A/3-4	ASTM D2974	781652		
60397740034	DPTS-2/9-10	ASTM D2974	781652		
60397740035	DPTS-2/13-14	ASTM D2974	781652		
60397740036	GB-19B/2.5-3.5	ASTM D2974	781652		
60397740037	GB-19B/4-5	ASTM D2974	781652		
60397740038	GB-19A/0.5-1.5	ASTM D2974	781652		
60397740039	GB-19A/5.5-6.5	ASTM D2974	781652		
60397740040	GB-19C/1-2	ASTM D2974	781652		
60397740041	GB-19C/1-2D	ASTM D2974	781652		
60397740042	GB-19C/2-3	ASTM D2974	781652		
60397740044	GB-13B/0.5-1.5	ASTM D2974	781652		
60397740045	GB-13B/2-3	ASTM D2974	781735		
60397740046	GB-13A/0.5-1.5	ASTM D2974	781735		
60397740047	GB-13A/5-6	ASTM D2974	781735		
60397740048	GB-13/7-8	ASTM D2974	781735		
60397740049	GB-13/11-12	ASTM D2974	781735		
60397740050	GB-13C/1-2	ASTM D2974	781735		
60397740051	GB-13C/5-6	ASTM D2974	781735		

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WO#: 60397740



60397740



DC#\_Title: ENV-FRM-LENE-0009\_Sample Conc

(b) (6) Revision: 2  
4/14/22

Effective Date: 01/12/2022

Issued By: Lenexa

Client Name: ~~GSA~~ ~~Goodfellow~~ Soil Sampling Burns & McDonnell Engineering

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZPLC

Thermometer Used: T299 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3-8 Corr. Factor -1.0 Corrected 2.8

Date and initials of examining contents (b) (6) 4/14/22

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	(b) (6) 4/14/22
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>SL, WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: <u>No</u> State: <u>MO</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_

Client: Burns & McDonnell Engineering

Profile # 143702

Site: GSA Goodfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2	SL															1														
3	WT	3												2									1							
4	WT		1	TRIP BLANK																										
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number: 60397740

Client: Burns & McDonnell Engineering

Profile # 143702

Site: GSA Goodfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2																1														
3																1														
4																1														
5	↓															1														
6	WT	3												2																
7	SL															1														
8																1														
9																1														
10																1														
11																1														
12	↓															1														

(b)  
(6)

4/14/22  
1

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unres amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				
BG1U	1liter unres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number: 60397740



Client: Burns & McDonnell Engineering

Profile # 143703

Site: GSA Goodfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2																1														
3																1														
4																1														
5																1														
6																1														
7																1														
8																1														
9																1														
10																1														
11																1														
12																1														

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NAOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NAOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				<b>Matrix</b>
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number: 60397740

Client: Burns & McDonnell Engineering

Profile # 143702

Site: GSA Goodfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2																1														
3																1														
4																1														
5																1														
6																1														
7	WT						1	2							1															
8							1	2							1															
9							1	2							1															
10							1	2							1															
11	WT						1	2							1															
12	SL						1	2							1															

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number:

60397740

Client: Burns & McDonnell Engineering

Profile # 143702

Site: GSA Goatfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2																1														
3																1														
4																1														
5																1														
6																1														
7																1														
8																1														
9																														
10																														
11																														
12																														

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGDU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number:

60397740

Client: Burns & McDonnell Engineering

Profile # 143702

Site: GSA Goodfellow Soil Sampling

Notes \_\_\_\_\_

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	SL															1														
2																1														
3																1														
4																1														
5																1														
6																1														
7																1														
8																1														
9																1														
10																1														
11																1														
12																1														

Container Codes

Glass				Plastic				Misc.	
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	I	Wipe/Swab		
DG9H	40mL HCl amber vial	WGFU	4oz clear soil jar	BP1N	1L HNO3 plastic	SP5T	120mL Coliform Na Thiosulfate		
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	ZPLC	Ziploc Bag		
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	AF	Air Filter		
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	C	Air Cassettes		
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	R	Terracore Kit		
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	U	Summa Can		
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic				
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic				
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate				
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic				
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	WT	Water		
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	SL	Solid		
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL unpreserved plastic	NAL	Non-aqueous Liquid		
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	OL	OIL		
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	WP	Wipe		
				BP4U	125mL unpreserved plastic	DW	Drinking Water		
				BP4N	125mL HNO3 plastic				
				BP4S	125mL H2SO4 plastic				
				WPDU	16oz unpreserved plastic				

Work Order Number:

60397740



Request for Chemical Analysis and Chain of Custody Record

PG. 5

Burns & McDonnell Engineering  
 9400 Ward Parkway  
 Kansas City, Missouri 64114  
 Phone: (816) 333-9400 Fax: (816) 822-3494

Laboratory: Pace Analytical  
 Address: 9608 Loriet Blvd.  
 City/State/Zip: Lenexa, KS 66219

Document Control No: 143202-04122022-003

Lab. Reference No. or Episode No.:

Attention: Justin Carter

Telephone: 913-563-1408, jeff.shopper@pacelabs.com

Project Number: 143702

10409 - 16

Client Name: GSA Goodfellow Soil Sampling

Matrix

Analysis

not 160397740

Sample Number	Sample Event		Sample Depth		Sample Collected		Matrix			Number of Containers	8260 VOCs/GRO	8270 DRO/DRO	8270 PAH-SIM	6020 AS
	Round	Year	From	To	Date	Time	Liquid	Solid	Gas					
GB-13B/0.5-1.5			0.5	1.5	4/12/22	1609		X		1		X		
GB-13B/2-3			2	3	4/12/22	16011		X		1		X		
GB-13A/0.5-1.5			0.5	1.5	4/12/22	1628		X		1		X		
GB-13A/5-6			5	6	4/12/22	1630		X		1		X		
GB-13/7-8			7	8	4/12/22	1651		X		1		X		
GB-13/11-12			11	12	4/12/22	1653		X		1		X		
GB-13C/1-2			1	2	4/12/22	1712		X		1		X		
GB-13C/5-6			5	6	4/12/22	1715		X		1		X		
ERB04112022			-	-	4/12/22	800	X			6		X	X	
Trip Blank											X			

Sampler (signature):

Sampler (signature):

Custody Seal Number:

Special Instructions:

Relinquished By (signature):

Date/Time

Received By (signature):

Date/Time

Ice Present in Container:

Temperature Upon receipt:

Relinquished By (signature):

Date/Time

Received By (signature):

Date/Time

Laboratory Comments:



Request for Chemical Analysis and Chain of Custody Record

PG-4

Burns & McDonnell Engineering 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 822-3494	<b>Laboratory:</b> Pace Analytical	<b>Document Control No:</b> 143702-04122022-001
	<b>Address:</b> 9608 Loriet Blvd.	<b>Lab. Reference No. or Episode No.:</b>
	<b>City/State/Zip:</b> Lenexa, KS 66219	
<b>Attention:</b> Justin Carter	<b>Telephone:</b> 913-563-1408, jeff.shopper@pacelabs.com	

Project Number: 143702 10409 - 16

Client Name: GSA Goodfellow Soil Sampling Matrix

Sample Number	Sample Event		Sample Depth		Sample Collected		Liquid	Solid	Gas	Number of Containers	Analysis					
	Round	Year	From	To	Date	Time					8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM	6020 AS		
GB-45B/3-4			3	4	4/12/22	1154		X		1			X			
GB-45A/1-2			1	2	4/12/22	1208		X		1			X			
GB-45A/3-4			3	4	4/12/22	1209		X		1			X			
GB-45A/3-4 M4			3	4	4/12/22	1209		X		1			X			
GB-45A/3-4 M5B			3	4	4/12/22	1209		X		1			X			
DPTS-2/9-10			9	10	4/12/22	1334		X		1			X			
DPTS-2/13-14			13	14	4/12/22	1337		X		1			X			
GB-19B/2.5-3.5			2.5	3.5	4/12/22	1417		X		1			X			
GB-19B/4-5			4	5	4/12/22	1419		X		1			X			
GB-19A/0.5-1.5			0.5	1.5	4/12/22	1438		X		1			X			
GB-19A/5.5-6.5			5.5	6.5	4/12/22	1440		X		1			X			
GB-19C/1-2			1	2	4/12/22	1500		X		1			X			
GB-19C/1-2b			1	2	4/12/22	1500		X		1			X			
GB-19C/2-3			2	3	4/12/22	1503		X		1			X			
FRB 04122022			-	-	4/12/22	1547	X			6	X	X	X			

W0#G0397746

<b>Sampler (signature):</b> (b) (6)	<b>Sampler (signature):</b> (b) (6)	<b>Custody Seal Number:</b> Aur- Aur-	<b>Special Instructions:</b>
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<b>Relinquished By (signature):</b> (b) (6)	<b>Date/Time:</b> 4/13 1000	<b>Received By (signature):</b> (b) (6)	<b>Date/Time:</b> 4/13 10:00	<b>Ice Present in Container:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Temperature Upon receipt:</b>
--	--------------------------------	--	---------------------------------	--	----------------------------------

<b>Relinquished By (signature):</b> (b) (6)	<b>Date/Time:</b> 4/13 10:23	<b>Received By (signature):</b> (b) (6)	<b>Date/Time:</b> 4/13 10:23	<b>Laboratory Comments:</b>
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Page 1 of 2  
7 of 100



### Request for Chemical Analysis and Chain of Custody Record

P9.3

Burns & McDonnell Engineering 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 822-3494	<b>Laboratory:</b> Pace Analytical  <b>Address:</b> 9608 Loriet Blvd.  <b>City/State/Zip:</b> Lenexa, KS 66219  <b>Telephone:</b> 913-563-1408, jeff.shopper@pacelabs.com	<b>Document Control No:</b> 143702-07122022-001  <b>Lab. Reference No. or Episode No.:</b>																
<b>Attention:</b> Justin Carter		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4">Analysis</th> </tr> <tr> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">8260 VOCs/GRO</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">8270 DRO/ORO</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">8270 PAH-SIM</td> </tr> <tr> <td></td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">6020 As</td> <td></td> <td></td> </tr> </table>	Analysis								Number of Containers	8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM		6020 As		
Analysis																		
Number of Containers	8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM															
	6020 As																	

**Project Number:** 143702 10409 - 16

**Client Name:** GSA Goodfellow Soil Sampling Matrix

Sample Number	Sample Event		Sample Depth		Sample Collected		Liquid	Solid	Gas	Number of Containers	8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM	6020 As
	Round	Year	From	To	Date	Time								
GB-40A/1-2			1	2	4/12/22	829		X		1			X	
GB-40A/3-4			3	4	4/12/22	830		X		1			X	
GB-40B/1-2			1	2	4/12/22	851		X		1			X	
GB-40B/5-6			5	6	4/12/22	853		X		1			X	
GB-40C/0.5-1.5			0.5	1.5	4/12/22	920		X		1			X	
GB-40C/5.5-6.5			5.5	6.5	4/12/22	922		X		1			X	
GB-59/12-13			12	13	4/12/22	1038		X		4	X	X		
GB-59/12-13D			12	13	4/12/22	1038		X		4	X	X		
GB-59/14-15			14	15	4/12/22	1041		X		4	X	X		
GB-59/14-15 MS			14	15	4/12/22	1041		X		4	X	X		
GB-59/14-15 MSB			14	15	4/12/22	1041		X		4	X	X		
GB-45C/0.5-1.5			0.5	1.5	4/12/22	1124		X		1			X	
GB-45C/0.5-1.5D			0.5	1.5	4/12/22	1124		X		1			X	
GB-45C/2.5-3.5			2.5	3.5	4/12/22	1126		X		1			X	
GB-45B/1-2			1	2	4/12/22	1153		X		1			X	

W04:60397740

<b>Sampler (signature):</b> (b) (6)	<b>Sampler (signature):</b> (b) (6)	<b>Custody Seal Number:</b> Aur- Aur-	<b>Special Instructions:</b>
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<b>Relinquished By (signature):</b> (b) (6)	<b>Date/Time</b> 4/13 1000	<b>Received By (signature):</b> (b) (6)	<b>Date/Time</b> 4/13/22	<b>Ice Present in Container:</b> Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Temperature Upon receipt:</b>
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<b>Relinquished By (signature):</b> (b) (6)	<b>Date/Time</b> 4/13 1023	<b>Received By (signature):</b> (b) (6)	<b>Date/Time</b> 4/13 1023	<b>Laboratory Comments:</b>	
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Page 8 of 20







Request for Chemical Analysis and Chain of Custody Record

Pg 1

Burns & McDonnell Engineering 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 822-3494	Laboratory: Pace Analytical	Document Control No: 143702-04112022-001
	Address: 9608 Loriet Blvd.	Lab. Reference No. or Episode No.:
	City/State/Zip: Lenexa, KS 66219	

Attention: Justin Carter	Telephone: 913-563-1408, jeff.shopper@pacelabs.com
Project Number: 143702	10409 - 16

Sample Number	Sample Event		Sample Depth		Sample Collected		Matrix			Number of Containers	Analysis			
	Round	Year	From	To	Date	Time	Liquid	Solid	Gas		8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM	6020 As
GB-64/9-10			9	10	4/11/22	1050		X		1			X	
GB-64/9-10B			9	10	4/11/22	1050		X		1			X	
GB-64/13-14			13	14	4/11/22	1052		X		1			X	
GB-64A/3-4			3	4	4/11/22	1121		X		1			X	
GB-64A/5-6			5	6	4/11/22	1123		X		1			X	
GB-64B/1.5-2.5			1.5	2.5	4/11/22	1144		X		1			X	
GB-64B/7.5-8.5			7.5	8.5	4/11/22	1152		X		1			X	
GB-64B/7.5-8.5 mG			7.5	8.5	4/11/22	1152		X		1			X	
GB-64B/7.5-8.5 mGB			7.5	8.5	4/11/22	1152		X		1			X	
GB-64C/2.5-3.5			2.5	3.5	4/11/22	1208		X		1			X	
GB-64C/4-5			4	5	4/11/22	1209		X		1			X	
<del>GB-64</del> GB-62A/1-2			1	2	4/11/22	1327		X		1		X	X	
GB-62A/3-4			3	4	4/11/22	1328		X		1		X	X	
GB-62C/1-2			1	2	4/11/22	1342		X		1		X	X	
GB-62C/3-4			3	4	4/11/22	1345		X		1		X	X	

wo#: 60397740

Sampler (signature): (b) (6)	Sampler (signature): (b) (6)	Custody Seal Number: Aur- Aur- 4/13/22	Special Instructions:
Relinquished By (signature): 1. (b) (6)	Date/Time: 4/13 1000	Received By (signature): (b) (6)	Date/Time: 10:00
Relinquished By (signature): 2. (b) (6)	Date/Time: 4/13 1023	Received By (signature): (b) (6)	Date/Time: 1023
Ice Present in Container: Yes <input type="checkbox"/> No <input type="checkbox"/>		Temperature Upon receipt:	
Laboratory Comments:			

Page 1 of 1

May 02, 2022

Justin Carter  
Burns & McDonnell  
9400 Ward Parkway  
Kansas City, MO 64114

RE: Project: 143702 GSA GOODFELLOW SOIL SAM  
Pace Project No.: 60398001

Dear Justin Carter:

Enclosed are the analytical results for sample(s) received by the laboratory on April 16, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

(b) (6)

Alice Spiller  
alice.spiller@pacelabs.com  
(913)599-5665  
PM Lab Management

Enclosures

cc: SHAUNA LAWRENCE, BURNS & MCDONNELL  
Jacquelin Lee, Burns & McDonnell



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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### **Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 20-020-0

Arkansas Drinking Water

Illinois Certification #: 2000302021-3

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212020-2

Oklahoma Certification #: 9205/9935

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-21-15

Utah Certification #: KS000212019-9

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60398001001	GB-09C/2-3	Solid	04/14/22 08:11	04/16/22 04:47
60398001002	GB-09C/5-6	Solid	04/14/22 08:13	04/16/22 04:47
60398001003	GB-09A/3-4	Solid	04/14/22 08:29	04/16/22 04:47
60398001004	GB-09A/5-6	Solid	04/14/22 08:32	04/16/22 04:47
60398001005	GB-09B/4-5	Solid	04/14/22 08:52	04/16/22 04:47
60398001006	GB-09B/9-10	Solid	04/14/22 08:55	04/16/22 04:47
60398001007	B-11AA/1-2	Solid	04/14/22 09:21	04/16/22 04:47
60398001008	B-11AA/4-5	Solid	04/14/22 09:26	04/16/22 04:47
60398001009	B-11AB/1.5-2.5	Solid	04/14/22 09:38	04/16/22 04:47
60398001010	B-11AB/4-5	Solid	04/14/22 09:40	04/16/22 04:47
60398001011	B-11AC/1-2	Solid	04/14/22 09:55	04/16/22 04:47
60398001012	B-11AC/4-5	Solid	04/14/22 09:56	04/16/22 04:47
60398001013	GB-50C/1.5-2.5	Solid	04/14/22 10:46	04/16/22 04:47
60398001014	GB-50C/4.0-5.0	Solid	04/14/22 10:50	04/16/22 04:47
60398001015	GB-50A/1.5-2.5	Solid	04/14/22 11:02	04/16/22 04:47
60398001016	GB-50B/1-2	Solid	04/14/22 11:55	04/16/22 04:47
60398001017	GB-50B/2.5-3.5	Solid	04/14/22 11:57	04/16/22 04:47
60398001018	GB-44A/3.5-4.5	Solid	04/14/22 12:26	04/16/22 04:47
60398001019	GB-44A/5-6	Solid	04/14/22 12:28	04/16/22 04:47
60398001020	GB-44B/2.5-3.5	Solid	04/14/22 12:37	04/16/22 04:47
60398001021	GB-44B/5-6	Solid	04/14/22 12:43	04/16/22 04:47
60398001022	ERB04142022	Water	04/14/22 13:30	04/16/22 04:47
60398001023	GB-50A/2.5-3.5	Solid	04/14/22 11:04	04/16/22 04:47
60398001024	GB-72/8-9	Solid	04/14/22 15:35	04/16/22 04:47
60398001025	GB-72/12-13	Solid	04/14/22 15:36	04/16/22 04:47
60398001026	GB-72/4-5	Solid	04/14/22 16:08	04/16/22 04:47
60398001027	GB-72/0.5-1.5	Solid	04/14/22 11:13	04/16/22 04:47
60398001028	GB-72/8-9D	Solid	04/14/22 15:35	04/16/22 04:47
60398001029	TRIP BLANK 1	Water	04/14/22 08:00	04/16/22 04:47
60398001030	TRIP BLANK 2	Water	04/14/22 08:00	04/16/22 04:47

## REPORT OF LABORATORY ANALYSIS

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**SAMPLE ANALYTE COUNT**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60398001001	GB-09C/2-3	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001002	GB-09C/5-6	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001003	GB-09A/3-4	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001004	GB-09A/5-6	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001005	GB-09B/4-5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001006	GB-09B/9-10	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001007	B-11AA/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001008	B-11AA/4-5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001009	B-11AB/1.5-2.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001010	B-11AB/4-5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001011	B-11AC/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001012	B-11AC/4-5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001013	GB-50C/1.5-2.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001014	GB-50C/4.0-5.0	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001015	GB-50A/1.5-2.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001016	GB-50B/1-2	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001017	GB-50B/2.5-3.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001018	GB-44A/3.5-4.5	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001019	GB-44A/5-6	EPA 8270 by SIM	JMT	18	PASI-K

**REPORT OF LABORATORY ANALYSIS**

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### SAMPLE ANALYTE COUNT

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60398001020	GB-44B/2.5-3.5	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60398001021	GB-44B/5-6	ASTM D2974	DWC	1	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60398001022	ERB04142022	ASTM D2974	DWC	1	PASI-K
60398001023	GB-50A/2.5-3.5	EPA 8270C by SIM	JMT	18	PASI-K
60398001024	GB-72/8-9	EPA 8270 by SIM	JMT	18	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K
60398001025	GB-72/12-13	EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
60398001026	GB-72/4-5	EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60398001027	GB-72/0.5-1.5	EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
60398001028	GB-72/8-9D	EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
60398001028	GB-72/8-9D	ASTM D2974	DWC	1	PASI-K
		EPA 8082	AJA1	8	PASI-K

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	JLH	5	PASI-K
		EPA 8270 by SIM	JMT	18	PASI-K
		EPA 8270	NAW	5	PASI-K
		EPA 8260B	RAD	94	PASI-K
		EPA 8260	RAD	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
<b>60398001029</b>	<b>TRIP BLANK 1</b>	EPA 5030B/8260	CSC	95	PASI-K
<b>60398001030</b>	<b>TRIP BLANK 2</b>	EPA 5030B/8260	CSC	95	PASI-K

PASI-K = Pace Analytical Services - Kansas City

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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**Method:** EPA 8082

**Description:** 8082 GCS PCB SW

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

5 samples were analyzed for EPA 8082 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

QC Batch: 782201

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- BLANK (Lab ID: 3119502)
  - PCB-1016 (Aroclor 1016)
  - PCB-1260 (Aroclor 1260)
- LCS (Lab ID: 3119503)
  - PCB-1016 (Aroclor 1016)
  - PCB-1260 (Aroclor 1260)

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

- GB-72/0.5-1.5 (Lab ID: 60398001027)
  - Decachlorobiphenyl (S)
- GB-72/12-13 (Lab ID: 60398001025)
  - Decachlorobiphenyl (S)
- GB-72/4-5 (Lab ID: 60398001026)
  - Decachlorobiphenyl (S)
- GB-72/8-9 (Lab ID: 60398001024)
  - Decachlorobiphenyl (S)
- GB-72/8-9D (Lab ID: 60398001028)
  - Decachlorobiphenyl (S)
- MS (Lab ID: 3119504)
  - Decachlorobiphenyl (S)
- MSD (Lab ID: 3119505)
  - Decachlorobiphenyl (S)

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8082

**Description:** 8082 GCS PCB SW

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 6010

**Description:** 6010 MET ICP Red. Interference

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

5 samples were analyzed for EPA 6010 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 783257

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397792001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3123322)
  - Antimony
  - Zinc
- MSD (Lab ID: 3123323)
  - Antimony
  - Copper

R1: RPD value was outside control limits.

- MSD (Lab ID: 3123323)
  - Copper

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

### General Information:

27 samples were analyzed for EPA 8270 by SIM by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

QC Batch: 782203

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- GB-72/0.5-1.5 (Lab ID: 60398001027)

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 782452

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- GB-44A/5-6 (Lab ID: 60398001019)
  - 2-Fluorobiphenyl (S)
  - Terphenyl-d14 (S)

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

QC Batch: 782203

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001028

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3119512)
  - Fluoranthene

QC Batch: 782204

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001002,60398001007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3119516)
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Fluoranthene
  - Indeno(1,2,3-cd)pyrene
  - Phenanthrene
  - Pyrene
- MS (Lab ID: 3119518)
  - Acenaphthene
  - Benzo(a)anthracene
  - Benzo(b)fluoranthene
  - Chrysene
  - Fluoranthene
  - Fluorene
  - Naphthalene
  - Phenanthrene
  - Pyrene
- MSD (Lab ID: 3119517)
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Fluoranthene
  - Indeno(1,2,3-cd)pyrene
  - Phenanthrene
  - Pyrene
- MSD (Lab ID: 3119519)
  - Acenaphthene
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(b)fluoranthene

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

QC Batch: 782204

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001002,60398001007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Chrysene
- Fluoranthene
- Fluorene
- Naphthalene
- Phenanthrene
- Pyrene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3119519)
  - Acenaphthene
  - Anthracene
  - Chrysene
  - Fluorene
  - Phenanthrene

QC Batch: 782452

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001019

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3120427)
  - Acenaphthene
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Fluoranthene
  - Fluorene
  - Indeno(1,2,3-cd)pyrene
  - Phenanthrene
  - Pyrene
- MSD (Lab ID: 3120428)
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene
  - Benzo(k)fluoranthene
  - Chrysene
  - Dibenz(a,h)anthracene
  - Fluoranthene

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8270 by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

QC Batch: 782452

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60398001019

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Fluorene
- Indeno(1,2,3-cd)pyrene
- Phenanthrene
- Pyrene

R1: RPD value was outside control limits.

- MSD (Lab ID: 3120428)
  - Acenaphthylene
  - Fluoranthene
  - Phenanthrene
  - Pyrene

### Additional Comments:

Analyte Comments:

QC Batch: 782203

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GB-72/0.5-1.5 (Lab ID: 60398001027)
  - 2-Fluorobiphenyl (S)
- GB-72/4-5 (Lab ID: 60398001026)
  - 2-Fluorobiphenyl (S)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8270

**Description:** 8270 MSSV DRO/ORO

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

5 samples were analyzed for EPA 8270 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

QC Batch: 782202

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- GB-72/0.5-1.5 (Lab ID: 60398001027)

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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**Method:** EPA 8270C by SIM

**Description:** 8270 MSSV PAH by SIM

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

1 sample was analyzed for EPA 8270C by SIM by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8260B

**Description:** 8260 MSV 5035A VOA

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

5 samples were analyzed for EPA 8260B by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035A/5030 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

QC Batch: 782793

IO: The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.

- GB-72/0.5-1.5 (Lab ID: 60398001027)
- 4-Bromofluorobenzene (S)

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 782793

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- GB-72/0.5-1.5 (Lab ID: 60398001027)
- 4-Bromofluorobenzene (S)

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 782793

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 3121604)
- 1,4-Dioxane (p-Dioxane)

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8260B

**Description:** 8260 MSV 5035A VOA

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

QC Batch: 782793

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- 2-Methylnaphthalene
- trans-1,4-Dichloro-2-butene

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 782793

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60397740026

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 3121605)
  - 1,1,2,2-Tetrachloroethane
  - 2-Butanone (MEK)
  - 2-Hexanone
  - Methyl acetate
  - Trichloroethene
- MSD (Lab ID: 3121606)
  - 1,1,2,2-Tetrachloroethane
  - 1,1-Dichloroethene
  - 2-Butanone (MEK)
  - 2-Hexanone
  - Acetone
  - Cyclohexanone
  - Methyl acetate
  - Trichloroethene

### Additional Comments:

Analyte Comments:

QC Batch: 782793

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3121603)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-72/0.5-1.5 (Lab ID: 60398001027)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-72/12-13 (Lab ID: 60398001025)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-72/4-5 (Lab ID: 60398001026)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

---

**Method:** EPA 8260B

**Description:** 8260 MSV 5035A VOA

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

Analyte Comments:

QC Batch: 782793

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- GB-72/8-9 (Lab ID: 60398001024)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- GB-72/8-9D (Lab ID: 60398001028)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- LCS (Lab ID: 3121604)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- MS (Lab ID: 3121605)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane
- MSD (Lab ID: 3121606)
  - Tetrahydrofuran
  - 1,1,2-Trichlorotrifluoroethane

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

### General Information:

2 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### Additional Comments:

Analyte Comments:

QC Batch: 783081

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 3122703)
  - 1,1,2-Trichlorotrifluoroethane
- LCS (Lab ID: 3122704)
  - 1,1,2-Trichlorotrifluoroethane
- TRIP BLANK 1 (Lab ID: 60398001029)
  - 1,1,2-Trichlorotrifluoroethane
- TRIP BLANK 2 (Lab ID: 60398001030)
  - 1,1,2-Trichlorotrifluoroethane

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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**Method:** EPA 8260

**Description:** 8260 MSV GRO and Oxygenates

**Client:** BURNS & MCDONNELL

**Date:** May 02, 2022

**General Information:**

5 samples were analyzed for EPA 8260 by Pace Analytical Services Kansas City. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 5035 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

**Surrogates:**

All surrogates were within QC limits with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09C/2-3**      **Lab ID: 60398001001**      Collected: 04/14/22 08:11      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	21.0	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	83-32-9	
Acenaphthylene	17.1	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	208-96-8	
Anthracene	68.8	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	120-12-7	
Benzo(a)anthracene	201	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	56-55-3	
Benzo(a)pyrene	177	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	50-32-8	
Benzo(b)fluoranthene	270	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	205-99-2	
Benzo(g,h,i)perylene	121	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	191-24-2	
Benzo(k)fluoranthene	88.8	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	207-08-9	
Chrysene	191	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	218-01-9	
Dibenz(a,h)anthracene	24.4	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	53-70-3	
Fluoranthene	456	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	206-44-0	
Fluorene	19.3	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	86-73-7	
Indeno(1,2,3-cd)pyrene	104	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	193-39-5	
Naphthalene	6.0	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	91-20-3	
Phenanthrene	253	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	85-01-8	
Pyrene	382	ug/kg	4.0	1	04/20/22 11:40	04/21/22 13:59	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	78	%	40-120	1	04/20/22 11:40	04/21/22 13:59	321-60-8	
Terphenyl-d14 (S)	87	%	45-130	1	04/20/22 11:40	04/21/22 13:59	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	20.8	%	0.50	1		04/20/22 16:28		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09C/5-6**      **Lab ID: 60398001002**      Collected: 04/14/22 08:13      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	12.8	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	83-32-9	
Acenaphthylene	7.3	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	208-96-8	
Anthracene	46.6	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	120-12-7	
Benzo(a)anthracene	151	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	56-55-3	M1
Benzo(a)pyrene	112	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	50-32-8	M1
Benzo(b)fluoranthene	187	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	205-99-2	M1
Benzo(g,h,i)perylene	71.8	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	191-24-2	M1
Benzo(k)fluoranthene	59.9	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	207-08-9	M1
Chrysene	142	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	218-01-9	M1
Dibenz(a,h)anthracene	16.3	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	53-70-3	
Fluoranthene	344	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	206-44-0	M1
Fluorene	10.4	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	86-73-7	
Indeno(1,2,3-cd)pyrene	64.3	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	193-39-5	M1
Naphthalene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	91-20-3	
Phenanthrene	176	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	85-01-8	M1
Pyrene	269	ug/kg	4.2	1	04/20/22 11:40	04/21/22 14:17	129-00-0	M1
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	85	%	40-120	1	04/20/22 11:40	04/21/22 14:17	321-60-8	
Terphenyl-d14 (S)	96	%	45-130	1	04/20/22 11:40	04/21/22 14:17	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	24.2	%	0.50	1		04/20/22 16:28		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09A/3-4**      **Lab ID: 60398001003**      Collected: 04/14/22 08:29      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	229	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	83-32-9	
Acenaphthylene	66.7	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	208-96-8	
Anthracene	660	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	120-12-7	
Benzo(a)anthracene	1350	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	56-55-3	
Benzo(a)pyrene	1070	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	50-32-8	
Benzo(b)fluoranthene	1700	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	205-99-2	
Benzo(g,h,i)perylene	550	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	191-24-2	
Benzo(k)fluoranthene	516	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	207-08-9	
Chrysene	1200	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	218-01-9	
Dibenz(a,h)anthracene	124	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	53-70-3	
Fluoranthene	3130	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	206-44-0	
Fluorene	204	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	86-73-7	
Indeno(1,2,3-cd)pyrene	503	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	193-39-5	
Naphthalene	94.4	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:11	91-20-3	
Phenanthrene	2220	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	85-01-8	
Pyrene	2710	ug/kg	38.9	10	04/20/22 11:40	04/22/22 13:39	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	40-120	1	04/20/22 11:40	04/21/22 15:11	321-60-8	
Terphenyl-d14 (S)	94	%	45-130	1	04/20/22 11:40	04/21/22 15:11	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	17.7	%	0.50	1		04/20/22 16:28		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09A/5-6**      **Lab ID: 60398001004**      Collected: 04/14/22 08:32      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	15.9	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	83-32-9	
Acenaphthylene	18.4	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	208-96-8	
Anthracene	60.4	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	120-12-7	
Benzo(a)anthracene	109	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	56-55-3	
Benzo(a)pyrene	82.2	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	50-32-8	
Benzo(b)fluoranthene	124	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	205-99-2	
Benzo(g,h,i)perylene	40.2	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	191-24-2	
Benzo(k)fluoranthene	32.5	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	207-08-9	
Chrysene	92.9	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	218-01-9	
Dibenz(a,h)anthracene	11.0	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	53-70-3	
Fluoranthene	247	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	206-44-0	
Fluorene	22.1	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	86-73-7	
Indeno(1,2,3-cd)pyrene	39.2	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	193-39-5	
Naphthalene	8.2	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	91-20-3	
Phenanthrene	222	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	85-01-8	
Pyrene	194	ug/kg	3.9	1	04/20/22 11:40	04/21/22 15:30	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	73	%	40-120	1	04/20/22 11:40	04/21/22 15:30	321-60-8	
Terphenyl-d14 (S)	83	%	45-130	1	04/20/22 11:40	04/21/22 15:30	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	19.7	%	0.50	1		04/20/22 16:28		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09B/4-5**      **Lab ID: 60398001005**      Collected: 04/14/22 08:52      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	208-96-8	
Anthracene	<b>12.8</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	120-12-7	
Benzo(a)anthracene	<b>57.7</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	56-55-3	
Benzo(a)pyrene	<b>51.6</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	50-32-8	
Benzo(b)fluoranthene	<b>83.5</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	205-99-2	
Benzo(g,h,i)perylene	<b>32.2</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	191-24-2	
Benzo(k)fluoranthene	<b>31.8</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	207-08-9	
Chrysene	<b>57.9</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	218-01-9	
Dibenz(a,h)anthracene	<b>6.7</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	53-70-3	
Fluoranthene	<b>142</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	206-44-0	
Fluorene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>29.2</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	193-39-5	
Naphthalene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	91-20-3	
Phenanthrene	<b>53.5</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	85-01-8	
Pyrene	<b>111</b>	ug/kg	4.2	1	04/20/22 11:40	04/21/22 15:48	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	73	%	40-120	1	04/20/22 11:40	04/21/22 15:48	321-60-8	
Terphenyl-d14 (S)	81	%	45-130	1	04/20/22 11:40	04/21/22 15:48	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>23.3</b>	%	0.50	1		04/20/22 16:28		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-09B/9-10**      **Lab ID: 60398001006**      Collected: 04/14/22 08:55      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	120-12-7	
Benzo(a)anthracene	<b>4.9</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	56-55-3	
Benzo(a)pyrene	<b>5.2</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	50-32-8	
Benzo(b)fluoranthene	<b>9.8</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	207-08-9	
Chrysene	<b>5.6</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	53-70-3	
Fluoranthene	<b>10.6</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	91-20-3	
Phenanthrene	<b>5.6</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	85-01-8	
Pyrene	<b>12.1</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:06	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	40-120	1	04/20/22 11:40	04/21/22 16:06	321-60-8	
Terphenyl-d14 (S)	86	%	45-130	1	04/20/22 11:40	04/21/22 16:06	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.4</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AA/1-2**      **Lab ID: 60398001007**      Collected: 04/14/22 09:21      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	135	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	83-32-9	M1, R1
Acenaphthylene	20.8	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	208-96-8	
Anthracene	135	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	120-12-7	M1, R1
Benzo(a)anthracene	80.9	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	56-55-3	M1
Benzo(a)pyrene	40.6	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	50-32-8	
Benzo(b)fluoranthene	78.7	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	205-99-2	M1
Benzo(g,h,i)perylene	18.0	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	191-24-2	
Benzo(k)fluoranthene	18.6	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	207-08-9	
Chrysene	70.2	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	218-01-9	M1, R1
Dibenz(a,h)anthracene	4.9	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	53-70-3	
Fluoranthene	337	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	206-44-0	M1
Fluorene	176	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	86-73-7	M1, R1
Indeno(1,2,3-cd)pyrene	18.4	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	193-39-5	
Naphthalene	176	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	91-20-3	M1
Phenanthrene	532	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	85-01-8	M1, R1
Pyrene	214	ug/kg	4.0	1	04/20/22 11:40	04/21/22 16:24	129-00-0	M1
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	76	%	40-120	1	04/20/22 11:40	04/21/22 16:24	321-60-8	
Terphenyl-d14 (S)	84	%	45-130	1	04/20/22 11:40	04/21/22 16:24	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	21.8	%	0.50	1		04/25/22 15:52		

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AA/4-5**      **Lab ID: 60398001008**      Collected: 04/14/22 09:26      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	6.4	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	83-32-9	
Acenaphthylene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	208-96-8	
Anthracene	7.4	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	207-08-9	
Chrysene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	53-70-3	
Fluoranthene	17.7	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	206-44-0	
Fluorene	8.8	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	193-39-5	
Naphthalene	5.4	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	91-20-3	
Phenanthrene	29.1	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	85-01-8	
Pyrene	10.7	ug/kg	4.2	1	04/20/22 11:40	04/21/22 17:18	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	40-120	1	04/20/22 11:40	04/21/22 17:18	321-60-8	
Terphenyl-d14 (S)	85	%	45-130	1	04/20/22 11:40	04/21/22 17:18	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	21.9	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AB/1.5-2.5**      **Lab ID: 60398001009**      Collected: 04/14/22 09:38      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	83-32-9	
Acenaphthylene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	208-96-8	
Anthracene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	120-12-7	
Benzo(a)anthracene	<b>7.5</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	56-55-3	
Benzo(a)pyrene	<b>4.9</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	50-32-8	
Benzo(b)fluoranthene	<b>8.6</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	207-08-9	
Chrysene	<b>6.8</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	53-70-3	
Fluoranthene	<b>20.9</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	206-44-0	
Fluorene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	193-39-5	
Naphthalene	ND	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	91-20-3	
Phenanthrene	<b>16.0</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	85-01-8	
Pyrene	<b>16.6</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 17:36	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	71	%	40-120	1	04/20/22 11:40	04/21/22 17:36	321-60-8	
Terphenyl-d14 (S)	77	%	45-130	1	04/20/22 11:40	04/21/22 17:36	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>16.7</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AB/4-5**      **Lab ID: 60398001010**      Collected: 04/14/22 09:40      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	207-08-9	
Chrysene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	53-70-3	
Fluoranthene	<b>5.2</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	91-20-3	
Phenanthrene	<b>5.8</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	85-01-8	
Pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 17:54	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	85	%	40-120	1	04/20/22 11:40	04/21/22 17:54	321-60-8	
Terphenyl-d14 (S)	91	%	45-130	1	04/20/22 11:40	04/21/22 17:54	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.4</b>	%		0.50	1		04/20/22 16:29	

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AC/1-2**      **Lab ID: 60398001011**      Collected: 04/14/22 09:55      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	53-70-3	
Fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	85-01-8	
Pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:12	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	66	%	40-120	1	04/20/22 11:40	04/21/22 18:12	321-60-8	
Terphenyl-d14 (S)	71	%	45-130	1	04/20/22 11:40	04/21/22 18:12	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.3</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: B-11AC/4-5**      **Lab ID: 60398001012**      Collected: 04/14/22 09:56      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	50-32-8	
Benzo(b)fluoranthene	<b>8.4</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	207-08-9	
Chrysene	<b>6.1</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	53-70-3	
Fluoranthene	<b>15.4</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	91-20-3	
Phenanthrene	<b>4.8</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	85-01-8	
Pyrene	<b>10.6</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 18:30	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	67	%	40-120	1	04/20/22 11:40	04/21/22 18:30	321-60-8	
Terphenyl-d14 (S)	71	%	45-130	1	04/20/22 11:40	04/21/22 18:30	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>21.5</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-50C/1.5-2.5**      **Lab ID: 60398001013**      Collected: 04/14/22 10:46      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	120-12-7	
Benzo(a)anthracene	<b>6.8</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	56-55-3	
Benzo(a)pyrene	<b>5.4</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	50-32-8	
Benzo(b)fluoranthene	<b>10.7</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	207-08-9	
Chrysene	<b>7.2</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	53-70-3	
Fluoranthene	<b>16.9</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	91-20-3	
Phenanthrene	<b>7.5</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	85-01-8	
Pyrene	<b>12.9</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 18:48	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	81	%	40-120	1	04/20/22 11:40	04/21/22 18:48	321-60-8	
Terphenyl-d14 (S)	87	%	45-130	1	04/20/22 11:40	04/21/22 18:48	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>18.7</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-50C/4.0-5.0**      **Lab ID: 60398001014**      Collected: 04/14/22 10:50      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	83-32-9	
Acenaphthylene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	208-96-8	
Anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	120-12-7	
Benzo(a)anthracene	<b>6.6</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	50-32-8	
Benzo(b)fluoranthene	<b>13.5</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	205-99-2	
Benzo(g,h,i)perylene	<b>4.4</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	191-24-2	
Benzo(k)fluoranthene	<b>4.2</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	207-08-9	
Chrysene	<b>9.7</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	53-70-3	
Fluoranthene	<b>28.2</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	206-44-0	
Fluorene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	193-39-5	
Naphthalene	ND	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	91-20-3	
Phenanthrene	<b>11.7</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	85-01-8	
Pyrene	<b>19.2</b>	ug/kg	4.1	1	04/20/22 11:40	04/21/22 19:06	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	65	%	40-120	1	04/20/22 11:40	04/21/22 19:06	321-60-8	
Terphenyl-d14 (S)	67	%	45-130	1	04/20/22 11:40	04/21/22 19:06	1718-51-0	
<b>Percent Moisture</b>								
Analytical Method: ASTM D2974								
Pace Analytical Services - Kansas City								
Percent Moisture	<b>20.5</b>	%		0.50	1	04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-50A/1.5-2.5**      **Lab ID: 60398001015**      Collected: 04/14/22 11:02      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>101</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	83-32-9	
Acenaphthylene	<b>16.0</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	208-96-8	
Anthracene	<b>277</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	120-12-7	
Benzo(a)anthracene	<b>1080</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	56-55-3	
Benzo(a)pyrene	<b>869</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	50-32-8	
Benzo(b)fluoranthene	<b>1710</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	205-99-2	
Benzo(g,h,i)perylene	<b>411</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	191-24-2	
Benzo(k)fluoranthene	<b>428</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	207-08-9	
Chrysene	<b>1290</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	218-01-9	
Dibenz(a,h)anthracene	<b>107</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	53-70-3	
Fluoranthene	<b>2790</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	206-44-0	
Fluorene	<b>115</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>399</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	193-39-5	
Naphthalene	<b>16.7</b>	ug/kg	3.9	1	04/20/22 11:40	04/21/22 19:24	91-20-3	
Phenanthrene	<b>1590</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	85-01-8	
Pyrene	<b>2190</b>	ug/kg	39.4	10	04/20/22 11:40	04/22/22 13:57	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	66	%	40-120	1	04/20/22 11:40	04/21/22 19:24	321-60-8	
Terphenyl-d14 (S)	75	%	45-130	1	04/20/22 11:40	04/21/22 19:24	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>16.2</b>	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-50B/1-2**      **Lab ID: 60398001016**      Collected: 04/14/22 11:55      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	13.8	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	83-32-9	
Acenaphthylene	27.4	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	208-96-8	
Anthracene	67.3	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	120-12-7	
Benzo(a)anthracene	328	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	56-55-3	
Benzo(a)pyrene	263	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	50-32-8	
Benzo(b)fluoranthene	421	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	205-99-2	
Benzo(g,h,i)perylene	115	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	191-24-2	
Benzo(k)fluoranthene	114	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	207-08-9	
Chrysene	319	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	218-01-9	
Dibenz(a,h)anthracene	29.1	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	53-70-3	
Fluoranthene	674	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	206-44-0	
Fluorene	14.6	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	86-73-7	
Indeno(1,2,3-cd)pyrene	113	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	193-39-5	
Naphthalene	ND	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	91-20-3	
Phenanthrene	231	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	85-01-8	
Pyrene	546	ug/kg	3.8	1	04/20/22 11:40	04/21/22 19:42	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	68	%	40-120	1	04/20/22 11:40	04/21/22 19:42	321-60-8	
Terphenyl-d14 (S)	77	%	45-130	1	04/20/22 11:40	04/21/22 19:42	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	15.0	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-50B/2.5-3.5**      **Lab ID: 60398001017**      Collected: 04/14/22 11:57      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	120-12-7	
Benzo(a)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	56-55-3	
Benzo(a)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	207-08-9	
Chrysene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	53-70-3	
Fluoranthene	<b>4.5</b>	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	91-20-3	
Phenanthrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	85-01-8	
Pyrene	ND	ug/kg	4.0	1	04/20/22 11:40	04/21/22 20:01	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	65	%	40-120	1	04/20/22 11:40	04/21/22 20:01	321-60-8	
Terphenyl-d14 (S)	71	%	45-130	1	04/20/22 11:40	04/21/22 20:01	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>19.8</b>	%	0.50	1		04/20/22 16:29		

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-44A/3.5-4.5**      **Lab ID: 60398001018**      Collected: 04/14/22 12:26      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	20.8	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	83-32-9	
Acenaphthylene	14.0	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	208-96-8	
Anthracene	82.0	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	120-12-7	
Benzo(a)anthracene	206	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	56-55-3	
Benzo(a)pyrene	166	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	50-32-8	
Benzo(b)fluoranthene	283	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	205-99-2	
Benzo(g,h,i)perylene	131	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	191-24-2	
Benzo(k)fluoranthene	134	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	207-08-9	
Chrysene	205	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	218-01-9	
Dibenz(a,h)anthracene	28.0	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	53-70-3	
Fluoranthene	452	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	206-44-0	
Fluorene	22.7	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	86-73-7	
Indeno(1,2,3-cd)pyrene	106	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	193-39-5	
Naphthalene	4.9	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	91-20-3	
Phenanthrene	245	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	85-01-8	
Pyrene	466	ug/kg	4.1	1	04/20/22 11:40	04/22/22 14:15	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	74	%	40-120	1	04/20/22 11:40	04/22/22 14:15	321-60-8	
Terphenyl-d14 (S)	86	%	45-130	1	04/20/22 11:40	04/22/22 14:15	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	21.2	%		0.50		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-44A/5-6**      **Lab ID: 60398001019**      Collected: 04/14/22 12:28      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	<b>34.1</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	83-32-9	M1
Acenaphthylene	<b>7.1</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	208-96-8	M1, R1
Anthracene	<b>98.7</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	120-12-7	M1
Benzo(a)anthracene	<b>149</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	56-55-3	M1
Benzo(a)pyrene	<b>109</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	50-32-8	M1
Benzo(b)fluoranthene	<b>164</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	205-99-2	M1
Benzo(g,h,i)perylene	<b>75.9</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	191-24-2	M1
Benzo(k)fluoranthene	<b>69.7</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	207-08-9	M1
Chrysene	<b>151</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	218-01-9	M1
Dibenz(a,h)anthracene	<b>15.5</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	53-70-3	M1
Fluoranthene	<b>394</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	206-44-0	M1, R1
Fluorene	<b>60.6</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	86-73-7	M1
Indeno(1,2,3-cd)pyrene	<b>61.4</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	193-39-5	M1
Naphthalene	<b>12.4</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	91-20-3	
Phenanthrene	<b>229</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	85-01-8	M1, R1
Pyrene	<b>357</b>	ug/kg	4.2	1	04/21/22 10:06	04/22/22 11:50	129-00-0	M1, R1
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	126	%	40-120	1	04/21/22 10:06	04/22/22 11:50	321-60-8	S1
Terphenyl-d14 (S)	158	%	45-130	1	04/21/22 10:06	04/22/22 11:50	1718-51-0	S1
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>22.3</b>	%	0.50	1		04/20/22 16:29		

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-44B/2.5-3.5**      **Lab ID: 60398001020**      Collected: 04/14/22 12:37      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	97.2	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	83-32-9	
Acenaphthylene	17.4	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	208-96-8	
Anthracene	202	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	120-12-7	
Benzo(a)anthracene	404	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	56-55-3	
Benzo(a)pyrene	315	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	50-32-8	
Benzo(b)fluoranthene	477	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	205-99-2	
Benzo(g,h,i)perylene	220	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	191-24-2	
Benzo(k)fluoranthene	159	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	207-08-9	
Chrysene	419	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	218-01-9	
Dibenz(a,h)anthracene	46.3	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	53-70-3	
Fluoranthene	791	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	206-44-0	
Fluorene	154	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	86-73-7	
Indeno(1,2,3-cd)pyrene	162	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	193-39-5	
Naphthalene	28.4	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	91-20-3	
Phenanthrene	513	ug/kg	4.2	1	04/21/22 10:06	04/22/22 12:08	85-01-8	
Pyrene	557	ug/kg	20.8	5	04/21/22 10:06	04/22/22 14:51	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	70	%	40-120	1	04/21/22 10:06	04/22/22 12:08	321-60-8	
Terphenyl-d14 (S)	81	%	45-130	1	04/21/22 10:06	04/22/22 12:08	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	21.9	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-44B/5-6**      **Lab ID: 60398001021**      Collected: 04/14/22 12:43      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	644	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	83-32-9	
Acenaphthylene	4.9	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	208-96-8	
Anthracene	555	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	120-12-7	
Benzo(a)anthracene	983	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	56-55-3	
Benzo(a)pyrene	769	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	50-32-8	
Benzo(b)fluoranthene	1280	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	205-99-2	
Benzo(g,h,i)perylene	725	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	191-24-2	
Benzo(k)fluoranthene	505	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	207-08-9	
Chrysene	948	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	218-01-9	
Dibenz(a,h)anthracene	177	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	53-70-3	
Fluoranthene	2340	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	206-44-0	
Fluorene	689	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	86-73-7	
Indeno(1,2,3-cd)pyrene	583	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	193-39-5	
Naphthalene	52.3	ug/kg	4.1	1	04/21/22 10:06	04/22/22 12:26	91-20-3	
Phenanthrene	2110	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	85-01-8	
Pyrene	1840	ug/kg	41.5	10	04/21/22 10:06	04/22/22 15:09	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	68	%	40-120	1	04/21/22 10:06	04/22/22 12:26	321-60-8	
Terphenyl-d14 (S)	77	%	45-130	1	04/21/22 10:06	04/22/22 12:26	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	22.8	%	0.50	1		04/20/22 16:29		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: ERB04142022	Lab ID: 60398001022	Collected: 04/14/22 13:30	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270C by SIM Preparation Method: EPA 3510C Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	83-32-9	
Acenaphthylene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	208-96-8	
Anthracene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	120-12-7	
Benzo(a)anthracene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	56-55-3	
Benzo(a)pyrene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	207-08-9	
Chrysene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	53-70-3	
Fluoranthene	ND	ug/L	0.48	1	04/19/22 21:25	04/20/22 13:54	206-44-0	
Fluorene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	193-39-5	
Naphthalene	ND	ug/L	0.48	1	04/19/22 21:25	04/20/22 13:54	91-20-3	
Phenanthrene	ND	ug/L	0.48	1	04/19/22 21:25	04/20/22 13:54	85-01-8	
Pyrene	ND	ug/L	0.095	1	04/19/22 21:25	04/20/22 13:54	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	82	%	37-109	1	04/19/22 21:25	04/20/22 13:54	321-60-8	
Terphenyl-d14 (S)	78	%	34-120	1	04/19/22 21:25	04/20/22 13:54	1718-51-0	

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-50A/2.5-3.5** Lab ID: **60398001023** Collected: 04/14/22 11:04 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
Acenaphthene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	83-32-9	
Acenaphthylene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	208-96-8	
Anthracene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	120-12-7	
Benzo(a)anthracene	<b>6.2</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	56-55-3	
Benzo(a)pyrene	<b>5.0</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	50-32-8	
Benzo(b)fluoranthene	<b>10.6</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	207-08-9	
Chrysene	<b>6.7</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	53-70-3	
Fluoranthene	<b>15.5</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	206-44-0	
Fluorene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	193-39-5	
Naphthalene	ND	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	91-20-3	
Phenanthrene	<b>11.2</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	85-01-8	
Pyrene	<b>13.0</b>	ug/kg	4.0	1	04/21/22 10:06	04/22/22 12:44	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	66	%	40-120	1	04/21/22 10:06	04/22/22 12:44	321-60-8	
Terphenyl-d14 (S)	72	%	45-130	1	04/21/22 10:06	04/22/22 12:44	1718-51-0	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>17.6</b>	%	0.50	1		04/21/22 14:18		

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/8-9**      **Lab ID: 60398001024**      Collected: 04/14/22 15:35      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	39.6	1	04/20/22 16:26	04/21/22 20:09	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	66	%	35-120	1	04/20/22 16:26	04/21/22 20:09	2051-24-3	CL
<b>6010 MET ICP Red. Interference</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Antimony	ND	mg/kg	0.92	1	04/26/22 12:42	04/28/22 22:42	7440-36-0	
Arsenic	6.1	mg/kg	0.92	1	04/26/22 12:42	04/28/22 22:42	7440-38-2	
Copper	17.9	mg/kg	1.8	1	04/26/22 12:42	04/28/22 22:42	7440-50-8	
Lead	30.9	mg/kg	0.92	1	04/26/22 12:42	04/28/22 22:42	7439-92-1	
Zinc	59.2	mg/kg	9.2	1	04/26/22 12:42	04/28/22 22:42	7440-66-6	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	83-32-9	
Acenaphthylene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	208-96-8	
Anthracene	20.6	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	120-12-7	
Benzo(a)anthracene	56.4	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	56-55-3	
Benzo(a)pyrene	48.2	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	50-32-8	
Benzo(b)fluoranthene	71.0	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	205-99-2	
Benzo(g,h,i)perylene	31.3	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	191-24-2	
Benzo(k)fluoranthene	25.2	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	207-08-9	
Chrysene	50.1	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	53-70-3	
Fluoranthene	130	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	206-44-0	
Fluorene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	86-73-7	
Indeno(1,2,3-cd)pyrene	27.6	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	193-39-5	
Naphthalene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	91-20-3	
Phenanthrene	84.2	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	85-01-8	
Pyrene	107	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:16	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	64	%	40-120	1	04/20/22 15:15	04/21/22 11:16	321-60-8	
Terphenyl-d14 (S)	69	%	45-130	1	04/20/22 15:15	04/21/22 11:16	1718-51-0	
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	ND	mg/kg	18.1	1	04/20/22 15:15	04/21/22 10:01		
TPH-DRO	ND	mg/kg	18.1	1	04/20/22 15:15	04/21/22 10:01		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/8-9**      **Lab ID: 60398001024**      Collected: 04/14/22 15:35      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270    Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	70	%	35-120	1	04/20/22 15:15	04/21/22 10:01	4165-60-0	
2-Fluorobiphenyl (S)	78	%	50-120	1	04/20/22 15:15	04/21/22 10:01	321-60-8	
Terphenyl-d14 (S)	90	%	45-120	1	04/20/22 15:15	04/21/22 10:01	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	22.4	ug/kg	21.6	1	04/22/22 10:34	04/22/22 13:16	67-64-1	
Acetonitrile	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	75-05-8	
Acrolein	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	107-02-8	
Acrylonitrile	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	994-05-8	
Benzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	71-43-2	
Bromobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-86-1	
Bromochloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	74-97-5	
Bromodichloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-27-4	
Bromoform	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-25-2	
Bromomethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	75-65-0	
n-Butylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	135-98-8	
tert-Butylbenzene	ND	ug/kg	27.0	1	04/22/22 10:34	04/22/22 13:16	98-06-6	
Carbon disulfide	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	56-23-5	
Chlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-90-7	
Chloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	110-75-8	
Chloroform	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	67-66-3	
Chloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	106-43-4	
Cyclohexane	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	110-82-7	
Cyclohexanone	ND	ug/kg	21.6	1	04/22/22 10:34	04/22/22 13:16	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	96-12-8	
Dibromochloromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	106-93-4	
Dibromomethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	21.6	1	04/22/22 10:34	04/22/22 13:16	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	107-06-2	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/8-9** Lab ID: **60398001024** Collected: 04/14/22 15:35 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2-Dichloroethene (Total)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	60-29-7	
Diisopropyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	123-91-1	L2
Ethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	637-92-3	
n-Heptane	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	87-68-3	
n-Hexane	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	110-54-3	
2-Hexanone	ND	ug/kg	21.6	1	04/22/22 10:34	04/22/22 13:16	591-78-6	
Iodomethane	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	99-87-6	
Methyl acetate	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	79-20-9	
Methylcyclohexane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-87-2	
Methylene Chloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	1634-04-4	
Naphthalene	ND	ug/kg	10.8	1	04/22/22 10:34	04/22/22 13:16	91-20-3	
n-Propylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	103-65-1	
Styrene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	79-34-5	
Tetrachloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	127-18-4	
Tetrahydrofuran	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	109-99-9	N2
Toluene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	79-00-5	
Trichloroethene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	76-13-1	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/8-9**      **Lab ID: 60398001024**      Collected: 04/14/22 15:35      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	108-67-8	
Vinyl acetate	ND	ug/kg	108	1	04/22/22 10:34	04/22/22 13:16	108-05-4	
Vinyl chloride	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	75-01-4	
Xylene (Total)	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	1330-20-7	
m&p-Xylene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	179601-23-1	
o-Xylene	ND	ug/kg	5.4	1	04/22/22 10:34	04/22/22 13:16	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 13:16	2037-26-5	
4-Bromofluorobenzene (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 13:16	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120	1	04/22/22 10:34	04/22/22 13:16	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.54	1	04/22/22 10:34	04/22/22 13:16		
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	78-122	1	04/22/22 10:34	04/22/22 13:16	2037-26-5	
4-Bromofluorobenzene (S)	101	%	69-133	1	04/22/22 10:34	04/22/22 13:16	460-00-4	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120	1	04/22/22 10:34	04/22/22 13:16	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>17.2</b>	%	0.50	1		04/21/22 14:18		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/12-13**      **Lab ID: 60398001025**      Collected: 04/14/22 15:36      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	39.8	1	04/20/22 16:26	04/21/22 20:27	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	61	%	35-120	1	04/20/22 16:26	04/21/22 20:27	2051-24-3	CL
<b>6010 MET ICP Red. Interference</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Antimony	ND	mg/kg	0.96	1	04/26/22 12:42	04/28/22 22:33	7440-36-0	
Arsenic	1.9	mg/kg	0.96	1	04/26/22 12:42	04/28/22 22:33	7440-38-2	
Copper	9.4	mg/kg	1.9	1	04/26/22 12:42	04/28/22 22:33	7440-50-8	
Lead	7.7	mg/kg	0.96	1	04/26/22 12:42	04/28/22 22:33	7439-92-1	
Zinc	29.2	mg/kg	9.6	1	04/26/22 12:42	04/28/22 22:33	7440-66-6	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	83-32-9	
Acenaphthylene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	208-96-8	
Anthracene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	120-12-7	
Benzo(a)anthracene	11.2	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	56-55-3	
Benzo(a)pyrene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	50-32-8	
Benzo(b)fluoranthene	12.7	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	207-08-9	
Chrysene	10.2	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	53-70-3	
Fluoranthene	28.0	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	206-44-0	
Fluorene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	193-39-5	
Naphthalene	ND	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	91-20-3	
Phenanthrene	24.7	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	85-01-8	
Pyrene	22.7	ug/kg	8.0	1	04/20/22 15:15	04/21/22 11:34	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	63	%	40-120	1	04/20/22 15:15	04/21/22 11:34	321-60-8	
Terphenyl-d14 (S)	69	%	45-130	1	04/20/22 15:15	04/21/22 11:34	1718-51-0	
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	ND	mg/kg	18.2	1	04/20/22 15:15	04/21/22 09:22		
TPH-DRO	ND	mg/kg	18.2	1	04/20/22 15:15	04/21/22 09:22		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/12-13**      **Lab ID: 60398001025**      Collected: 04/14/22 15:36      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**8270 MSSV DRO/ORO**

Analytical Method: EPA 8270      Preparation Method: EPA 3546

Pace Analytical Services - Kansas City

**Surrogates**

Nitrobenzene-d5 (S)	73	%	35-120	1	04/20/22 15:15	04/21/22 09:22	4165-60-0	
2-Fluorobiphenyl (S)	79	%	50-120	1	04/20/22 15:15	04/21/22 09:22	321-60-8	
Terphenyl-d14 (S)	95	%	45-120	1	04/20/22 15:15	04/21/22 09:22	1718-51-0	

**8260 MSV 5035A VOA**

Analytical Method: EPA 8260B      Preparation Method: EPA 5035A/5030

Pace Analytical Services - Kansas City

Acetone	ND	ug/kg	20.1	1	04/22/22 10:34	04/22/22 13:32	67-64-1	
Acetonitrile	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	75-05-8	
Acrolein	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	107-02-8	
Acrylonitrile	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	994-05-8	
Benzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	71-43-2	
Bromobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-27-4	
Bromoform	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-25-2	
Bromomethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	75-65-0	
n-Butylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	135-98-8	
tert-Butylbenzene	ND	ug/kg	25.2	1	04/22/22 10:34	04/22/22 13:32	98-06-6	
Carbon disulfide	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-90-7	
Chloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	110-75-8	
Chloroform	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	67-66-3	
Chloromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	106-43-4	
Cyclohexane	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	110-82-7	
Cyclohexanone	ND	ug/kg	20.1	1	04/22/22 10:34	04/22/22 13:32	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	20.1	1	04/22/22 10:34	04/22/22 13:32	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	107-06-2	

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/12-13**      **Lab ID: 60398001025**      Collected: 04/14/22 15:36      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	60-29-7	
Diisopropyl ether	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	123-91-1	L2
Ethylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	637-92-3	
n-Heptane	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	87-68-3	
n-Hexane	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	110-54-3	
2-Hexanone	ND	ug/kg	20.1	1	04/22/22 10:34	04/22/22 13:32	591-78-6	
Iodomethane	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	99-87-6	
Methyl acetate	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	79-20-9	
Methylcyclohexane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-87-2	
Methylene Chloride	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	1634-04-4	
Naphthalene	ND	ug/kg	10.1	1	04/22/22 10:34	04/22/22 13:32	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	103-65-1	
Styrene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	127-18-4	
Tetrahydrofuran	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	109-99-9	N2
Toluene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	79-00-5	
Trichloroethene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	76-13-1	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/12-13**      **Lab ID: 60398001025**      Collected: 04/14/22 15:36      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trimethylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	108-67-8	
Vinyl acetate	ND	ug/kg	101	1	04/22/22 10:34	04/22/22 13:32	108-05-4	
Vinyl chloride	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	1330-20-7	
m&p-Xylene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	179601-23-1	
o-Xylene	ND	ug/kg	5.0	1	04/22/22 10:34	04/22/22 13:32	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 13:32	2037-26-5	
4-Bromofluorobenzene (S)	98	%	80-120	1	04/22/22 10:34	04/22/22 13:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 13:32	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.50	1	04/22/22 10:34	04/22/22 13:32		
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	78-122	1	04/22/22 10:34	04/22/22 13:32	2037-26-5	
4-Bromofluorobenzene (S)	98	%	69-133	1	04/22/22 10:34	04/22/22 13:32	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 13:32	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>18.8</b>	%	0.50	1		04/21/22 14:18		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/4-5** Lab ID: **60398001026** Collected: 04/14/22 16:08 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082 Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	38.8	1	04/20/22 16:26	04/21/22 20:45	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	67	%	35-120	1	04/20/22 16:26	04/21/22 20:45	2051-24-3	CL
<b>6010 MET ICP Red. Interference</b>								
Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Antimony	ND	mg/kg	0.98	1	04/26/22 12:42	04/28/22 22:35	7440-36-0	
Arsenic	3.8	mg/kg	0.98	1	04/26/22 12:42	04/28/22 22:35	7440-38-2	
Copper	23.0	mg/kg	2.0	1	04/26/22 12:42	04/28/22 22:35	7440-50-8	
Lead	46.5	mg/kg	0.98	1	04/26/22 12:42	04/28/22 22:35	7439-92-1	
Zinc	60.3	mg/kg	9.8	1	04/26/22 12:42	04/28/22 22:35	7440-66-6	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	83-32-9	
Acenaphthylene	ND	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	208-96-8	
Anthracene	164	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	120-12-7	
Benzo(a)anthracene	452	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	56-55-3	
Benzo(a)pyrene	340	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	50-32-8	
Benzo(b)fluoranthene	584	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	205-99-2	
Benzo(g,h,i)perylene	239	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	191-24-2	
Benzo(k)fluoranthene	142	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	207-08-9	
Chrysene	416	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	53-70-3	
Fluoranthene	1150	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	206-44-0	
Fluorene	ND	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	86-73-7	
Indeno(1,2,3-cd)pyrene	210	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	193-39-5	
Naphthalene	109	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	91-20-3	
Phenanthrene	930	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	85-01-8	
Pyrene	849	ug/kg	77.1	10	04/20/22 15:15	04/21/22 11:53	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	65	%	40-120	10	04/20/22 15:15	04/21/22 11:53	321-60-8	D3
Terphenyl-d14 (S)	71	%	45-130	10	04/20/22 15:15	04/21/22 11:53	1718-51-0	
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270 Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	199	mg/kg	17.5	1	04/20/22 15:15	04/21/22 10:20		
TPH-DRO	134	mg/kg	17.5	1	04/20/22 15:15	04/21/22 10:20		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/4-5** Lab ID: **60398001026** Collected: 04/14/22 16:08 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	71	%	35-120	1	04/20/22 15:15	04/21/22 10:20	4165-60-0	
2-Fluorobiphenyl (S)	82	%	50-120	1	04/20/22 15:15	04/21/22 10:20	321-60-8	
Terphenyl-d14 (S)	91	%	45-120	1	04/20/22 15:15	04/21/22 10:20	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	ND	ug/kg	20.3	1	04/22/22 10:34	04/22/22 13:48	67-64-1	
Acetonitrile	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	75-05-8	
Acrolein	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	107-02-8	
Acrylonitrile	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	994-05-8	
Benzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	71-43-2	
Bromobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-86-1	
Bromochloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	74-97-5	
Bromodichloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-27-4	
Bromoform	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-25-2	
Bromomethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	75-65-0	
n-Butylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	135-98-8	
tert-Butylbenzene	ND	ug/kg	25.4	1	04/22/22 10:34	04/22/22 13:48	98-06-6	
Carbon disulfide	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	56-23-5	
Chlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-90-7	
Chloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	110-75-8	
Chloroform	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	67-66-3	
Chloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	106-43-4	
Cyclohexane	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	110-82-7	
Cyclohexanone	ND	ug/kg	20.3	1	04/22/22 10:34	04/22/22 13:48	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	96-12-8	
Dibromochloromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	106-93-4	
Dibromomethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	20.3	1	04/22/22 10:34	04/22/22 13:48	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	107-06-2	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/4-5** Lab ID: **60398001026** Collected: 04/14/22 16:08 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2-Dichloroethene (Total)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	60-29-7	
Diisopropyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	123-91-1	L2
Ethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	637-92-3	
n-Heptane	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	87-68-3	
n-Hexane	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	110-54-3	
2-Hexanone	ND	ug/kg	20.3	1	04/22/22 10:34	04/22/22 13:48	591-78-6	
Iodomethane	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	99-87-6	
Methyl acetate	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	79-20-9	
Methylcyclohexane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-87-2	
Methylene Chloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-09-2	
1-Methylnaphthalene	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	90-12-0	
2-Methylnaphthalene	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	1634-04-4	
Naphthalene	ND	ug/kg	10.2	1	04/22/22 10:34	04/22/22 13:48	91-20-3	
n-Propylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	103-65-1	
Styrene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	79-34-5	
Tetrachloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	127-18-4	
Tetrahydrofuran	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	109-99-9	N2
Toluene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	79-00-5	
Trichloroethene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	76-13-1	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/4-5**      **Lab ID: 60398001026**      Collected: 04/14/22 16:08      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	108-67-8	
Vinyl acetate	ND	ug/kg	102	1	04/22/22 10:34	04/22/22 13:48	108-05-4	
Vinyl chloride	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	75-01-4	
Xylene (Total)	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	1330-20-7	
m&p-Xylene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	179601-23-1	
o-Xylene	ND	ug/kg	5.1	1	04/22/22 10:34	04/22/22 13:48	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 13:48	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 13:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 13:48	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.51	1	04/22/22 10:34	04/22/22 13:48		
<b>Surrogates</b>								
Toluene-d8 (S)	101	%	78-122	1	04/22/22 10:34	04/22/22 13:48	2037-26-5	
4-Bromofluorobenzene (S)	100	%	69-133	1	04/22/22 10:34	04/22/22 13:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120	1	04/22/22 10:34	04/22/22 13:48	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>15.2</b>	%	0.50	1		04/21/22 14:18		

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/0.5-1.5**      **Lab ID: 60398001027**      Collected: 04/14/22 11:13      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	39.5	1	04/20/22 16:26	04/21/22 21:02	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	66	%	35-120	1	04/20/22 16:26	04/21/22 21:02	2051-24-3	CL
<b>6010 MET ICP Red. Interference</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Antimony	ND	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:37	7440-36-0	
Arsenic	5.8	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:37	7440-38-2	
Copper	19.2	mg/kg	2.2	1	04/26/22 12:42	04/28/22 22:37	7440-50-8	
Lead	60.3	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:37	7439-92-1	
Zinc	106	mg/kg	10.9	1	04/26/22 12:42	04/28/22 22:37	7440-66-6	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	83-32-9	
Acenaphthylene	ND	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	208-96-8	
Anthracene	335	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	120-12-7	
Benzo(a)anthracene	1090	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	56-55-3	
Benzo(a)pyrene	835	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	50-32-8	
Benzo(b)fluoranthene	1520	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	205-99-2	
Benzo(g,h,i)perylene	646	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	191-24-2	
Benzo(k)fluoranthene	583	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	207-08-9	
Chrysene	1050	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	53-70-3	
Fluoranthene	2770	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	206-44-0	
Fluorene	ND	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	86-73-7	
Indeno(1,2,3-cd)pyrene	539	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	193-39-5	
Naphthalene	ND	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	91-20-3	
Phenanthrene	1840	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	85-01-8	
Pyrene	1980	ug/kg	195	10	04/20/22 15:15	04/21/22 12:11	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	80	%	40-120	10	04/20/22 15:15	04/21/22 12:11	321-60-8	D3,P3
Terphenyl-d14 (S)	83	%	45-130	10	04/20/22 15:15	04/21/22 12:11	1718-51-0	
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	360	mg/kg	44.3	1	04/20/22 15:15	04/21/22 10:40		
TPH-DRO	155	mg/kg	44.3	1	04/20/22 15:15	04/21/22 10:40		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/0.5-1.5** Lab ID: **60398001027** Collected: 04/14/22 11:13 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	73	%	35-120	1	04/20/22 15:15	04/21/22 10:40	4165-60-0	P3
2-Fluorobiphenyl (S)	85	%	50-120	1	04/20/22 15:15	04/21/22 10:40	321-60-8	
Terphenyl-d14 (S)	97	%	45-120	1	04/20/22 15:15	04/21/22 10:40	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	ND	ug/kg	23.9	1	04/22/22 10:34	04/22/22 14:04	67-64-1	
Acetonitrile	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	75-05-8	
Acrolein	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	107-02-8	
Acrylonitrile	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	994-05-8	
Benzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	71-43-2	
Bromobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-86-1	
Bromochloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	74-97-5	
Bromodichloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-27-4	
Bromoform	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-25-2	
Bromomethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	75-65-0	
n-Butylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	29.9	1	04/22/22 10:34	04/22/22 14:04	98-06-6	
Carbon disulfide	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	56-23-5	
Chlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-90-7	
Chloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	110-75-8	
Chloroform	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	67-66-3	
Chloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	106-43-4	
Cyclohexane	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	110-82-7	
Cyclohexanone	ND	ug/kg	23.9	1	04/22/22 10:34	04/22/22 14:04	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	96-12-8	
Dibromochloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	106-93-4	
Dibromomethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	23.9	1	04/22/22 10:34	04/22/22 14:04	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	107-06-2	

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/0.5-1.5** Lab ID: **60398001027** Collected: 04/14/22 11:13 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2-Dichloroethene (Total)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	60-29-7	
Diisopropyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	123-91-1	L2
Ethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	637-92-3	
n-Heptane	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	87-68-3	
n-Hexane	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	110-54-3	
2-Hexanone	ND	ug/kg	23.9	1	04/22/22 10:34	04/22/22 14:04	591-78-6	
Iodomethane	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	99-87-6	
Methyl acetate	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	79-20-9	
Methylcyclohexane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-87-2	
Methylene Chloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-09-2	
1-Methylnaphthalene	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	90-12-0	
2-Methylnaphthalene	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	1634-04-4	
Naphthalene	ND	ug/kg	12.0	1	04/22/22 10:34	04/22/22 14:04	91-20-3	
n-Propylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	103-65-1	
Styrene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	79-34-5	
Tetrachloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	127-18-4	
Tetrahydrofuran	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	109-99-9	N2
Toluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	79-00-5	
Trichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	76-13-1	N2

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/0.5-1.5**      **Lab ID: 60398001027**      Collected: 04/14/22 11:13      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	108-67-8	
Vinyl acetate	ND	ug/kg	120	1	04/22/22 10:34	04/22/22 14:04	108-05-4	
Vinyl chloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	75-01-4	
Xylene (Total)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	1330-20-7	
m&p-Xylene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	179601-23-1	
o-Xylene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:04	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	112	%	80-120	1	04/22/22 10:34	04/22/22 14:04	2037-26-5	
4-Bromofluorobenzene (S)	123	%	80-120	1	04/22/22 10:34	04/22/22 14:04	460-00-4	IO,S1
1,2-Dichlorobenzene-d4 (S)	106	%	80-120	1	04/22/22 10:34	04/22/22 14:04	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.60	1	04/22/22 10:34	04/22/22 14:04		
<b>Surrogates</b>								
Toluene-d8 (S)	112	%	78-122	1	04/22/22 10:34	04/22/22 14:04	2037-26-5	
4-Bromofluorobenzene (S)	123	%	69-133	1	04/22/22 10:34	04/22/22 14:04	460-00-4	
1,2-Dichlorobenzene-d4 (S)	106	%	80-120	1	04/22/22 10:34	04/22/22 14:04	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>16.8</b>	%	0.50	1		04/21/22 14:18		

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/8-9D**      **Lab ID: 60398001028**      Collected: 04/14/22 15:35      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8082 GCS PCB SW</b>								
Analytical Method: EPA 8082    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
PCB-1016 (Aroclor 1016)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	40.2	1	04/20/22 16:26	04/21/22 21:20	11096-82-5	
<b>Surrogates</b>								
Decachlorobiphenyl (S)	60	%	35-120	1	04/20/22 16:26	04/21/22 21:20	2051-24-3	CL
<b>6010 MET ICP Red. Interference</b>								
Analytical Method: EPA 6010    Preparation Method: EPA 3050								
Pace Analytical Services - Kansas City								
Antimony	ND	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:40	7440-36-0	
Arsenic	3.6	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:40	7440-38-2	
Copper	12.7	mg/kg	2.2	1	04/26/22 12:42	04/28/22 22:40	7440-50-8	
Lead	20.8	mg/kg	1.1	1	04/26/22 12:42	04/28/22 22:40	7439-92-1	
Zinc	42.4	mg/kg	11.2	1	04/26/22 12:42	04/28/22 22:40	7440-66-6	
<b>8270 MSSV PAH by SIM</b>								
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
Acenaphthene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	83-32-9	
Acenaphthylene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	208-96-8	
Anthracene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	120-12-7	
Benzo(a)anthracene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	56-55-3	
Benzo(a)pyrene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	50-32-8	
Benzo(b)fluoranthene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	205-99-2	
Benzo(g,h,i)perylene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	207-08-9	
Chrysene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	53-70-3	
Fluoranthene	11.6	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	206-44-0	M1
Fluorene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	193-39-5	
Naphthalene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	91-20-3	
Phenanthrene	ND	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	85-01-8	
Pyrene	9.3	ug/kg	8.1	1	04/20/22 15:15	04/21/22 12:29	129-00-0	
<b>Surrogates</b>								
2-Fluorobiphenyl (S)	57	%	40-120	1	04/20/22 15:15	04/21/22 12:29	321-60-8	
Terphenyl-d14 (S)	63	%	45-130	1	04/20/22 15:15	04/21/22 12:29	1718-51-0	
<b>8270 MSSV DRO/ORO</b>								
Analytical Method: EPA 8270    Preparation Method: EPA 3546								
Pace Analytical Services - Kansas City								
TPH-ORO	ND	mg/kg	18.4	1	04/20/22 15:15	04/21/22 09:41		
TPH-DRO	ND	mg/kg	18.4	1	04/20/22 15:15	04/21/22 09:41		

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/8-9D** Lab ID: **60398001028** Collected: 04/14/22 15:35 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV DRO/ORO</b>		Analytical Method: EPA 8270 Preparation Method: EPA 3546 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	65	%	35-120	1	04/20/22 15:15	04/21/22 09:41	4165-60-0	
2-Fluorobiphenyl (S)	74	%	50-120	1	04/20/22 15:15	04/21/22 09:41	321-60-8	
Terphenyl-d14 (S)	83	%	45-120	1	04/20/22 15:15	04/21/22 09:41	1718-51-0	
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
Acetone	ND	ug/kg	24.2	1	04/22/22 10:34	04/22/22 14:21	67-64-1	
Acetonitrile	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	75-05-8	
Acrolein	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	107-02-8	
Acrylonitrile	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	107-13-1	
tert-Amylmethyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	994-05-8	
Benzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	71-43-2	
Bromobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-86-1	
Bromochloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	74-97-5	
Bromodichloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-27-4	
Bromoform	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-25-2	
Bromomethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	78-93-3	
tert-Butyl Alcohol	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	75-65-0	
n-Butylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	135-98-8	
tert-Butylbenzene	ND	ug/kg	30.2	1	04/22/22 10:34	04/22/22 14:21	98-06-6	
Carbon disulfide	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	56-23-5	
Chlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-90-7	
Chloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-00-3	
2-Chloroethylvinyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	110-75-8	
Chloroform	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	67-66-3	
Chloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	106-43-4	
Cyclohexane	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	110-82-7	
Cyclohexanone	ND	ug/kg	24.2	1	04/22/22 10:34	04/22/22 14:21	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	96-12-8	
Dibromochloromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	106-93-4	
Dibromomethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/kg	24.2	1	04/22/22 10:34	04/22/22 14:21	110-57-6	L2
Dichlorodifluoromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	107-06-2	

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: **GB-72/8-9D** Lab ID: **60398001028** Collected: 04/14/22 15:35 Received: 04/16/22 04:47 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2-Dichloroethene (Total)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	60-29-7	
Diisopropyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	123-91-1	L2
Ethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	637-92-3	
n-Heptane	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	87-68-3	
n-Hexane	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	110-54-3	
2-Hexanone	ND	ug/kg	24.2	1	04/22/22 10:34	04/22/22 14:21	591-78-6	
Iodomethane	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	99-87-6	
Methyl acetate	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	79-20-9	
Methylcyclohexane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-87-2	
Methylene Chloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-09-2	
1-Methylnaphthalene	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	90-12-0	
2-Methylnaphthalene	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	91-57-6	L2
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	1634-04-4	
Naphthalene	ND	ug/kg	12.1	1	04/22/22 10:34	04/22/22 14:21	91-20-3	
n-Propylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	103-65-1	
Styrene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	79-34-5	
Tetrachloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	127-18-4	
Tetrahydrofuran	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	109-99-9	N2
Toluene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	79-00-5	
Trichloroethene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	76-13-1	N2

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

**Sample: GB-72/8-9D**      **Lab ID: 60398001028**      Collected: 04/14/22 15:35      Received: 04/16/22 04:47      Matrix: Solid

*Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.*

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV 5035A VOA</b>		Analytical Method: EPA 8260B    Preparation Method: EPA 5035A/5030 Pace Analytical Services - Kansas City						
1,2,3-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	108-67-8	
Vinyl acetate	ND	ug/kg	121	1	04/22/22 10:34	04/22/22 14:21	108-05-4	
Vinyl chloride	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	75-01-4	
Xylene (Total)	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	1330-20-7	
m&p-Xylene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	179601-23-1	
o-Xylene	ND	ug/kg	6.0	1	04/22/22 10:34	04/22/22 14:21	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:21	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120	1	04/22/22 10:34	04/22/22 14:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 14:21	2199-69-1	
<b>8260 MSV GRO and Oxygenates</b>		Analytical Method: EPA 8260    Preparation Method: EPA 5035 Pace Analytical Services - Kansas City						
TPH-GRO	ND	mg/kg	0.60	1	04/22/22 10:34	04/22/22 14:21		
<b>Surrogates</b>								
Toluene-d8 (S)	100	%	78-122	1	04/22/22 10:34	04/22/22 14:21	2037-26-5	
4-Bromofluorobenzene (S)	100	%	69-133	1	04/22/22 10:34	04/22/22 14:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	102	%	80-120	1	04/22/22 10:34	04/22/22 14:21	2199-69-1	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City						
Percent Moisture	<b>18.7</b>	%	0.50	1		04/21/22 14:18		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: TRIP BLANK 1	Lab ID: 60398001029	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Acetone	ND	ug/L	10.0	1		04/25/22 14:38	67-64-1	
Acetonitrile	ND	ug/L	10.0	1		04/25/22 14:38	75-05-8	
Acrolein	ND	ug/L	50.0	1		04/25/22 14:38	107-02-8	
Acrylonitrile	ND	ug/L	20.0	1		04/25/22 14:38	107-13-1	
tert-Amylmethyl ether	ND	ug/L	1.0	1		04/25/22 14:38	994-05-8	
Benzene	ND	ug/L	1.0	1		04/25/22 14:38	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		04/25/22 14:38	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		04/25/22 14:38	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/25/22 14:38	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/25/22 14:38	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/22 14:38	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/22 14:38	78-93-3	
tert-Butyl Alcohol	ND	ug/L	10.0	1		04/25/22 14:38	75-65-0	
n-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		04/25/22 14:38	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/25/22 14:38	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/25/22 14:38	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		04/25/22 14:38	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		04/25/22 14:38	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/25/22 14:38	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		04/25/22 14:38	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		04/25/22 14:38	106-43-4	
Cyclohexane	ND	ug/L	1.0	1		04/25/22 14:38	110-82-7	
Cyclohexanone	ND	ug/L	20.0	1		04/25/22 14:38	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		04/25/22 14:38	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/25/22 14:38	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/25/22 14:38	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/25/22 14:38	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	20.0	1		04/25/22 14:38	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	1		04/25/22 14:38	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/25/22 14:38	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/25/22 14:38	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		04/25/22 14:38	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:38	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:38	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:38	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:38	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:38	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:38	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:38	563-58-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: TRIP BLANK 1	Lab ID: 60398001029	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:38	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:38	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	1.0	1		04/25/22 14:38	60-29-7	
Diisopropyl ether	ND	ug/L	1.0	1		04/25/22 14:38	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	100	1		04/25/22 14:38	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1.0	1		04/25/22 14:38	637-92-3	
n-Heptane	ND	ug/L	10.0	1		04/25/22 14:38	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		04/25/22 14:38	87-68-3	
n-Hexane	ND	ug/L	10.0	1		04/25/22 14:38	110-54-3	
2-Hexanone	ND	ug/L	10.0	1		04/25/22 14:38	591-78-6	
Iodomethane	ND	ug/L	10.0	1		04/25/22 14:38	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/22 14:38	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		04/25/22 14:38	99-87-6	
Methyl acetate	ND	ug/L	1.0	1		04/25/22 14:38	79-20-9	
Methylcyclohexane	ND	ug/L	1.0	1		04/25/22 14:38	108-87-2	
Methylene Chloride	ND	ug/L	1.0	1		04/25/22 14:38	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		04/25/22 14:38	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		04/25/22 14:38	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/22 14:38	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/25/22 14:38	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		04/25/22 14:38	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	103-65-1	
Styrene	ND	ug/L	1.0	1		04/25/22 14:38	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/25/22 14:38	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/25/22 14:38	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/25/22 14:38	127-18-4	
Tetrahydrofuran	ND	ug/L	5.0	1		04/25/22 14:38	109-99-9	
Toluene	ND	ug/L	1.0	1		04/25/22 14:38	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:38	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/25/22 14:38	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/25/22 14:38	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/25/22 14:38	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/25/22 14:38	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		04/25/22 14:38	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		04/25/22 14:38	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:38	108-67-8	
Vinyl acetate	ND	ug/L	20.0	1		04/25/22 14:38	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/25/22 14:38	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		04/25/22 14:38	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/25/22 14:38	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		04/25/22 14:38	95-47-6	

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: <b>TRIP BLANK 1</b>	Lab ID: <b>60398001029</b>	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	80-120	1		04/25/22 14:38	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		04/25/22 14:38	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	1		04/25/22 14:38	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		04/25/22 14:38		

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: TRIP BLANK 2	Lab ID: 60398001030	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
Acetone	ND	ug/L	10.0	1		04/25/22 14:52	67-64-1	
Acetonitrile	ND	ug/L	10.0	1		04/25/22 14:52	75-05-8	
Acrolein	ND	ug/L	50.0	1		04/25/22 14:52	107-02-8	
Acrylonitrile	ND	ug/L	20.0	1		04/25/22 14:52	107-13-1	
tert-Amylmethyl ether	ND	ug/L	1.0	1		04/25/22 14:52	994-05-8	
Benzene	ND	ug/L	1.0	1		04/25/22 14:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		04/25/22 14:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		04/25/22 14:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		04/25/22 14:52	75-27-4	
Bromoform	ND	ug/L	1.0	1		04/25/22 14:52	75-25-2	
Bromomethane	ND	ug/L	5.0	1		04/25/22 14:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		04/25/22 14:52	78-93-3	
tert-Butyl Alcohol	ND	ug/L	10.0	1		04/25/22 14:52	75-65-0	
n-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		04/25/22 14:52	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		04/25/22 14:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		04/25/22 14:52	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		04/25/22 14:52	110-75-8	c2
Chloroform	ND	ug/L	1.0	1		04/25/22 14:52	67-66-3	
Chloromethane	ND	ug/L	1.0	1		04/25/22 14:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		04/25/22 14:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		04/25/22 14:52	106-43-4	
Cyclohexane	ND	ug/L	1.0	1		04/25/22 14:52	110-82-7	
Cyclohexanone	ND	ug/L	20.0	1		04/25/22 14:52	108-94-1	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		04/25/22 14:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		04/25/22 14:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		04/25/22 14:52	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		04/25/22 14:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	20.0	1		04/25/22 14:52	110-57-6	
Dichlorodifluoromethane	ND	ug/L	1.0	1		04/25/22 14:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		04/25/22 14:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		04/25/22 14:52	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		04/25/22 14:52	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		04/25/22 14:52	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		04/25/22 14:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:52	563-58-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: TRIP BLANK 2	Lab ID: 60398001030	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		04/25/22 14:52	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	1.0	1		04/25/22 14:52	60-29-7	
Diisopropyl ether	ND	ug/L	1.0	1		04/25/22 14:52	108-20-3	
1,4-Dioxane (p-Dioxane)	ND	ug/L	100	1		04/25/22 14:52	123-91-1	
Ethylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1.0	1		04/25/22 14:52	637-92-3	
n-Heptane	ND	ug/L	10.0	1		04/25/22 14:52	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		04/25/22 14:52	87-68-3	
n-Hexane	ND	ug/L	10.0	1		04/25/22 14:52	110-54-3	
2-Hexanone	ND	ug/L	10.0	1		04/25/22 14:52	591-78-6	
Iodomethane	ND	ug/L	10.0	1		04/25/22 14:52	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		04/25/22 14:52	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		04/25/22 14:52	99-87-6	
Methyl acetate	ND	ug/L	1.0	1		04/25/22 14:52	79-20-9	
Methylcyclohexane	ND	ug/L	1.0	1		04/25/22 14:52	108-87-2	
Methylene Chloride	ND	ug/L	1.0	1		04/25/22 14:52	75-09-2	
1-Methylnaphthalene	ND	ug/L	10.0	1		04/25/22 14:52	90-12-0	
2-Methylnaphthalene	ND	ug/L	10.0	1		04/25/22 14:52	91-57-6	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		04/25/22 14:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		04/25/22 14:52	1634-04-4	
Naphthalene	ND	ug/L	10.0	1		04/25/22 14:52	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	103-65-1	
Styrene	ND	ug/L	1.0	1		04/25/22 14:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		04/25/22 14:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		04/25/22 14:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		04/25/22 14:52	127-18-4	
Tetrahydrofuran	ND	ug/L	5.0	1		04/25/22 14:52	109-99-9	
Toluene	ND	ug/L	1.0	1		04/25/22 14:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		04/25/22 14:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		04/25/22 14:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		04/25/22 14:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		04/25/22 14:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		04/25/22 14:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		04/25/22 14:52	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		04/25/22 14:52	76-13-1	N2
1,2,3-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	526-73-8	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		04/25/22 14:52	108-67-8	
Vinyl acetate	ND	ug/L	20.0	1		04/25/22 14:52	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		04/25/22 14:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		04/25/22 14:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		04/25/22 14:52	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		04/25/22 14:52	95-47-6	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Sample: <b>TRIP BLANK 2</b>	Lab ID: <b>60398001030</b>	Collected: 04/14/22 08:00	Received: 04/16/22 04:47	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260						
		Pace Analytical Services - Kansas City						
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102	%	80-120	1		04/25/22 14:52	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		04/25/22 14:52	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	1		04/25/22 14:52	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		04/25/22 14:52		

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**QUALITY CONTROL DATA**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch: 783257 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
 Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3123320 Matrix: Solid

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	mg/kg	ND	1.0	04/29/22 15:43	
Arsenic	mg/kg	ND	1.0	04/29/22 15:43	
Copper	mg/kg	ND	2.0	04/29/22 15:43	
Lead	mg/kg	ND	1.0	04/29/22 15:43	
Zinc	mg/kg	ND	10.0	04/29/22 15:43	

LABORATORY CONTROL SAMPLE: 3123321

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	100	90.3	90	80-120	
Arsenic	mg/kg	100	82.3	82	80-120	
Copper	mg/kg	100	102	102	80-120	
Lead	mg/kg	100	94.8	95	80-120	
Zinc	mg/kg	100	94.0	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3123322 3123323

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60397792001 Result	Spike Conc.	Spike Conc.	Conc.								
Antimony	mg/kg	6.6	89.3	89.3	58.2	53.6	58	53	75-125	8	20	M1	
Arsenic	mg/kg	2.3	89.3	89.3	73.2	73.8	79	80	75-125	1	20		
Copper	mg/kg	91.8	89.3	89.3	166	209	83	131	75-125	23	20	M1, R1	
Lead	mg/kg	17.5	89.3	89.3	104	109	96	102	75-125	5	20		
Zinc	mg/kg	266	89.3	89.3	327	356	68	102	75-125	9	20	M1	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM  
Pace Project No.: 60398001

QC Batch: 782793 Analysis Method: EPA 8260B  
QC Batch Method: EPA 5035A/5030 Analysis Description: 8260 MSV 5035A Volatile Organics  
Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3121603 Matrix: Solid  
Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,1-Trichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2-Trichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1,2-Trichlorotrifluoroethane	ug/kg	ND	5.0	04/22/22 10:17	N2
1,1-Dichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,1-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
1,1-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,2,3-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	04/22/22 10:17	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloroethane	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,3-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,3-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
1,4-Dichlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
1,4-Dioxane (p-Dioxane)	ug/kg	ND	100	04/22/22 10:17	
1-Methylnaphthalene	ug/kg	ND	10.0	04/22/22 10:17	
2,2-Dichloropropane	ug/kg	ND	5.0	04/22/22 10:17	
2-Butanone (MEK)	ug/kg	ND	10.0	04/22/22 10:17	
2-Chloroethylvinyl ether	ug/kg	ND	5.0	04/22/22 10:17	
2-Chlorotoluene	ug/kg	ND	5.0	04/22/22 10:17	
2-Hexanone	ug/kg	ND	20.0	04/22/22 10:17	
2-Methylnaphthalene	ug/kg	ND	10.0	04/22/22 10:17	
4-Chlorotoluene	ug/kg	ND	5.0	04/22/22 10:17	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	04/22/22 10:17	
Acetone	ug/kg	ND	20.0	04/22/22 10:17	
Acetonitrile	ug/kg	ND	100	04/22/22 10:17	
Acrolein	ug/kg	ND	100	04/22/22 10:17	
Acrylonitrile	ug/kg	ND	100	04/22/22 10:17	
Benzene	ug/kg	ND	5.0	04/22/22 10:17	
Bromobenzene	ug/kg	ND	5.0	04/22/22 10:17	
Bromochloromethane	ug/kg	ND	5.0	04/22/22 10:17	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

METHOD BLANK: 3121603

Matrix: Solid

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/kg	ND	5.0	04/22/22 10:17	
Bromoform	ug/kg	ND	5.0	04/22/22 10:17	
Bromomethane	ug/kg	ND	5.0	04/22/22 10:17	
Carbon disulfide	ug/kg	ND	5.0	04/22/22 10:17	
Carbon tetrachloride	ug/kg	ND	5.0	04/22/22 10:17	
Chlorobenzene	ug/kg	ND	5.0	04/22/22 10:17	
Chloroethane	ug/kg	ND	5.0	04/22/22 10:17	
Chloroform	ug/kg	ND	5.0	04/22/22 10:17	
Chloromethane	ug/kg	ND	5.0	04/22/22 10:17	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	
Cyclohexane	ug/kg	ND	10.0	04/22/22 10:17	
Cyclohexanone	ug/kg	ND	20.0	04/22/22 10:17	
Dibromochloromethane	ug/kg	ND	5.0	04/22/22 10:17	
Dibromomethane	ug/kg	ND	5.0	04/22/22 10:17	
Dichlorodifluoromethane	ug/kg	ND	5.0	04/22/22 10:17	
Diethyl ether (Ethyl ether)	ug/kg	ND	5.0	04/22/22 10:17	
Diisopropyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Ethyl-tert-butyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Ethylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	04/22/22 10:17	
Iodomethane	ug/kg	ND	10.0	04/22/22 10:17	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	04/22/22 10:17	
m&p-Xylene	ug/kg	ND	5.0	04/22/22 10:17	
Methyl acetate	ug/kg	ND	100	04/22/22 10:17	
Methyl-tert-butyl ether	ug/kg	ND	5.0	04/22/22 10:17	
Methylcyclohexane	ug/kg	ND	5.0	04/22/22 10:17	
Methylene Chloride	ug/kg	ND	5.0	04/22/22 10:17	
n-Butylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
n-Heptane	ug/kg	ND	10.0	04/22/22 10:17	
n-Hexane	ug/kg	ND	10.0	04/22/22 10:17	
n-Propylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Naphthalene	ug/kg	ND	10.0	04/22/22 10:17	
o-Xylene	ug/kg	ND	5.0	04/22/22 10:17	
p-Isopropyltoluene	ug/kg	ND	5.0	04/22/22 10:17	
sec-Butylbenzene	ug/kg	ND	5.0	04/22/22 10:17	
Styrene	ug/kg	ND	5.0	04/22/22 10:17	
tert-Amylmethyl ether	ug/kg	ND	5.0	04/22/22 10:17	
tert-Butyl Alcohol	ug/kg	ND	10.0	04/22/22 10:17	
tert-Butylbenzene	ug/kg	ND	25.0	04/22/22 10:17	
Tetrachloroethene	ug/kg	ND	5.0	04/22/22 10:17	
Tetrahydrofuran	ug/kg	ND	5.0	04/22/22 10:17	N2
Toluene	ug/kg	ND	5.0	04/22/22 10:17	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	04/22/22 10:17	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

METHOD BLANK: 3121603

Matrix: Solid

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/kg	ND	20.0	04/22/22 10:17	
Trichloroethene	ug/kg	ND	5.0	04/22/22 10:17	
Trichlorofluoromethane	ug/kg	ND	5.0	04/22/22 10:17	
Vinyl acetate	ug/kg	ND	100	04/22/22 10:17	
Vinyl chloride	ug/kg	ND	5.0	04/22/22 10:17	
Xylene (Total)	ug/kg	ND	5.0	04/22/22 10:17	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	04/22/22 10:17	
4-Bromofluorobenzene (S)	%	103	80-120	04/22/22 10:17	
Toluene-d8 (S)	%	102	80-120	04/22/22 10:17	

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	100	94.9	95	80-130	
1,1,1-Trichloroethane	ug/kg	100	99.0	99	75-130	
1,1,2,2-Tetrachloroethane	ug/kg	100	84.2	84	75-120	
1,1,2-Trichloroethane	ug/kg	100	89.9	90	80-120	
1,1,2-Trichlorotrifluoroethane	ug/kg	100	104	104	80-120	N2
1,1-Dichloroethane	ug/kg	100	93.0	93	75-125	
1,1-Dichloroethene	ug/kg	100	106	106	70-130	
1,1-Dichloropropene	ug/kg	100	98.8	99	60-140	
1,2,3-Trichlorobenzene	ug/kg	100	90.6	91	80-125	
1,2,3-Trichloropropane	ug/kg	100	86.8	87	80-120	
1,2,3-Trimethylbenzene	ug/kg	100	90.4	90	80-120	
1,2,4-Trichlorobenzene	ug/kg	100	93.0	93	80-125	
1,2,4-Trimethylbenzene	ug/kg	100	91.7	92	80-125	
1,2-Dibromo-3-chloropropane	ug/kg	100	81.3	81	75-135	
1,2-Dibromoethane (EDB)	ug/kg	100	97.4	97	80-125	
1,2-Dichlorobenzene	ug/kg	100	92.3	92	80-120	
1,2-Dichloroethane	ug/kg	100	89.4	89	80-120	
1,2-Dichloroethene (Total)	ug/kg	200	195	98	80-120	
1,2-Dichloropropane	ug/kg	100	90.2	90	80-120	
1,3,5-Trimethylbenzene	ug/kg	100	92.7	93	80-125	
1,3-Dichlorobenzene	ug/kg	100	92.8	93	80-120	
1,3-Dichloropropane	ug/kg	100	94.1	94	80-120	
1,4-Dichlorobenzene	ug/kg	100	91.8	92	80-120	
1,4-Dioxane (p-Dioxane)	ug/kg	500	359	72	75-120	L2
1-Methylnaphthalene	ug/kg	100	89.1	89	80-120	
2,2-Dichloropropane	ug/kg	100	92.0	92	75-130	
2-Butanone (MEK)	ug/kg	500	480	96	60-135	
2-Chloroethylvinyl ether	ug/kg	500	599	120	70-125	
2-Chlorotoluene	ug/kg	100	85.8	86	80-120	
2-Hexanone	ug/kg	500	505	101	70-135	
2-Methylnaphthalene	ug/kg	100	78.7	79	80-120	L2

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Chlorotoluene	ug/kg	100	94.0	94	80-120	
4-Methyl-2-pentanone (MIBK)	ug/kg	500	419	84	75-130	
Acetone	ug/kg	500	461	92	50-150	
Acetonitrile	ug/kg	500	456	91	50-120	
Acrolein	ug/kg		396			
Acrylonitrile	ug/kg	500	442	88	80-120	
Benzene	ug/kg	100	93.2	93	80-120	
Bromobenzene	ug/kg	100	89.2	89	80-120	
Bromochloromethane	ug/kg	100	92.7	93	75-120	
Bromodichloromethane	ug/kg	100	88.5	88	80-125	
Bromoform	ug/kg	100	91.4	91	80-135	
Bromomethane	ug/kg	100	115	115	35-135	
Carbon disulfide	ug/kg	100	102	102	65-140	
Carbon tetrachloride	ug/kg	100	99.5	99	75-140	
Chlorobenzene	ug/kg	100	97.1	97	80-120	
Chloroethane	ug/kg	100	95.4	95	50-135	
Chloroform	ug/kg	100	87.1	87	80-120	
Chloromethane	ug/kg	100	92.1	92	15-155	
cis-1,2-Dichloroethene	ug/kg	100	96.4	96	80-120	
cis-1,3-Dichloropropene	ug/kg	100	89.4	89	80-125	
Cyclohexane	ug/kg	100	96.4	96	80-120	
Cyclohexanone	ug/kg	500	421	84	80-120	
Dibromochloromethane	ug/kg	100	93.4	93	80-130	
Dibromomethane	ug/kg	100	91.5	92	80-120	
Dichlorodifluoromethane	ug/kg	100	97.5	98	10-160	
Diethyl ether (Ethyl ether)	ug/kg	100	91.5	92	80-120	
Diisopropyl ether	ug/kg	100	88.9	89	75-135	
Ethyl-tert-butyl ether	ug/kg	100	85.4	85	70-125	
Ethylbenzene	ug/kg	100	97.6	98	80-120	
Hexachloro-1,3-butadiene	ug/kg	100	85.1	85	80-135	
Iodomethane	ug/kg	100	104	104	65-145	
Isopropylbenzene (Cumene)	ug/kg	100	100	100	75-135	
m&p-Xylene	ug/kg	200	202	101	80-125	
Methyl acetate	ug/kg	500	430	86	80-120	
Methyl-tert-butyl ether	ug/kg	100	83.8	84	75-130	
Methylcyclohexane	ug/kg	100	96.6	97	80-120	
Methylene Chloride	ug/kg	100	89.3	89	65-120	
n-Butylbenzene	ug/kg	100	101	101	80-135	
n-Heptane	ug/kg	100	99.2	99	80-120	
n-Hexane	ug/kg	100	94.5	94	55-150	
n-Propylbenzene	ug/kg	100	93.1	93	80-125	
Naphthalene	ug/kg	100	90.1	90	80-120	
o-Xylene	ug/kg	100	99.1	99	80-125	
p-Isopropyltoluene	ug/kg	100	93.7	94	65-145	
sec-Butylbenzene	ug/kg	100	95.7	96	80-135	
Styrene	ug/kg	100	101	101	85-125	
tert-Amylmethyl ether	ug/kg	100	83.3	83	80-125	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3121604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/kg	500	367	73	65-130	
tert-Butylbenzene	ug/kg	100	92.8	93	80-125	
Tetrachloroethene	ug/kg	100	93.4	93	80-130	
Tetrahydrofuran	ug/kg	500	425	85	80-120	N2
Toluene	ug/kg	100	94.8	95	80-120	
trans-1,2-Dichloroethene	ug/kg	100	98.7	99	75-125	
trans-1,3-Dichloropropene	ug/kg	100	91.9	92	80-130	
trans-1,4-Dichloro-2-butene	ug/kg	100	76.3	76	80-120	L2
Trichloroethene	ug/kg	100	93.3	93	80-125	
Trichlorofluoromethane	ug/kg	100	103	103	65-135	
Vinyl acetate	ug/kg		93.9J			
Vinyl chloride	ug/kg	100	99.7	100	35-145	
Xylene (Total)	ug/kg	300	301	100	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			90	80-120	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121605 3121606

Parameter	Units	60397740026		MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
1,1,1,2-Tetrachloroethane	ug/kg	ND	107	107	106	86.0	97.3	81	92	25-130	12	35	
1,1,1-Trichloroethane	ug/kg	ND	107	107	106	89.9	99.1	84	94	45-120	10	35	
1,1,2,2-Tetrachloroethane	ug/kg	ND	107	107	106	ND	ND	0	0	10-145		35	M1
1,1,2-Trichloroethane	ug/kg	ND	107	107	106	73.6	74.9	69	71	25-130	2	35	
1,1,2-Trichloroethane	ug/kg	ND	107	107	106	95.3	104	89	98	35-120	9	35	N2
Trichlorotrifluoroethane													
1,1-Dichloroethane	ug/kg	ND	107	107	106	86.3	95.6	81	90	40-120	10	35	
1,1-Dichloroethene	ug/kg	ND	107	107	106	115	135	108	128	35-120	16	35	M1
1,1-Dichloropropene	ug/kg	ND	107	107	106	88.9	98.6	83	93	40-125	10	35	
1,2,3-Trichlorobenzene	ug/kg	ND	107	107	106	78.9	94.5	74	89	10-125	18	50	
1,2,3-Trichloropropane	ug/kg	ND	107	107	106	86.7	102	81	96	25-135	16	35	
1,2,3-Trimethylbenzene	ug/kg	ND	107	107	106	77.3	88.5	73	84	35-120	13	35	
1,2,4-Trichlorobenzene	ug/kg	ND	107	107	106	79.3	92.9	74	88	10-125	16	50	
1,2,4-Trimethylbenzene	ug/kg	ND	107	107	106	78.5	88.4	74	83	35-120	12	35	
1,2-Dibromo-3-chloropropane	ug/kg	ND	107	107	106	65.3	69.5	61	66	10-145	6	35	
1,2-Dibromoethane (EDB)	ug/kg	ND	107	107	106	99.5	110	93	103	30-140	10	35	
1,2-Dichlorobenzene	ug/kg	ND	107	107	106	80.8	94.1	76	89	10-125	15	35	
1,2-Dichloroethane	ug/kg	ND	107	107	106	89.5	101	84	95	35-120	12	35	
1,2-Dichloroethene (Total)	ug/kg	ND	213	212	212	181	201	85	95	40-120	10	35	
1,2-Dichloropropane	ug/kg	ND	107	107	106	85.3	97.2	80	92	35-120	13	35	
1,3,5-Trimethylbenzene	ug/kg	ND	107	107	106	77.1	88.1	72	83	15-130	13	35	
1,3-Dichlorobenzene	ug/kg	ND	107	107	106	79.4	89.9	75	85	10-125	12	37	
1,3-Dichloropropane	ug/kg	ND	107	107	106	95.0	106	89	100	30-120	11	35	
1,4-Dichlorobenzene	ug/kg	ND	107	107	106	80.0	90.9	75	86	10-125	13	35	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3121605			3121606							
Parameter	Units	MS		MSD		MS	MSD	% Rec	% Rec	% Rec	Max	Qual
		60397740026	Spike	Spike	MS							
1,4-Dioxane (p-Dioxane)	ug/kg	ND	533	529	427	513	80	97	10-200	18	35	
1-Methylnaphthalene	ug/kg	ND	107	106	80.6	102	76	96	35-120	23	35	
2,2-Dichloropropane	ug/kg	ND	107	106	83.2	91.6	78	87	40-120	10	35	
2-Butanone (MEK)	ug/kg	ND	533	529	898	1010	168	190	20-145	11	35	M1
2-Chloroethylvinyl ether	ug/kg	ND	533	529	624	698	117	132	20-155	11	35	
2-Chlorotoluene	ug/kg	ND	107	106	73.2	82.9	69	78	15-125	12	35	
2-Hexanone	ug/kg	ND	533	529	959	1110	180	210	15-150	15	35	M1
2-Methylnaphthalene	ug/kg	ND	107	106	71.1	91.3	67	86	35-120	25	35	
4-Chlorotoluene	ug/kg	ND	107	106	78.7	90.3	74	85	10-125	14	35	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	533	529	593	678	111	128	30-140	14	35	
Acetone	ug/kg	ND	533	529	847	933	156	174	10-165	10	35	M1
Acetonitrile	ug/kg	ND	533	529	413	451	78	85	35-120	9	35	
Acrolein	ug/kg	ND			477	524				9	60	
Acrylonitrile	ug/kg	ND	533	529	432	478	81	90	10-145	10	35	
Benzene	ug/kg	ND	107	106	82.8	93.5	78	88	35-120	12	35	
Bromobenzene	ug/kg	ND	107	106	78.5	91.5	74	86	15-125	15	35	
Bromochloromethane	ug/kg	ND	107	106	92.8	104	87	98	35-120	12	35	
Bromodichloromethane	ug/kg	ND	107	106	80.8	89.2	76	84	30-130	10	35	
Bromoform	ug/kg	ND	107	106	92.7	105	87	100	15-135	13	35	
Bromomethane	ug/kg	ND	107	106	94.2	103	88	97	10-120	8	35	
Carbon disulfide	ug/kg	ND	107	106	84.2	94.9	79	90	20-120	12	35	
Carbon tetrachloride	ug/kg	ND	107	106	89.7	99.9	84	94	40-125	11	35	
Chlorobenzene	ug/kg	ND	107	106	85.9	96.3	81	91	20-125	11	35	
Chloroethane	ug/kg	ND	107	106	93.7	104	88	98	25-120	10	35	
Chloroform	ug/kg	ND	107	106	81.7	91.4	77	86	40-125	11	35	
Chloromethane	ug/kg	ND	107	106	87.9	101	82	95	10-120	14	35	
cis-1,2-Dichloroethene	ug/kg	ND	107	106	89.8	99.3	84	94	35-120	10	35	
cis-1,3-Dichloropropene	ug/kg	ND	107	106	81.8	91.1	77	86	20-130	11	35	
Cyclohexane	ug/kg	ND	107	106	87.1	93.4	82	88	35-120	7	35	
Cyclohexanone	ug/kg	ND	533	529	582	695	109	131	35-120	18	35	M1
Dibromochloromethane	ug/kg	ND	107	106	88.8	97.6	83	92	25-135	9	35	
Dibromomethane	ug/kg	ND	107	106	92.9	105	87	99	30-125	12	35	
Dichlorodifluoromethane	ug/kg	ND	107	106	98.4	106	92	100	10-120	7	35	
Diethyl ether (Ethyl ether)	ug/kg	ND	107	106	94.4	106	89	100	35-120	12	35	
Diisopropyl ether	ug/kg	ND	107	106	84.0	94.4	79	89	45-135	12	25	
Ethyl-tert-butyl ether	ug/kg	ND	107	106	82.9	94.0	78	89	45-130	13	25	
Ethylbenzene	ug/kg	ND	107	106	85.0	94.5	80	89	35-120	11	35	
Hexachloro-1,3-butadiene	ug/kg	ND	107	106	64.9	76.7	61	72	10-125	17	45	
Iodomethane	ug/kg	ND	107	106	90.2	111	85	105	30-120	21	35	
Isopropylbenzene (Cumene)	ug/kg	ND	107	106	86.4	96.6	81	91	20-135	11	35	
m&p-Xylene	ug/kg	ND	213	212	175	195	82	92	30-145	11	35	
Methyl acetate	ug/kg	ND	533	529	ND	ND	0	0	30-120		35	M1
Methyl-tert-butyl ether	ug/kg	ND	107	106	88.3	100	83	95	35-140	13	35	
Methylcyclohexane	ug/kg	ND	107	106	85.5	96.1	80	91	35-120	12	35	

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**QUALITY CONTROL DATA**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Parameter	Units	60397740026		3121605		3121606		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Methylene Chloride	ug/kg	ND	107	106	87.1	96.3	81	90	10-135	10	35			
n-Butylbenzene	ug/kg	ND	107	106	79.0	89.6	74	85	10-130	13	35			
n-Heptane	ug/kg	ND	107	106	85.5	96.2	80	91	35-120	12	35			
n-Hexane	ug/kg	ND	107	106	84.2	93.0	79	88	10-150	10	35			
n-Propylbenzene	ug/kg	ND	107	106	78.3	89.3	73	84	20-125	13	35			
Naphthalene	ug/kg	ND	107	106	90.4	109	85	103	10-160	18	35			
o-Xylene	ug/kg	ND	107	106	87.4	98.1	82	93	30-145	12	35			
p-Isopropyltoluene	ug/kg	ND	107	106	77.8	86.9	73	82	10-135	11	35			
sec-Butylbenzene	ug/kg	ND	107	106	79.1	90.1	74	85	15-135	13	35			
Styrene	ug/kg	ND	107	106	91.2	104	86	98	15-130	13	35			
tert-Amylmethyl ether	ug/kg	ND	107	106	84.3	95.2	79	90	45-140	12	35			
tert-Butyl Alcohol	ug/kg	ND	533	529	424	519	79	98	55-130	20	25			
tert-Butylbenzene	ug/kg	ND	107	106	79.1	89.3	74	84	15-135	12	35			
Tetrachloroethene	ug/kg	ND	107	106	79.7	87.6	75	83	30-125	10	35			
Tetrahydrofuran	ug/kg	ND	533	529	472	526	89	99	35-120	11	35	N2		
Toluene	ug/kg	ND	107	106	84.0	93.8	79	89	35-120	11	35			
trans-1,2-Dichloroethene	ug/kg	ND	107	106	91.2	101	86	96	40-120	10	35			
trans-1,3-Dichloropropene	ug/kg	ND	107	106	85.7	94.4	80	89	20-135	10	35			
trans-1,4-Dichloro-2-butene	ug/kg	ND	107	106	74.4	83.7	70	79	15-120	12	35			
Trichloroethene	ug/kg	ND	107	106	155	176	145	166	25-140	12	35	M1		
Trichlorofluoromethane	ug/kg	ND	107	106	94.5	102	89	96	35-120	7	35			
Vinyl acetate	ug/kg	ND			84.5J	93.8J					35			
Vinyl chloride	ug/kg	ND	107	106	95.3	104	89	98	10-120	9	35			
Xylene (Total)	ug/kg	ND	320	317	262	293	82	92	35-120	11	35			
1,2-Dichlorobenzene-d4 (S)	%						102	103	80-120					
4-Bromofluorobenzene (S)	%						92	92	80-120					
Toluene-d8 (S)	%						101	100	80-120					

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM  
Pace Project No.: 60398001

QC Batch: 783081	Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260	Analysis Description: 8260 MSV Water 10 mL Purge
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001029, 60398001030

METHOD BLANK: 3122703 Matrix: Water

Associated Lab Samples: 60398001029, 60398001030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	04/22/22 23:28	N2
1,1-Dichloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,1-Dichloroethene	ug/L	ND	1.0	04/22/22 23:28	
1,1-Dichloropropene	ug/L	ND	1.0	04/22/22 23:28	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
1,2,3-Trichloropropane	ug/L	ND	2.5	04/22/22 23:28	
1,2,3-Trimethylbenzene	ug/L	ND	1.0	04/22/22 23:28	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	04/22/22 23:28	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	04/22/22 23:28	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/22/22 23:28	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
1,2-Dichloroethane	ug/L	ND	1.0	04/22/22 23:28	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	04/22/22 23:28	
1,2-Dichloropropane	ug/L	ND	1.0	04/22/22 23:28	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	04/22/22 23:28	
1,3-Dichlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
1,3-Dichloropropane	ug/L	ND	1.0	04/22/22 23:28	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
1,4-Dioxane (p-Dioxane)	ug/L	ND	100	04/22/22 23:28	
1-Methylnaphthalene	ug/L	ND	10.0	04/22/22 23:28	
2,2-Dichloropropane	ug/L	ND	1.0	04/22/22 23:28	
2-Butanone (MEK)	ug/L	ND	10.0	04/22/22 23:28	
2-Chloroethylvinyl ether	ug/L	ND	10.0	04/22/22 23:28	
2-Chlorotoluene	ug/L	ND	1.0	04/22/22 23:28	
2-Hexanone	ug/L	ND	10.0	04/22/22 23:28	
2-Methylnaphthalene	ug/L	ND	10.0	04/22/22 23:28	
4-Chlorotoluene	ug/L	ND	1.0	04/22/22 23:28	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	04/22/22 23:28	
Acetone	ug/L	ND	10.0	04/22/22 23:28	
Acetonitrile	ug/L	ND	10.0	04/22/22 23:28	
Acrolein	ug/L	ND	50.0	04/22/22 23:28	
Acrylonitrile	ug/L	ND	20.0	04/22/22 23:28	
Benzene	ug/L	ND	1.0	04/22/22 23:28	
Bromobenzene	ug/L	ND	1.0	04/22/22 23:28	
Bromochloromethane	ug/L	ND	1.0	04/22/22 23:28	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

METHOD BLANK: 3122703

Matrix: Water

Associated Lab Samples: 60398001029, 60398001030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromodichloromethane	ug/L	ND	1.0	04/22/22 23:28	
Bromoform	ug/L	ND	1.0	04/22/22 23:28	
Bromomethane	ug/L	ND	5.0	04/22/22 23:28	
Carbon disulfide	ug/L	ND	5.0	04/22/22 23:28	
Carbon tetrachloride	ug/L	ND	1.0	04/22/22 23:28	
Chlorobenzene	ug/L	ND	1.0	04/22/22 23:28	
Chloroethane	ug/L	ND	1.0	04/22/22 23:28	
Chloroform	ug/L	ND	1.0	04/22/22 23:28	
Chloromethane	ug/L	ND	1.0	04/22/22 23:28	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/22/22 23:28	
cis-1,3-Dichloropropene	ug/L	ND	1.0	04/22/22 23:28	
Cyclohexane	ug/L	ND	1.0	04/22/22 23:28	
Cyclohexanone	ug/L	ND	20.0	04/22/22 23:28	
Dibromochloromethane	ug/L	ND	1.0	04/22/22 23:28	
Dibromomethane	ug/L	ND	1.0	04/22/22 23:28	
Dichlorodifluoromethane	ug/L	ND	1.0	04/22/22 23:28	
Diethyl ether (Ethyl ether)	ug/L	ND	1.0	04/22/22 23:28	
Diisopropyl ether	ug/L	ND	1.0	04/22/22 23:28	
Ethyl-tert-butyl ether	ug/L	ND	1.0	04/22/22 23:28	
Ethylbenzene	ug/L	ND	1.0	04/22/22 23:28	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	04/22/22 23:28	
Iodomethane	ug/L	ND	10.0	04/22/22 23:28	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	04/22/22 23:28	
m&p-Xylene	ug/L	ND	2.0	04/22/22 23:28	
Methyl acetate	ug/L	ND	1.0	04/22/22 23:28	
Methyl-tert-butyl ether	ug/L	ND	1.0	04/22/22 23:28	
Methylcyclohexane	ug/L	ND	1.0	04/22/22 23:28	
Methylene Chloride	ug/L	ND	1.0	04/22/22 23:28	
n-Butylbenzene	ug/L	ND	1.0	04/22/22 23:28	
n-Heptane	ug/L	ND	10.0	04/22/22 23:28	
n-Hexane	ug/L	ND	10.0	04/22/22 23:28	
n-Propylbenzene	ug/L	ND	1.0	04/22/22 23:28	
Naphthalene	ug/L	ND	10.0	04/22/22 23:28	
o-Xylene	ug/L	ND	1.0	04/22/22 23:28	
p-Isopropyltoluene	ug/L	ND	1.0	04/22/22 23:28	
sec-Butylbenzene	ug/L	ND	1.0	04/22/22 23:28	
Styrene	ug/L	ND	1.0	04/22/22 23:28	
tert-Amylmethyl ether	ug/L	ND	1.0	04/22/22 23:28	
tert-Butyl Alcohol	ug/L	ND	10.0	04/22/22 23:28	
tert-Butylbenzene	ug/L	ND	1.0	04/22/22 23:28	
Tetrachloroethene	ug/L	ND	1.0	04/22/22 23:28	
Tetrahydrofuran	ug/L	ND	5.0	04/22/22 23:28	
Toluene	ug/L	ND	1.0	04/22/22 23:28	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/22/22 23:28	
trans-1,3-Dichloropropene	ug/L	ND	1.0	04/22/22 23:28	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

METHOD BLANK: 3122703

Matrix: Water

Associated Lab Samples: 60398001029, 60398001030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
trans-1,4-Dichloro-2-butene	ug/L	ND	20.0	04/22/22 23:28	
Trichloroethene	ug/L	ND	1.0	04/22/22 23:28	
Trichlorofluoromethane	ug/L	ND	1.0	04/22/22 23:28	
Vinyl acetate	ug/L	ND	20.0	04/22/22 23:28	
Vinyl chloride	ug/L	ND	1.0	04/22/22 23:28	
Xylene (Total)	ug/L	ND	3.0	04/22/22 23:28	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120	04/22/22 23:28	
4-Bromofluorobenzene (S)	%	101	80-120	04/22/22 23:28	
Toluene-d8 (S)	%	98	80-120	04/22/22 23:28	

LABORATORY CONTROL SAMPLE: 3122704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.2	101	80-120	
1,1,1-Trichloroethane	ug/L	20	19.0	95	80-120	
1,1,2,2-Tetrachloroethane	ug/L	20	16.3	81	75-125	
1,1,2-Trichloroethane	ug/L	20	19.2	96	80-120	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.7	99	70-130	N2
1,1-Dichloroethane	ug/L	20	18.2	91	75-125	
1,1-Dichloroethene	ug/L	20	19.9	99	80-120	
1,1-Dichloropropene	ug/L	20	19.0	95	80-125	
1,2,3-Trichlorobenzene	ug/L	20	20.0	100	75-125	
1,2,3-Trichloropropane	ug/L	20	18.1	91	80-125	
1,2,3-Trimethylbenzene	ug/L	20	18.6	93	80-125	
1,2,4-Trichlorobenzene	ug/L	20	19.5	97	75-120	
1,2,4-Trimethylbenzene	ug/L	20	19.5	98	80-125	
1,2-Dibromo-3-chloropropane	ug/L	20	18.2	91	70-120	
1,2-Dibromoethane (EDB)	ug/L	20	20.2	101	80-120	
1,2-Dichlorobenzene	ug/L	20	18.9	95	80-120	
1,2-Dichloroethane	ug/L	20	17.6	88	75-120	
1,2-Dichloroethene (Total)	ug/L	40	39.4	99	80-120	
1,2-Dichloropropane	ug/L	20	19.0	95	80-125	
1,3,5-Trimethylbenzene	ug/L	20	18.9	95	80-125	
1,3-Dichlorobenzene	ug/L	20	19.0	95	80-120	
1,3-Dichloropropane	ug/L	20	19.7	98	80-120	
1,4-Dichlorobenzene	ug/L	20	19.0	95	80-120	
1,4-Dioxane (p-Dioxane)	ug/L	100	101	101	10-180	
1-Methylnaphthalene	ug/L	20	22.2	111	40-160	
2,2-Dichloropropane	ug/L	20	17.1	85	60-130	
2-Butanone (MEK)	ug/L	100	146	146	40-150	
2-Chloroethylvinyl ether	ug/L	100	97.3	97	30-165	
2-Chlorotoluene	ug/L	20	17.9	89	80-120	
2-Hexanone	ug/L	100	143	143	45-150	
2-Methylnaphthalene	ug/L	20	19.6	98	55-150	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3122704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Chlorotoluene	ug/L	20	18.8	94	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	94.7	95	65-140	
Acetone	ug/L	100	167	167	20-175	
Acetonitrile	ug/L	100	93.4	93	25-180	
Acrolein	ug/L		93.2			
Acrylonitrile	ug/L	100	90.6	91	70-135	
Benzene	ug/L	20	19.4	97	80-120	
Bromobenzene	ug/L	20	19.3	97	80-120	
Bromochloromethane	ug/L	20	20.7	103	80-125	
Bromodichloromethane	ug/L	20	18.3	91	80-125	
Bromoform	ug/L	20	20.0	100	60-135	
Bromomethane	ug/L	20	22.6	113	10-165	
Carbon disulfide	ug/L	20	18.8	94	75-135	
Carbon tetrachloride	ug/L	20	18.8	94	80-125	
Chlorobenzene	ug/L	20	19.3	97	80-120	
Chloroethane	ug/L	20	16.5	82	70-130	
Chloroform	ug/L	20	18.7	93	80-120	
Chloromethane	ug/L	20	19.1	95	35-155	
cis-1,2-Dichloroethene	ug/L	20	20.5	102	80-120	
cis-1,3-Dichloropropene	ug/L	20	19.1	95	80-125	
Cyclohexane	ug/L	20	19.6	98	80-130	
Cyclohexanone	ug/L	100	134	134	10-180	
Dibromochloromethane	ug/L	20	20.3	101	70-120	
Dibromomethane	ug/L	20	18.5	93	80-120	
Dichlorodifluoromethane	ug/L	20	18.2	91	50-150	
Diethyl ether (Ethyl ether)	ug/L	20	19.6	98	70-140	
Diisopropyl ether	ug/L	20	18.1	90	65-130	
Ethyl-tert-butyl ether	ug/L	20	19.6	98	65-120	
Ethylbenzene	ug/L	20	19.7	98	80-120	
Hexachloro-1,3-butadiene	ug/L	20	18.8	94	65-135	
Iodomethane	ug/L	20	18.9	94	30-135	
Isopropylbenzene (Cumene)	ug/L	20	19.7	99	80-125	
m&p-Xylene	ug/L	40	41.2	103	75-130	
Methyl acetate	ug/L	100	87.8	88	45-140	
Methyl-tert-butyl ether	ug/L	20	18.9	94	65-130	
Methylcyclohexane	ug/L	20	20.1	100	80-125	
Methylene Chloride	ug/L	20	20.0	100	75-120	
n-Butylbenzene	ug/L	20	18.4	92	80-125	
n-Heptane	ug/L	20	19.1	95	10-180	
n-Hexane	ug/L	20	19.0	95	60-135	
n-Propylbenzene	ug/L	20	19.0	95	80-120	
Naphthalene	ug/L	20	20.6	103	70-120	
o-Xylene	ug/L	20	20.7	104	75-130	
p-Isopropyltoluene	ug/L	20	18.5	93	80-135	
sec-Butylbenzene	ug/L	20	18.9	94	80-120	
Styrene	ug/L	20	21.4	107	80-120	
tert-Amylmethyl ether	ug/L	20	19.4	97	75-125	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3122704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/L	100	90.3	90	50-150	
tert-Butylbenzene	ug/L	20	19.0	95	80-120	
Tetrachloroethene	ug/L	20	18.9	95	80-120	
Tetrahydrofuran	ug/L	100	92.3	92	75-125	
Toluene	ug/L	20	20.1	100	80-120	
trans-1,2-Dichloroethene	ug/L	20	19.0	95	80-120	
trans-1,3-Dichloropropene	ug/L	20	19.4	97	75-120	
trans-1,4-Dichloro-2-butene	ug/L	20	18J	90	40-145	
Trichloroethene	ug/L	20	20.0	100	80-120	
Trichlorofluoromethane	ug/L	20	17.8	89	80-130	
Vinyl acetate	ug/L		10.3J			
Vinyl chloride	ug/L	20	18.4	92	65-130	
Xylene (Total)	ug/L	60	62.0	103	80-120	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			100	80-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM  
Pace Project No.: 60398001

QC Batch:	782794	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035	Analysis Description:	8260 MSV GRO and Oxygenates
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3121608 Matrix: Solid  
Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	0.50	04/22/22 10:17	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	04/22/22 10:17	
4-Bromofluorobenzene (S)	%	103	69-133	04/22/22 10:17	
Toluene-d8 (S)	%	102	78-122	04/22/22 10:17	

LABORATORY CONTROL SAMPLE: 3121609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	4	3.5	87	61-140	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			90	69-133	
Toluene-d8 (S)	%			102	78-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121610 3121611

Parameter	Units	60397619008		3121611		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
1,2-Dichlorobenzene-d4 (S)	%					102	102	80-120			
4-Bromofluorobenzene (S)	%					91	93	69-133			
Toluene-d8 (S)	%					99	100	78-122			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3121612 3121613

Parameter	Units	60397740026		3121613		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
1,2-Dichlorobenzene-d4 (S)	%					102	103	80-120			
4-Bromofluorobenzene (S)	%					92	92	69-133			
Toluene-d8 (S)	%					101	100	78-122			

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**QUALITY CONTROL DATA**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch: 782201 Analysis Method: EPA 8082  
 QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB  
 Laboratory: Pace Analytical Services - Kansas City  
 Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3119502 Matrix: Solid  
 Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	32.1	04/22/22 10:19	CH
PCB-1221 (Aroclor 1221)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1232 (Aroclor 1232)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1242 (Aroclor 1242)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1248 (Aroclor 1248)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1254 (Aroclor 1254)	ug/kg	ND	32.1	04/22/22 10:19	
PCB-1260 (Aroclor 1260)	ug/kg	ND	32.1	04/22/22 10:19	CH
Decachlorobiphenyl (S)	%	88	35-120	04/22/22 10:19	

LABORATORY CONTROL SAMPLE: 3119503

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	164	173	106	65-120	CH
PCB-1260 (Aroclor 1260)	ug/kg	164	175	107	65-120	CH
Decachlorobiphenyl (S)	%			78	35-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119504 3119505

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60398001031 Result	Spike Conc.	Spike Conc.	Result						
PCB-1016 (Aroclor 1016)	ug/kg	ND	190	188	200	178	105	95	30-130	11	40
PCB-1260 (Aroclor 1260)	ug/kg	ND	190	188	236	190	118	95	15-155	22	40
Decachlorobiphenyl (S)	%						70	64	35-120		50 CL

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch:	782203	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3119510

Matrix: Solid

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	6.5	04/21/22 08:52	
Acenaphthylene	ug/kg	ND	6.5	04/21/22 08:52	
Anthracene	ug/kg	ND	6.5	04/21/22 08:52	
Benzo(a)anthracene	ug/kg	ND	6.5	04/21/22 08:52	
Benzo(a)pyrene	ug/kg	ND	6.5	04/21/22 08:52	
Benzo(b)fluoranthene	ug/kg	ND	6.5	04/21/22 08:52	
Benzo(g,h,i)perylene	ug/kg	ND	6.5	04/21/22 08:52	
Benzo(k)fluoranthene	ug/kg	ND	6.5	04/21/22 08:52	
Chrysene	ug/kg	ND	6.5	04/21/22 08:52	
Dibenz(a,h)anthracene	ug/kg	ND	6.5	04/21/22 08:52	
Fluoranthene	ug/kg	ND	6.5	04/21/22 08:52	
Fluorene	ug/kg	ND	6.5	04/21/22 08:52	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	6.5	04/21/22 08:52	
Naphthalene	ug/kg	ND	6.5	04/21/22 08:52	
Phenanthrene	ug/kg	ND	6.5	04/21/22 08:52	
Pyrene	ug/kg	ND	6.5	04/21/22 08:52	
2-Fluorobiphenyl (S)	%	73	40-120	04/21/22 08:52	
Terphenyl-d14 (S)	%	78	45-130	04/21/22 08:52	

LABORATORY CONTROL SAMPLE: 3119511

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	32.9	22.4	68	45-120	
Acenaphthylene	ug/kg	32.9	21.8	66	50-120	
Anthracene	ug/kg	32.9	22.7	69	50-120	
Benzo(a)anthracene	ug/kg	32.9	23.9	73	55-125	
Benzo(a)pyrene	ug/kg	32.9	23.0	70	45-120	
Benzo(b)fluoranthene	ug/kg	32.9	23.7	72	50-125	
Benzo(g,h,i)perylene	ug/kg	32.9	23.4	71	40-120	
Benzo(k)fluoranthene	ug/kg	32.9	22.3	68	55-120	
Chrysene	ug/kg	32.9	23.3	71	55-120	
Dibenz(a,h)anthracene	ug/kg	32.9	23.7	72	40-125	
Fluoranthene	ug/kg	32.9	24.5	74	50-125	
Fluorene	ug/kg	32.9	22.6	69	50-120	
Indeno(1,2,3-cd)pyrene	ug/kg	32.9	24.1	73	44-125	
Naphthalene	ug/kg	32.9	21.7	66	45-120	
Phenanthrene	ug/kg	32.9	23.4	71	50-125	
Pyrene	ug/kg	32.9	23.6	72	50-125	
2-Fluorobiphenyl (S)	%			73	40-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3119511

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			78	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119512 3119513

Parameter	Units	60398001028		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Acenaphthene	ug/kg	ND	40.4	40.4	34.4	29.6	85	73	10-150	15	42		
Acenaphthylene	ug/kg	ND	40.4	40.4	31.8	29.4	79	73	30-125	8	44		
Anthracene	ug/kg	ND	40.4	40.4	38.0	33.2	94	82	10-160	14	54		
Benzo(a)anthracene	ug/kg	ND	40.4	40.4	54.9	44.9	123	98	10-160	20	62		
Benzo(a)pyrene	ug/kg	ND	40.4	40.4	51.3	41.9	127	104	10-150	20	66		
Benzo(b)fluoranthene	ug/kg	ND	40.4	40.4	59.7	47.9	131	102	10-165	22	61		
Benzo(g,h,i)perylene	ug/kg	ND	40.4	40.4	49.8	40.4	124	100	10-155	21	58		
Benzo(k)fluoranthene	ug/kg	ND	40.4	40.4	43.9	37.8	102	87	10-165	15	53		
Chrysene	ug/kg	ND	40.4	40.4	52.8	43.0	120	95	10-150	20	57		
Dibenz(a,h)anthracene	ug/kg	ND	40.4	40.4	34.9	33.1	87	82	10-175	5	48		
Fluoranthene	ug/kg	11.6	40.4	40.4	91.8	63.2	199	128	10-180	37	54	M1	
Fluorene	ug/kg	ND	40.4	40.4	34.6	30.9	86	77	20-145	11	39		
Indeno(1,2,3-cd)pyrene	ug/kg	ND	40.4	40.4	47.5	40.2	118	100	10-150	17	59		
Naphthalene	ug/kg	ND	40.4	40.4	31.0	28.5	77	71	10-165	8	54		
Phenanthrene	ug/kg	ND	40.4	40.4	71.5	46.5	159	97	10-170	42	51		
Pyrene	ug/kg	9.3	40.4	40.4	76.4	55.0	166	113	10-180	32	61		
2-Fluorobiphenyl (S)	%						85	71	40-120				
Terphenyl-d14 (S)	%						90	78	45-130				

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch:	782204	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001001, 60398001002, 60398001003, 60398001004, 60398001005, 60398001006, 60398001007, 60398001008, 60398001009, 60398001010, 60398001011, 60398001012, 60398001013, 60398001014, 60398001015, 60398001016, 60398001017, 60398001018

METHOD BLANK: 3119514 Matrix: Solid

Associated Lab Samples: 60398001001, 60398001002, 60398001003, 60398001004, 60398001005, 60398001006, 60398001007, 60398001008, 60398001009, 60398001010, 60398001011, 60398001012, 60398001013, 60398001014, 60398001015, 60398001016, 60398001017, 60398001018

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.1	04/21/22 13:23	
Acenaphthylene	ug/kg	ND	3.1	04/21/22 13:23	
Anthracene	ug/kg	ND	3.1	04/21/22 13:23	
Benzo(a)anthracene	ug/kg	ND	3.1	04/21/22 13:23	
Benzo(a)pyrene	ug/kg	ND	3.1	04/21/22 13:23	
Benzo(b)fluoranthene	ug/kg	ND	3.1	04/21/22 13:23	
Benzo(g,h,i)perylene	ug/kg	ND	3.1	04/21/22 13:23	
Benzo(k)fluoranthene	ug/kg	ND	3.1	04/21/22 13:23	
Chrysene	ug/kg	ND	3.1	04/21/22 13:23	
Dibenz(a,h)anthracene	ug/kg	ND	3.1	04/21/22 13:23	
Fluoranthene	ug/kg	ND	3.1	04/21/22 13:23	
Fluorene	ug/kg	ND	3.1	04/21/22 13:23	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.1	04/21/22 13:23	
Naphthalene	ug/kg	ND	3.1	04/21/22 13:23	
Phenanthrene	ug/kg	ND	3.1	04/21/22 13:23	
Pyrene	ug/kg	ND	3.1	04/21/22 13:23	
2-Fluorobiphenyl (S)	%	75	40-120	04/21/22 13:23	
Terphenyl-d14 (S)	%	73	45-130	04/21/22 13:23	

LABORATORY CONTROL SAMPLE: 3119515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	31.9	25.6	80	45-120	
Acenaphthylene	ug/kg	31.9	25.4	79	50-120	
Anthracene	ug/kg	31.9	26.9	84	50-120	
Benzo(a)anthracene	ug/kg	31.9	28.8	90	55-125	
Benzo(a)pyrene	ug/kg	31.9	27.1	85	45-120	
Benzo(b)fluoranthene	ug/kg	31.9	27.2	85	50-125	
Benzo(g,h,i)perylene	ug/kg	31.9	27.9	87	40-120	
Benzo(k)fluoranthene	ug/kg	31.9	27.3	86	55-120	
Chrysene	ug/kg	31.9	27.7	87	55-120	
Dibenz(a,h)anthracene	ug/kg	31.9	27.3	86	40-125	
Fluoranthene	ug/kg	31.9	30.1	94	50-125	
Fluorene	ug/kg	31.9	26.7	84	50-120	
Indeno(1,2,3-cd)pyrene	ug/kg	31.9	29.2	91	44-125	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3119515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	31.9	24.7	77	45-120	
Phenanthrene	ug/kg	31.9	28.1	88	50-125	
Pyrene	ug/kg	31.9	28.4	89	50-125	
2-Fluorobiphenyl (S)	%			82	40-120	
Terphenyl-d14 (S)	%			90	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119516 3119517

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		60398001002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Acenaphthene	ug/kg	12.8	42.2	43.3	42.3	37.5	70	57	10-150	12	42	
Acenaphthylene	ug/kg	7.3	42.2	43.3	38.7	37.3	74	69	30-125	4	44	
Anthracene	ug/kg	46.6	42.2	43.3	63.1	51.3	39	11	10-160	21	54	
Benzo(a)anthracene	ug/kg	151	42.2	43.3	103	87.8	-113	-146	10-160	16	62	M1
Benzo(a)pyrene	ug/kg	112	42.2	43.3	82.3	69.7	-70	-98	10-150	17	66	M1
Benzo(b)fluoranthene	ug/kg	187	42.2	43.3	105	84.4	-195	-238	10-165	22	61	M1
Benzo(g,h,i)perylene	ug/kg	71.8	42.2	43.3	64.6	60.9	-17	-25	10-155	6	58	M1
Benzo(k)fluoranthene	ug/kg	59.9	42.2	43.3	58.6	54.4	-3	-13	10-165	7	53	M1
Chrysene	ug/kg	142	42.2	43.3	96.3	84.8	-107	-131	10-150	13	57	M1
Dibenz(a,h)anthracene	ug/kg	16.3	42.2	43.3	36.9	38.8	49	52	10-175	5	48	
Fluoranthene	ug/kg	344	42.2	43.3	196	146	-351	-457	10-180	29	54	M1
Fluorene	ug/kg	10.4	42.2	43.3	43.0	39.6	77	67	20-145	8	39	
Indeno(1,2,3-cd)pyrene	ug/kg	64.3	42.2	43.3	61.5	56.3	-7	-19	10-150	9	59	M1
Naphthalene	ug/kg	ND	42.2	43.3	33.8	34.1	74	73	10-165	1	54	
Phenanthrene	ug/kg	176	42.2	43.3	155	114	-51	-144	10-170	30	51	M1
Pyrene	ug/kg	269	42.2	43.3	171	142	-233	-295	10-180	19	61	M1
2-Fluorobiphenyl (S)	%						72	79	40-120			
Terphenyl-d14 (S)	%						78	84	45-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119518 3119519

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		60398001007 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Acenaphthene	ug/kg	135	40	42.6	76.5	48.4	-147	-204	10-150	45	42	M1,R1
Acenaphthylene	ug/kg	20.8	40	42.6	41.7	38.0	52	40	30-125	9	44	
Anthracene	ug/kg	135	40	42.6	163	60.7	71	-173	10-160	91	54	M1,R1
Benzo(a)anthracene	ug/kg	80.9	40	42.6	77.7	58.8	-8	-52	10-160	28	62	M1
Benzo(a)pyrene	ug/kg	40.6	40	42.6	55.1	49.5	36	21	10-150	11	66	
Benzo(b)fluoranthene	ug/kg	78.7	40	42.6	76.9	64.7	-5	-33	10-165	17	61	M1
Benzo(g,h,i)perylene	ug/kg	18.0	40	42.6	36.3	34.0	46	38	10-155	7	58	
Benzo(k)fluoranthene	ug/kg	18.6	40	42.6	48.5	42.6	75	56	10-165	13	53	
Chrysene	ug/kg	70.2	40	42.6	139	57.0	173	-31	10-150	84	57	M1,R1
Dibenz(a,h)anthracene	ug/kg	4.9	40	42.6	29.5	28.6	61	56	10-175	3	48	
Fluoranthene	ug/kg	337	40	42.6	151	99.9	-463	-556	10-180	41	54	M1

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119518		3119519		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60398001007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Fluorene	ug/kg	176	40	42.6	87.8	53.6	-221	-288	20-145	48	39	M1,R1	
Indeno(1,2,3-cd)pyrene	ug/kg	18.4	40	42.6	39.3	36.8	52	43	10-150	7	59		
Naphthalene	ug/kg	176	40	42.6	137	81.5	-98	-222	10-165	51	54	M1	
Phenanthrene	ug/kg	532	40	42.6	186	99.9	-863	-1010	10-170	60	51	M1,R1	
Pyrene	ug/kg	214	40	42.6	110	77.6	-259	-319	10-180	34	61	M1	
2-Fluorobiphenyl (S)	%						75	71	40-120				
Terphenyl-d14 (S)	%						84	78	45-130				

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch: 782452 Analysis Method: EPA 8270 by SIM  
 QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
 Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001019, 60398001020, 60398001021, 60398001023

METHOD BLANK: 3120425 Matrix: Solid

Associated Lab Samples: 60398001019, 60398001020, 60398001021, 60398001023

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.3	04/22/22 11:14	
Acenaphthylene	ug/kg	ND	3.3	04/22/22 11:14	
Anthracene	ug/kg	ND	3.3	04/22/22 11:14	
Benzo(a)anthracene	ug/kg	ND	3.3	04/22/22 11:14	
Benzo(a)pyrene	ug/kg	ND	3.3	04/22/22 11:14	
Benzo(b)fluoranthene	ug/kg	ND	3.3	04/22/22 11:14	
Benzo(g,h,i)perylene	ug/kg	ND	3.3	04/22/22 11:14	
Benzo(k)fluoranthene	ug/kg	ND	3.3	04/22/22 11:14	
Chrysene	ug/kg	ND	3.3	04/22/22 11:14	
Dibenz(a,h)anthracene	ug/kg	ND	3.3	04/22/22 11:14	
Fluoranthene	ug/kg	ND	3.3	04/22/22 11:14	
Fluorene	ug/kg	ND	3.3	04/22/22 11:14	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.3	04/22/22 11:14	
Naphthalene	ug/kg	ND	3.3	04/22/22 11:14	
Phenanthrene	ug/kg	ND	3.3	04/22/22 11:14	
Pyrene	ug/kg	ND	3.3	04/22/22 11:14	
2-Fluorobiphenyl (S)	%	77	40-120	04/22/22 11:14	
Terphenyl-d14 (S)	%	89	45-130	04/22/22 11:14	

LABORATORY CONTROL SAMPLE: 3120426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	32.6	23.4	72	45-120	
Acenaphthylene	ug/kg	32.6	22.5	69	50-120	
Anthracene	ug/kg	32.6	23.9	73	50-120	
Benzo(a)anthracene	ug/kg	32.6	24.4	75	55-125	
Benzo(a)pyrene	ug/kg	32.6	23.6	72	45-120	
Benzo(b)fluoranthene	ug/kg	32.6	24.0	74	50-125	
Benzo(g,h,i)perylene	ug/kg	32.6	24.4	75	40-120	
Benzo(k)fluoranthene	ug/kg	32.6	24.6	75	55-120	
Chrysene	ug/kg	32.6	24.4	75	55-120	
Dibenz(a,h)anthracene	ug/kg	32.6	24.3	74	40-125	
Fluoranthene	ug/kg	32.6	24.8	76	50-125	
Fluorene	ug/kg	32.6	23.6	72	50-120	
Indeno(1,2,3-cd)pyrene	ug/kg	32.6	24.4	75	44-125	
Naphthalene	ug/kg	32.6	22.9	70	45-120	
Phenanthrene	ug/kg	32.6	25.3	78	50-125	
Pyrene	ug/kg	32.6	25.6	78	50-125	
2-Fluorobiphenyl (S)	%			73	40-120	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

LABORATORY CONTROL SAMPLE: 3120426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			79	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3120427 3120428

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		60398001019 Result	Spike Conc.	Spike Conc.	MS Result						
Acenaphthene	ug/kg	34.1	41.8	41.6	195	163	383	311	10-150	17	42 M1
Acenaphthylene	ug/kg	7.1	41.8	41.6	54.5	117	113	264	30-125	73	44 M1,R1
Anthracene	ug/kg	98.7	41.8	41.6	477	660	903	1350	10-160	32	54 M1
Benzo(a)anthracene	ug/kg	149	41.8	41.6	520	932	885	1880	10-160	57	62 M1
Benzo(a)pyrene	ug/kg	109	41.8	41.6	393	697	680	1410	10-150	56	66 M1
Benzo(b)fluoranthene	ug/kg	164	41.8	41.6	556	1050	935	2120	10-165	61	61 M1
Benzo(g,h,i)perylene	ug/kg	75.9	41.8	41.6	239	379	388	727	10-155	45	58 M1
Benzo(k)fluoranthene	ug/kg	69.7	41.8	41.6	194	329	296	623	10-165	52	53 M1
Chrysene	ug/kg	151	41.8	41.6	488	843	805	1660	10-150	53	57 M1
Dibenz(a,h)anthracene	ug/kg	15.5	41.8	41.6	79.0	107	151	220	10-175	30	48 M1
Fluoranthene	ug/kg	394	41.8	41.6	914	2170	1240	4270	10-180	82	54 M1,R1
Fluorene	ug/kg	60.6	41.8	41.6	331	307	645	591	20-145	8	39 M1
Indeno(1,2,3-cd)pyrene	ug/kg	61.4	41.8	41.6	200	297	331	566	10-150	39	59 M1
Naphthalene	ug/kg	12.4	41.8	41.6	62.9	60.4	121	115	10-165	4	54
Phenanthrene	ug/kg	229	41.8	41.6	630	1600	958	3290	10-170	87	51 M1,R1
Pyrene	ug/kg	357	41.8	41.6	730	1890	890	3690	10-180	89	61 M1,R1
2-Fluorobiphenyl (S)	%						87	69	40-120		
Terphenyl-d14 (S)	%						103	80	45-130		

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch:	782202	Analysis Method:	EPA 8270
QC Batch Method:	EPA 3546	Analysis Description:	8270 MSSV TPH ORO
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

METHOD BLANK: 3119506 Matrix: Solid  
Associated Lab Samples: 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO	mg/kg	ND	14.8	04/21/22 08:05	
TPH-ORO	mg/kg	ND	14.8	04/21/22 08:05	
2-Fluorobiphenyl (S)	%	83	50-120	04/21/22 08:05	
Nitrobenzene-d5 (S)	%	73	35-120	04/21/22 08:05	
Terphenyl-d14 (S)	%	95	45-120	04/21/22 08:05	

LABORATORY CONTROL SAMPLE: 3119507

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO	mg/kg	329	321	98	40-125	
2-Fluorobiphenyl (S)	%			85	50-120	
Nitrobenzene-d5 (S)	%			82	35-120	
Terphenyl-d14 (S)	%			94	45-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3119508 3119509

Parameter	Units	60398001027		3119509		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
TPH-DRO	mg/kg	155	385	391	450	597	77	113	40-125	28	38
2-Fluorobiphenyl (S)	%						82	90	50-120		
Nitrobenzene-d5 (S)	%						73	81	35-120		P3
Terphenyl-d14 (S)	%						85	95	45-120		

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch: 781795	Analysis Method: EPA 8270C by SIM
QC Batch Method: EPA 3510C	Analysis Description: 8270 Water PAH by SIM MSSV
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001022

METHOD BLANK: 3118229 Matrix: Water

Associated Lab Samples: 60398001022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	ND	0.10	04/20/22 08:35	
Acenaphthylene	ug/L	ND	0.10	04/20/22 08:35	
Anthracene	ug/L	ND	0.10	04/20/22 08:35	
Benzo(a)anthracene	ug/L	ND	0.10	04/20/22 08:35	
Benzo(a)pyrene	ug/L	ND	0.10	04/20/22 08:35	
Benzo(b)fluoranthene	ug/L	ND	0.10	04/20/22 08:35	
Benzo(g,h,i)perylene	ug/L	ND	0.10	04/20/22 08:35	
Benzo(k)fluoranthene	ug/L	ND	0.10	04/20/22 08:35	
Chrysene	ug/L	ND	0.10	04/20/22 08:35	
Dibenz(a,h)anthracene	ug/L	ND	0.10	04/20/22 08:35	
Fluoranthene	ug/L	ND	0.50	04/20/22 08:35	
Fluorene	ug/L	ND	0.10	04/20/22 08:35	
Indeno(1,2,3-cd)pyrene	ug/L	ND	0.10	04/20/22 08:35	
Naphthalene	ug/L	ND	0.50	04/20/22 08:35	
Phenanthrene	ug/L	ND	0.50	04/20/22 08:35	
Pyrene	ug/L	ND	0.10	04/20/22 08:35	
2-Fluorobiphenyl (S)	%	86	37-109	04/20/22 08:35	
Terphenyl-d14 (S)	%	94	34-120	04/20/22 08:35	

LABORATORY CONTROL SAMPLE: 3118230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	10	7.5	75	46-102	
Acenaphthylene	ug/L	10	8.0	80	48-112	
Anthracene	ug/L	10	8.6	86	50-114	
Benzo(a)anthracene	ug/L	10	8.7	87	52-124	
Benzo(a)pyrene	ug/L	10	7.6	76	56-119	
Benzo(b)fluoranthene	ug/L	10	8.1	81	49-116	
Benzo(g,h,i)perylene	ug/L	10	7.8	78	43-120	
Benzo(k)fluoranthene	ug/L	10	8.3	83	48-110	
Chrysene	ug/L	10	7.9	79	53-105	
Dibenz(a,h)anthracene	ug/L	10	7.1	71	39-127	
Fluoranthene	ug/L	10	10.0	100	54-122	
Fluorene	ug/L	10	8.4	84	47-109	
Indeno(1,2,3-cd)pyrene	ug/L	10	7.4	74	47-124	
Naphthalene	ug/L	10	7.0	70	42-103	
Phenanthrene	ug/L	10	7.9	79	47-107	
Pyrene	ug/L	10	6.9	69	44-104	
2-Fluorobiphenyl (S)	%			85	37-109	

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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LABORATORY CONTROL SAMPLE: 3118230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			73	34-120	

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**QUALITY CONTROL DATA**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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QC Batch:	782434	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001001, 60398001002, 60398001003, 60398001004, 60398001005, 60398001006, 60398001008, 60398001009, 60398001010, 60398001011, 60398001012, 60398001013, 60398001014, 60398001015, 60398001016, 60398001017, 60398001018, 60398001019, 60398001020, 60398001021

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METHOD BLANK: 3120339 Matrix: Solid

Associated Lab Samples: 60398001001, 60398001002, 60398001003, 60398001004, 60398001005, 60398001006, 60398001008, 60398001009, 60398001010, 60398001011, 60398001012, 60398001013, 60398001014, 60398001015, 60398001016, 60398001017, 60398001018, 60398001019, 60398001020, 60398001021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/20/22 16:28	

---

SAMPLE DUPLICATE: 3120340

Parameter	Units	60398001002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.2	23.9	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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QC Batch: 782637	Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001023, 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

---

METHOD BLANK: 3121083 Matrix: Solid

Associated Lab Samples: 60398001023, 60398001024, 60398001025, 60398001026, 60398001027, 60398001028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/21/22 14:17	

SAMPLE DUPLICATE: 3121084

Parameter	Units	60397678107 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.8	23.8	14	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

QC Batch: 783091	Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60398001007

METHOD BLANK: 3122726 Matrix: Solid

Associated Lab Samples: 60398001007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	04/25/22 15:52	

SAMPLE DUPLICATE: 3122727

Parameter	Units	60398001007 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.8	21.7	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

IO The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

c2 Acid preservation may not be appropriate for the analysis of 2-Chloroethylvinyl ether.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60398001024	GB-72/8-9	EPA 3546	782201	EPA 8082	782472
60398001025	GB-72/12-13	EPA 3546	782201	EPA 8082	782472
60398001026	GB-72/4-5	EPA 3546	782201	EPA 8082	782472
60398001027	GB-72/0.5-1.5	EPA 3546	782201	EPA 8082	782472
60398001028	GB-72/8-9D	EPA 3546	782201	EPA 8082	782472
60398001024	GB-72/8-9	EPA 3050	783257	EPA 6010	783463
60398001025	GB-72/12-13	EPA 3050	783257	EPA 6010	783463
60398001026	GB-72/4-5	EPA 3050	783257	EPA 6010	783463
60398001027	GB-72/0.5-1.5	EPA 3050	783257	EPA 6010	783463
60398001028	GB-72/8-9D	EPA 3050	783257	EPA 6010	783463
60398001001	GB-09C/2-3	EPA 3546	782204	EPA 8270 by SIM	782480
60398001002	GB-09C/5-6	EPA 3546	782204	EPA 8270 by SIM	782480
60398001003	GB-09A/3-4	EPA 3546	782204	EPA 8270 by SIM	782480
60398001004	GB-09A/5-6	EPA 3546	782204	EPA 8270 by SIM	782480
60398001005	GB-09B/4-5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001006	GB-09B/9-10	EPA 3546	782204	EPA 8270 by SIM	782480
60398001007	B-11AA/1-2	EPA 3546	782204	EPA 8270 by SIM	782480
60398001008	B-11AA/4-5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001009	B-11AB/1.5-2.5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001010	B-11AB/4-5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001011	B-11AC/1-2	EPA 3546	782204	EPA 8270 by SIM	782480
60398001012	B-11AC/4-5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001013	GB-50C/1.5-2.5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001014	GB-50C/4.0-5.0	EPA 3546	782204	EPA 8270 by SIM	782480
60398001015	GB-50A/1.5-2.5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001016	GB-50B/1-2	EPA 3546	782204	EPA 8270 by SIM	782480
60398001017	GB-50B/2.5-3.5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001018	GB-44A/3.5-4.5	EPA 3546	782204	EPA 8270 by SIM	782480
60398001019	GB-44A/5-6	EPA 3546	782452	EPA 8270 by SIM	782752
60398001020	GB-44B/2.5-3.5	EPA 3546	782452	EPA 8270 by SIM	782752
60398001021	GB-44B/5-6	EPA 3546	782452	EPA 8270 by SIM	782752
60398001023	GB-50A/2.5-3.5	EPA 3546	782452	EPA 8270 by SIM	782752
60398001024	GB-72/8-9	EPA 3546	782203	EPA 8270 by SIM	782477
60398001025	GB-72/12-13	EPA 3546	782203	EPA 8270 by SIM	782477
60398001026	GB-72/4-5	EPA 3546	782203	EPA 8270 by SIM	782477
60398001027	GB-72/0.5-1.5	EPA 3546	782203	EPA 8270 by SIM	782477
60398001028	GB-72/8-9D	EPA 3546	782203	EPA 8270 by SIM	782477
60398001024	GB-72/8-9	EPA 3546	782202	EPA 8270	782464
60398001025	GB-72/12-13	EPA 3546	782202	EPA 8270	782464
60398001026	GB-72/4-5	EPA 3546	782202	EPA 8270	782464
60398001027	GB-72/0.5-1.5	EPA 3546	782202	EPA 8270	782464
60398001028	GB-72/8-9D	EPA 3546	782202	EPA 8270	782464
60398001022	ERB04142022	EPA 3510C	781795	EPA 8270C by SIM	782257
60398001024	GB-72/8-9	EPA 5035A/5030	782793	EPA 8260B	782810
60398001025	GB-72/12-13	EPA 5035A/5030	782793	EPA 8260B	782810

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 143702 GSA GOODFELLOW SOIL SAM

Pace Project No.: 60398001

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60398001026	GB-72/4-5	EPA 5035A/5030	782793	EPA 8260B	782810
60398001027	GB-72/0.5-1.5	EPA 5035A/5030	782793	EPA 8260B	782810
60398001028	GB-72/8-9D	EPA 5035A/5030	782793	EPA 8260B	782810
60398001029	TRIP BLANK 1	EPA 5030B/8260	783081		
60398001030	TRIP BLANK 2	EPA 5030B/8260	783081		
60398001024	GB-72/8-9	EPA 5035	782794	EPA 8260	782804
60398001025	GB-72/12-13	EPA 5035	782794	EPA 8260	782804
60398001026	GB-72/4-5	EPA 5035	782794	EPA 8260	782804
60398001027	GB-72/0.5-1.5	EPA 5035	782794	EPA 8260	782804
60398001028	GB-72/8-9D	EPA 5035	782794	EPA 8260	782804
60398001001	GB-09C/2-3	ASTM D2974	782434		
60398001002	GB-09C/5-6	ASTM D2974	782434		
60398001003	GB-09A/3-4	ASTM D2974	782434		
60398001004	GB-09A/5-6	ASTM D2974	782434		
60398001005	GB-09B/4-5	ASTM D2974	782434		
60398001006	GB-09B/9-10	ASTM D2974	782434		
60398001007	B-11AA/1-2	ASTM D2974	783091		
60398001008	B-11AA/4-5	ASTM D2974	782434		
60398001009	B-11AB/1.5-2.5	ASTM D2974	782434		
60398001010	B-11AB/4-5	ASTM D2974	782434		
60398001011	B-11AC/1-2	ASTM D2974	782434		
60398001012	B-11AC/4-5	ASTM D2974	782434		
60398001013	GB-50C/1.5-2.5	ASTM D2974	782434		
60398001014	GB-50C/4.0-5.0	ASTM D2974	782434		
60398001015	GB-50A/1.5-2.5	ASTM D2974	782434		
60398001016	GB-50B/1-2	ASTM D2974	782434		
60398001017	GB-50B/2.5-3.5	ASTM D2974	782434		
60398001018	GB-44A/3.5-4.5	ASTM D2974	782434		
60398001019	GB-44A/5-6	ASTM D2974	782434		
60398001020	GB-44B/2.5-3.5	ASTM D2974	782434		
60398001021	GB-44B/5-6	ASTM D2974	782434		
60398001023	GB-50A/2.5-3.5	ASTM D2974	782637		
60398001024	GB-72/8-9	ASTM D2974	782637		
60398001025	GB-72/12-13	ASTM D2974	782637		
60398001026	GB-72/4-5	ASTM D2974	782637		
60398001027	GB-72/0.5-1.5	ASTM D2974	782637		
60398001028	GB-72/8-9D	ASTM D2974	782637		

### REPORT OF LABORATORY ANALYSIS

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WO#: 60398001



DC#\_Title: ENV-FRM-LENE-0009\_Sa



Revision: 2

Effective Date: 01/12/2022

Issued By: [Redacted]

Client Name: Swas & Mc Donnell

Courier: FedEx  UPS  VIA  Clay  PEX  ECI  Pace  Xroads  Client  Other

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2pic

Thermometer Used: TJOL Type of Ice: Wet Blue  None

Cooler Temperature (°C): As-read 1.5 Corr. Factor -1.0 Corrected 0.5

Date and initials of person examining contents: 04.19.2022 cu

Temperature should be above freezing to 6°C 1.9, 3.2 0.9, 2.2

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>No test marked on coc</u>
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>ERB cont. BPSN &amp; 3UG9H</u>
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>received RAS volume for</u>
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>3-11AA/1-2</u> (b) (6) <u>4.19.22</u>
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>WT/SL</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	(b) (6) <u>4.19.22</u>
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>1 DGA ID69H in coolers 1st</u>
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: IDW SOIL 04142022 sample moved to separate wo/report (60398062)

Project Manager Review: \_\_\_\_\_ Date: \_\_\_\_\_



## Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell Engineering  
 9400 Ward Parkway  
 Kansas City, Missouri 64114  
 Phone: (816) 333-9400 Fax: (816) 822-3494

**Laboratory:** Pace Analytical  
**Address:** 9608 Loriet Blvd.  
**City/State/Zip:** Lenexa, KS 66219  
**Telephone:** 913-563-1408, jeff.shopper@pacelabs.com

**Document Control No:** 143702-04142022-001

**Lab. Reference No. or Episode No.:**

**Attention:** Justin Carter

**Project Number:** 143702

10409 - 16

**Client Name:** GSA Goodfellow Soil Sampling

Sample Number	Sample Event		Sample Depth		Sample Collected		Matrix			Number of Containers	Analysis			
	Round	Year	From	To	Date	Time	Liquid	Solid	Gas		8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM	6020 AS
GB-09C/2-3			2	3	4/14/22	811		X		1		X		
GB-09C/5-b			5	b	4/14/22	813		X		1		X		
GB-09C/5-b MS			5	b	4/14/22	813		X		1		X		
GB-09C/5-b MSB			5	b	4/14/22	813		X		1		X		
GB-09A/3-4			3	4	4/14/22	829		X		1		X		
GB-09A/5-b			5	b	4/14/22	832		X		1		X		
GB-09B/4-5			4	5	4/14/22	852		X		1		X		
GB-09B/9-10			9	10	4/14/22	855		X		1		X		
B-11AA/1-2			1	2	4/20/22	921		X		1		X		
B-11AA/4-5			4	5	4/14/22	926		X		1		X		
B-11AB/1.5-2.5			1.5	2.5	4/14/22	938		X		1		X		
B-11AB/4-5			4	5	4/14/22	940		X		1		X		
B-11AC/1-2			1	2	4/14/22	955		X		1		X		
B-11AC/4-5			4	5	4/14/22	956		X		1		X		
GB-50C/1.5-2.5			1.5	2.5	4/14/22	1046		X		1		X		

60798001  
~~60798000~~

**Sampler (signature):** (b) (6)

**Sampler (signature):** (b) (6)

**Custody Seal Number:**  
 Aur-  
 Aur-

**Special Instructions:**

**Relinquished By (signature):** (b) (6)

**Date/Time:** 4/15

**Received By (signature):** (b) (6)

**Date/Time:** 4/15/22

**Ice Present in Container:**  
 Yes  No

**Temperature Upon receipt:** 0.5, 0.9, 2.2

**Relinquished By (signature):** (b) (6)

**Date/Time:**

**Received By (signature):** (b) (6)

**Date/Time:** 4-16-22 0447

**Laboratory Comments:**



## Request for Chemical Analysis and Chain of Custody Record

**Burns & McDonnell Engineering**  
 9400 Ward Parkway  
 Kansas City, Missouri 64114  
 Phone: (816) 333-9400 Fax: (816) 822-3494

**Laboratory:** Pace Analytical  
**Address:** 9608 Loriet Blvd.  
**City/State/Zip:** Lenexa, KS 66219

**Document Control No:** 193-702-04142022-002  
**Lab. Reference No. or Episode No.:**

**Attention:** Justin Carter

**Telephone:** 913-563-1408, jeff.shopper@pacelabs.com

**Project Number:** 143702

10409 - 16

**Client Name:** GSA Goodfellow Soil Sampling

**Matrix:**

Sample Number	Sample Event		Sample Depth		Sample Collected		Liqui	Solid	Gas	Number of Containers	Analysis								
	Round	Year	From	To	Date	Time					8260 VOCs/GRO	8270 DRO/ORO	8270 PAH-SIM	6020 As	PEB 8082	PEB Compounds 16684	TOTAL METALS 6010B	EXPLOSIVES 8330	
67B-50C/4.0-5.0			4	5	4/14/22	1050		X		1			X						
67B-50A/1.5-2.5			1.5	2.5	4/14/22	1102		X		1			X						
67B-50B/1-2			1	2	4/14/22	1155		X		1			X						
67B-50B/2.5-3.5			2.5	3.5	4/14/22	1157		X		1			X						
67B-44A/3.5-4.5			3.5	4.5	4/14/22	1226		X		1			X						
67B-44A/5-6			5	6	4/14/22	1228		X		1			X						
67B-44B/2.5-3.5			2.5	3.5	4/14/22	1237		X		1			X						
67B-44B/5-6			5	6	4/14/22	1243		X		1			X						
B-11AA/1-2MS			1	2	4/14/22	921		X		1			X						
B-11AA/1-2MSB			1	2	4/14/22	921		X		1			X						
ERB04/4/2022			-	-	4/14/22	1330	X			6			X						
67B-50A/2.5-3.5			2.5	3.5	4/14/22	1604		X		1			X						
67B-72/8-9			8	9	4/14/22	1535		X		8	X	X	X	X	X	X	X	X	Contact Pm Bore Hole Analysis
67B-72/12-13			12	13	4/14/22	1536		X		6	X	X	X	X	X	X	X	X	Contact Pm Bore Hole Analysis
67B-72/4-5			4	5	4/14/22	1608		X		7	X	X	X	X	X	X	X	X	

60798001

**Sampler (signature):**  
 (b) (6)

**Sampler (signature):**  
 (b) (6)

**Custody Seal Number:**  
 Aur-  
 Aur-  
 11AM

**Special Instructions:**  
 TOTAL METALS = Antimony, Arsenic, Copper, Lead, Zinc  
 6010B

**Relinquished By (signature):**  
 (b) (6)

**Date/Time:**  
 4/15

**Received By (signature):**  
 (b) (6)

**Date/Time:**  
 4/15/22

**Ice Present in Container:**  
 Yes  No

**Temperature Upon receipt:**  
 0.5, 0.9, 2.2

**Relinquished By (signature):**  
 (b) (6)

**Date/Time:**

**Received By (signature):**  
 (b) (6)

**Date/Time:**  
 4-16-220497

**Laboratory Comments:**







*Try to squeeze in PCB rig.  
Congener & explosives not  
needed for GB-72 samples*

**From:** Carter, Justin <jcarter@burnsmcd.com>  
**Sent:** Monday, April 18, 2022 6:36 AM  
**To:** Alice Spiller <Alice.Spiller@pacelabs.com>  
**Cc:** Lawrence, Shauna <slawrence@burnsmcd.com>  
**Subject:** Goodfellow Soil Samples

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Alice,

For the soil samples you should have received late last week for the Goodfellow project, I need to change the analytical suite for a few samples.

Sample ID	Analytical Suite on COC	Corrected Analytical Suite
GB-72/0.5-1.5	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 1668A PCB Congeners 6010B Total Metals 8330 Explosives	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 6010 Metals (antimony, arsenic, Copper, lead, and zinc)
GB-72/4-5	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 1668A PCB Congeners 6010B Total Metals 8330 Explosives	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 6010 Metals (antimony, arsenic, Copper, lead, and zinc)
GB-72/8-9	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 1668A PCB Congeners 6010B Total Metals 8330 Explosives	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 6010 Metals (antimony, arsenic, Copper, lead, and zinc)
GB-72/8-9D	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 1668A PCB Congeners 6010B Total Metals 8330 Explosives	8260 VOCs/GRO 8270 DRO/ORO 8720 PAH-SIM 8082 PCB 6010 Metals (antimony, arsenic, Copper, lead, and zinc)
GB-72/12-13	8260 VOCs/GRO 8270 DRO/ORO	8260 VOCs/GRO 8270 DRO/ORO

8720 PAH-SIM 8082 PCB 1668A PCB Congeners 6010B Total Metals 8330 Explosives	8720 PAH-SIM 8082 PCB 6010 Metals (antimony, arsenic, Copper, lead, and zinc)
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Additionally, if you can squeeze the extra volume from one of the samples (not the duplicate) for an MS/MSD for PCBs and metals (antimony, arsenic, Copper, lead, and zinc) I would really appreciate it.

If you have questions, please let me know.

Sincerely,

**Justin Carter, PG\*** \ Burns & McDonnell  
Senior Geologist, Environmental Division  
O 816-839-7183 \ M 816-813-1018 \ F 816-822-3494  
[jcarter@burnsmcd.com](mailto:jcarter@burnsmcd.com) \ burnsmcd.com  
9400 Ward Parkway \ Kansas City, MO 64114



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\*Registered in: LA

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# Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: MO

Cert. Needed:  Yes  No

Workorder: 60398001    Workorder Name: 143702 GSA GOODFELLOW SOIL SAM    Owner Received Date: 4/16/2022    Results Requested By: 4/28/2022

Report To		Subcontract To					Requested Analysis																																																																																									
Alice Spiller Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone (913)599-5665		Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858					<div style="text-align: right;"> <p>1153</p> <p>LAB USE ONLY</p> <p>11454554</p> <p>-01</p> </div>																																																																																									
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Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved																																																																																										
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Transfers					Comments				
Released By	Date/Time	Received By	Date/Time						
(b) (6)	4/19/22 18:00	(b) (6)	4/20 9:00						

Cooler Temperature on Receipt	°C	Custody Seal	<input checked="" type="radio"/> Y or <input type="radio"/> N	Received on Ice	<input checked="" type="radio"/> Y or <input type="radio"/> N	Samples Intact	<input checked="" type="radio"/> Y or <input type="radio"/> N
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\*\*\*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.  
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Temp 5.2+0=5.2  
 Trk 53338761401

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N    If Applicable

COC Signed/Accurate:  Y  N    VOA Zero Headspace:  Y  N

Bottles arrive intact:  Y  N    Pres. Correct/Check:  Y  N

Correct bottles used:  Y  N

Sufficient volume sent:  Y  N

RAP Screen < 0.5 mR/hr:  Y  N



**WO# : 20241593**



1000 Riverbend Blvd., Suite F  
 St. Rose, LA 70087

Project #:

PM: SJS Due Date: 04/27/22  
 CLIENT: PASI-KANS

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present:  YES  NO Custody Seals intact:  YES  NO

Samples on ice:  YES  NO

Type of ice: Wet Blue None

Date and Initials of person examining contents: 4/25/22 (b) (6)

**ICE MELTED**

Temp should be ≤6°C \*Temp must be measured from Temperature blank when present

Cooler #1 Thermometer Used: 10 Cooler Temp °C: (Observed) 25.0 (CF) 0 (Actual) 25.0  
 Cooler #2 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #3 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_  
 Cooler #4 Thermometer Used: \_\_\_\_\_ Cooler Temp °C: (Observed) \_\_\_\_\_ (CF) \_\_\_\_\_ (Actual) \_\_\_\_\_

Tracking #: 5333 8761 4487

Temperature Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers received within manufacture's precautionary and/or expiration dates.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No If added record lot #.: HNO <sub>3</sub> _____ H <sub>2</sub> SO <sub>4</sub> _____ Date: _____ Time: _____
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Client Notification/ Resolution:**

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_  
 \_\_\_\_\_  
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**APPENDIX H – DATA VALIDATION MEMORADUM**



Date: July 11, 2022  
To: Justin Carter  
From: Jacque Lee  
Subject: Data Validation Memorandum  
QA/QC Review of Analytical Data; Additional Soil Sampling Event – April 2022  
Goodfellow Federal Complex; St. Louis, Missouri  
Project No. 143702

Soil samples and associated field quality control (QC) samples were collected April 11-12 and 14, 2022, and were analyzed at Pace Analytical Services, LLC (Pace) of Lenexa, Kansas. Analyses performed for one or more samples for this sampling event included:

Analysis	Analytical Method(s)
<b>Organics</b>	
Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO)	SW-846 8260
TPH – Diesel Range Organics/Oil Range Organics (TPH-DRO/ORO)	SW-846 8270
Volatile Organic Compounds (VOCs)	SW-846 8260/8260B
Polychlorinated Biphenyls (PCBs)	SW-846 8082
Semivolatile Organic Compounds (SVOCs) SVOCs – Select Ion Monitoring (SIM)	SW-846 8270-SIM/8270C-SIM
<b>Inorganics</b>	
Metals	SW-846 6010 SW-846 6020
Percent Moisture	ASTM D2974

The quality assurance (QA)/ QC results in association with the soil samples collected were examined for any method-specific requirements. The analytical data were reviewed in accordance with the *Final Quality Assurance Project Plan, Goodfellow Federal Complex (QAPP)*, United States Environmental Protection Agency’s (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (NFGO, 2020), and/or *National Functional Guidelines for Inorganic Superfund Methods Data Review* (NFGO, 2020). Additionally, the PCB Congener data were evaluated using the *EPA Region III Interim Guidelines for Validation of Data Generated Using Method 1668 Toxic, Dioxin-like PCB Data* (EPA, 2004). Data qualifiers, when appropriate, were added to the data in accordance with recommendations noted in the above references. In the event data validation qualifiers were added for more than one reason, the bias indicator may have been dropped for final reporting of the data. The QA/QC review results are discussed below. Table 1 presents the data qualifiers added during this review.



July 11, 2022

Page 2

1. Chain-of-Custody (COC) – The COC forms were reviewed for any errors or omissions. The relinquished and received signatures, times, and dates on the COC forms were present and properly signed. The lab was contacted by the project manager to make the following changes:
  - SDG 60398001: The analytical suite noted on the COCs for one or more soil samples was changed to exclude PCB congeners by EPA 1668A and explosives by SW-846 8330. A copy of the email correspondence presenting these edits was provided by Pace as part of the analytical data package.
2. Requested Analyses Completed – All analyses were completed as requested, except for:
  - SDG60398001: The lab was contacted by the project manager to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD) for PCBs by SW-846 8082 and Metals by SW-846 6010 if any project sample(s) in this shipment had excess volume. Due to lack of extra volume, these analyses were not conducted.  
  
Also for this SDG, it was requested that sample IDW be reported in its own separate report. Thus, results for this sample were not reported in this SDG.
3. Holding Times – All samples were extracted and/or analyzed within their method-required holding times.
4. Sample Preservation – Samples were received by the laboratories within or slightly below the recommended 4 degrees Celsius (°C)  $\pm$  2 °C sample preservation temperature range. Since the samples were not frozen upon arrival, no data qualification was necessary.
5. Method Blanks – Method blanks were reviewed to assess possible cross-contamination or carry over in sample preparation or analysis. These were analyzed with each analytical batch. General qualification for method blank review is as follows: any detection noted in the blank was reviewed in the associated sample(s). If the sample exhibited a detection of said analyte less than five times this blank detection (or ten times for common laboratory contaminants), the sample was disregarded as false positive and qualified as undetected (U). No detections of target analytes were noted in the method blanks.
6. Rinsate and Trip Blanks – Rinsate blanks were collected due to the use of non-dedicated equipment to evaluate potential cross-contamination between samples caused by residual contamination on sampling equipment. Trip blanks are supplied by the laboratory and sent to the field with the sample containers to evaluate potential cross-contamination during sample shipment. Trip blanks were included with the shipments of VOCs. General qualification for review is as follows: any detection noted in these blanks were

July 11, 2022

Page 3

reviewed in the associated sample(s). If the sample exhibited a detection of said analyte less than five times this blank detection (or ten times for common laboratory contaminants), the sample was disregarded as false positive and qualified as undetected (U). Table 2 summarizes the rinsate and trip blank detections noted during this review. No qualifiers were added based on these detections.

7. Surrogate Spikes – Surrogates are added for organic analyses. Surrogates are compounds not normally found in the environment that are added (spiked) into samples and analyzed for percent recovery (REC). For any surrogate REC exceeding its control limit, associated detections were qualified as estimated high bias (J+) and non-detects did not require qualification. Any surrogate REC below its control limit resulted in detections qualified as estimated low bias (J-), and non-detects qualified as estimated at the reporting limit (UJ). For extremely low or lack of surrogate RECs, the non-detect results may have been rejected (R).

Note: For extractable organics, two or more surrogates of the same fraction (where applicable) are generally allowed outside control limits before data validation qualifiers are added. Additionally, for any dilutions greater than five, it was likely the surrogate was diluted out of the sample in the extraction process, and no conclusions were made for these instances.

Table 3 summarizes the surrogate RECs outside control limits for this review. Note, surrogates outside control limits for laboratory-specific QC samples were not included, as these are not typically qualified during QA/QC review. Any data qualifiers added based on surrogate RECs are presented on Table 1.

8. Laboratory Control Samples (LCS) – The LCS contains a matrix similar to that of the field sample that has been spiked with known concentrations of target analytes. The LCS is prepared and analyzed by the same method as the field samples. As a measure of analytical accuracy, the results of the LCS are compared against the known analyte concentrations in the spike to determine REC. The purpose of the LCS is to determine the performance of the laboratory with respect to analyte recovery, independent of field sample matrix interference.

For any LCS RECs exceeding their control limits, associated detections were qualified as estimated high bias (J+) and non-detects did not require qualification. Any LCS RECs below their control limits resulted in detections qualified as estimated low bias (J-), and non-detects qualified as estimated at the reporting limit (UJ). For extremely low RECs, the non-detect results may have been rejected (R).

July 11, 2022

Page 4

Table 4 summarizes the LCS results outside their respective control limits for this review. Any data qualifiers added based on LCS RECs are presented on Table 1.

9. Matrix Spikes/Matrix Spike Duplicates (MS/MSD) – MS/MSD analyses were performed for each sample batch, as sample volumes permitted. Only project-specific MS/MSDs were compared and used for qualification in this review. MS/MSD RECs outside control limits can indicate potential problems with analytical accuracy, while the MS/MSD RPD may indicate problems with analytical precision.

For any MS/MSD REC exceeding its control limit, spiked sample detections were qualified as estimated (J) for organics/estimated high bias (J+) for inorganics and non-detects did not require qualification. Any MS/MSD REC below its control limit resulted in spiked sample detections qualified as estimated (J) for organics/estimated low bias (J-) for inorganics, and non-detects qualified as estimated at the reporting limit (UJ). For extremely low RECs, the non-detect results may have been rejected (R). For elevated MSMS/D RPDs, a spiked sample detection was qualified as estimated (J), while no qualifiers were necessary for nondetects.

Table 5 summarizes the site-specific MS/MSD results outside their respective control limits for this review. Any data qualifiers added based on MS/MSD RECs and/or RPDs are presented on Table 1.

10. Field Duplicates – Five field duplicate pairs were analyzed for the sampling event included in this review. The purpose of the field duplicates was to provide a QC assessment to evaluate field and analytical precision, therefore, unless significant differences were noted, qualifiers were not applied.

An RPD limit of 30 percent was used for review of the field duplicates. For field duplicate pairs yielding results less than five times the lower reporting limit, a sensitivity test was used. Criteria for the sensitivity test was that the difference between the field duplicate results was less than two times the lower reporting limit.

Table 6 presents detections noted in the field duplicate pairs for this data review. The following field duplicate pairs were collected during this sampling event:

- GB-19C/1-2 // GB-19C/1-2D: 8270 SIM only. The parent sample was analyzed at dilutions of 1:10-1:100 for all analytes, while the duplicate was not diluted for any analytes. The lab was contacted to verify the discrepancies in these concentrations and noted there was evidence of matrix differences in these analyses. The lab also noted significant differences in the appearances of the samples, further indicating matrix interferences. Therefore, based on professional

July 11, 2022  
Page 5

judgment, the original sample results were qualified as estimated (J), while the field duplicate sample data were rejected (R).

- GB-45C/0.5-1.5 // GB-45C/0.5-1.5D: 8270 SIM only. Both samples were analyzed at a 1:1 dilution. The parent sample yielded higher concentrations for all analytes, indicating that matrix interference(s) and/or sample inhomogeneity were evident in these analyses. To account for the differences in precision, all results for this field duplicate pair were qualified estimated at the reporting limit (UJ) or estimated (J).
- GB-64/9-10 // GB-64/9-10D: 6020, Arsenic only. The RPD between these results slightly exceeded the noted criteria. These results were qualified as estimated (J) for this field duplicate pair.
- GB-72/8-9 // GB-72/8-9D: All methods. Although several analytes did not pass their sensitivity or RPD criteria, respectively, the majority of the analytes were adequately replicated. The parent sample generally yielded higher concentrations for all analytes, indicating that matrix interference(s) and/or sample inhomogeneity were evident in these analyses. To account for the differences in precision, all results for this field duplicate pair were qualified (UJ) or estimated (J).

For all above-noted field duplicate qualification, see Table 1 for qualifiers.

11. Detection and Quantitation Limits – Some samples required a dilution for one or more metals or SVOC SIM analyses. These dilutions were necessary in order to bring the concentration of target analytes within the calibration range and/or to account for matrix interferences. A few SVOC analytes were nondetects, which resulted in elevated reporting limits (see below). All other dilutions were detected at concentrations above their respective reporting limit. No qualifiers were added based on these dilutions.

Additionally, for SVOC-SIM and/or SVOC sample GB-72/0.5/10.5 in SDG 60398001 and samples GB-19C/1-2, GB-40B/1-2, GB45C/0.5-1.5, and GB45C/0.5-1.5D in SDG 60397740, the extractions could not be concentrated to the routine final volume, which resulted in elevated reporting limits. These adjustments were necessary for these soil samples to adjust for dry weight reporting and/or during sample extractions to concentrate the sample to the needed volume(s) for analysis. Therefore, although a dilution was not noted for all analytes, this resulted in elevated reporting limit for these samples. No data qualifiers were necessary based on the elevated reporting limits.

12. Miscellaneous – In one or more SDGs, the laboratory noted that the continuing calibration verifications (CCVs) for PCB analytes Aroclor 1016 and/or Aroclor 1260 exceeded their control limits. These items are generally included in upper level reviews,

July 11, 2022  
Page 6

and were beyond the scope of this review. All associated samples were nondetects for these analytes, and therefore, no qualifiers were necessary. Based on the case narrative notes, impact based on these CCV results did not impact the reported final results.

Pace also noted that they did not hold NELAC/TNI accreditation at the time of analysis for VOCs 1,1,2-trichlorotrifluoroethane and tetrahydrofuran. This level of certification was not required for this project, and the lab was determined qualified for analysis of these samples based on their other certifications. Data were reviewed using the reported QC, and qualifiers were added as necessary based on these results.

13. Conclusion – The data were reviewed for achievement of any method-specified QA/QC criteria. Data qualifiers added as a result of this review are included on Table 1. With the exception of the rejected (R) PAH results for GB-19C/1-2D due to evidence of matrix differences, and the rejected (R) 1,1,2,2-tetrachloroethane and methyl acetate results for sample GB-59/14-15 due to lack of MS/MSD spike recovery, all data are valid for use, as qualified, in reporting the results of this sampling event.

#### Attachments

- Table 1 – Summary of Qualifiers Added During Data Validation Review
- Table 2 – Rinsate and Trip Blank Detections
- Table 3 – Surrogate Results Outside QC Limits
- Table 4 – LCS/LCSD Results Outside QC Limits
- Table 5 – MS/MSD Results Outside QC Limits
- Table 6 – Field Duplicate Analysis – Detections Only

**Table 1**  
**Summary of Qualifiers Added During Data Validation Review**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Sample Date	Analytical Method	Analyte(s)	Units	Laboratory Result/Qualifier	Data Validation Qualifier	Reason(s) for Qualification	Final Result for Reporting
B-11AA/1-2	4/14/2022	SW-846 8270-SIM	Acenaphthene	ug/kg	135	J	MS and/or MSD RECs Extremely Low MS/MSD RPD > QC Limit	135 J
			Anthracene	ug/kg	135	J	MS and/or MSD RECs Extremely Low MS/MSD RPD > QC Limit	135 J
			Benzo(a)anthracene	ug/kg	80.9	J	MS and/or MSD RECs Extremely Low	80.9 J
			Benzo(b)fluoranthene	ug/kg	78.7	J	MS and/or MSD RECs Extremely Low	78.7 J
			Chrysene	ug/kg	70.2	J	MS and/or MSD RECs Extremely Low MS/MSD RPD > QC Limit	70.2 J
ERB04122022	4/12/2022	SW-846 8270C-SIM	Benzo(a)pyrene	ug/L	0.067 U	UJ	LCS RECs < QC Limit	0.067 UJ
		SW-846 8260	Chloroform	ug/L	7.1	J+	Surrogate RECs > QC Limit	7.10 J+
GB-09C/5-6	4/14/2022	SW-846 8270-SIM	Benzo(a)anthracene	ug/kg	151	J	MS and/or MSD RECs Extremely Low	151 J
			Benzo(a)pyrene	ug/kg	112	J	MS and/or MSD RECs Extremely Low	112 J
			Benzo(g,h,i)perylene	ug/kg	71.8	J	MS and/or MSD RECs Extremely Low	71.8 J
			Benzo(k)fluoranthene	ug/kg	59.9	J	MS and/or MSD RECs Extremely Low	59.9 J
			Chrysene	ug/kg	142	J	MS and/or MSD RECs Extremely Low	142 J
			Indeno(1,2,3-cd)pyrene	ug/kg	64.3	J	MS and/or MSD RECs Extremely Low	64.3 J
GB-19C/1-2	4/12/2022	SW-846 8270-SIM	Acenaphthene	ug/kg	14,600	J	Confirmed matrix differences were present between the field duplicate pair. See text for details.	14,600 J
			Acenaphthylene	ug/kg	1,400	J		1,400 J
			Anthracene	ug/kg	28,400	J		28,400 J
			Benzo(a)anthracene	ug/kg	37,000	J		37,000 J
			Benzo(a)pyrene	ug/kg	27,100	J		27,100 J
			Benzo(b)fluoranthene	ug/kg	51,800	J		51,800 J
			Benzo(g,h,i)perylene	ug/kg	12,900	J		12,900 J
			Benzo(k)fluoranthene	ug/kg	10,400	J		10,400 J
			Chrysene	ug/kg	31,000	J		31,000 J
			Dibenzo(a,h)anthracene	ug/kg	3,480	J		3,480 J
			Fluoranthene	ug/kg	117,000	J		117,000 J
			Fluorene	ug/kg	13,600	J		13,600 J
			Indeno(1,2,3-cd)pyrene	ug/kg	12,100	J		12,100 J
			Naphthalene	ug/kg	13,900	J		13,900 J
			Phenanthrene	ug/kg	135,000	J		135,000 J
GB-19C/1-2D	4/12/2022	SW-846 8270-SIM	Pyrene	ug/kg	92,200	J	92,200 J	
			Acenaphthene	ug/kg	26.7	R	26.7 R	
			Acenaphthylene	ug/kg	11.8	R	11.8 R	
			Anthracene	ug/kg	68.6	R	68.6 R	
			Benzo(a)anthracene	ug/kg	196	R	196 R	
			Benzo(a)pyrene	ug/kg	171	R	171 R	
			Benzo(b)fluoranthene	ug/kg	309	R	309 R	
			Benzo(g,h,i)perylene	ug/kg	97	R	97 R	
			Benzo(k)fluoranthene	ug/kg	66.5	R	66.5 R	
			Chrysene	ug/kg	180	R	180 R	
			Dibenzo(a,h)anthracene	ug/kg	23.6	R	23.6 R	
			Fluoranthene	ug/kg	406	R	406 R	
			Fluorene	ug/kg	22.7	R	22.7 R	
			Indeno(1,2,3-cd)pyrene	ug/kg	87.2	R	87.2 R	
			Naphthalene	ug/kg	9.5	R	9.5 R	
Phenanthrene	ug/kg	293	R	293 R				
Pyrene	ug/kg	387	R	387 R				

**Table 1**  
**Summary of Qualifiers Added During Data Validation Review**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Sample Date	Analytical Method	Analyte(s)	Units	Laboratory Result/Qualifier	Data Validation Qualifier	Reason(s) for Qualification	Final Result for Reporting
GB-44A/5-6	4/14/2022	SW-846 8270-SIM	Acenaphthene	ug/kg	34.1	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	34.1 J
			Acenaphthylene	ug/kg	7.1	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit MS/MSD RPD > QC Limit	7.1 J
			Anthracene	ug/kg	98.7	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	98.7 J
			Benzo(a)anthracene	ug/kg	149.0	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	149 J
			Benzo(a)pyrene	ug/kg	109.0	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	109 J
			Benzo(b)fluoranthene	ug/kg	164.0	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	164 J
			Benzo(g,h,i)perylene	ug/kg	75.9	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	75.9 J
			Benzo(k)fluoranthene	ug/kg	69.7	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	69.7 J
			Chrysene	ug/kg	151.0	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	151 J
			Dibenzo(a,h)anthracene	ug/kg	15.5	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	15.5 J
			Fluorene	ug/kg	60.6	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	60.6 J
			Indeno(1,2,3-cd)pyrene	ug/kg	61.4	J	Surrogate RECs > QC Limit MS and/or MSD RECs > QC Limit	61.4 J
			Naphthalene	ug/kg	12.4	J	Surrogate RECs > QC Limit	12.4 J
GB-45C/0.5-1.5	4/12/2022	SW-846 8270-SIM	Acenaphthylene	ug/kg	68.3	J	Field Duplicate Discrepancy	68.3 J
			Anthracene	ug/kg	133	J	Field Duplicate Discrepancy	133 J
			Benzo(a)anthracene	ug/kg	513	J	Field Duplicate Discrepancy	513 J
			Benzo(a)pyrene	ug/kg	474	J	Field Duplicate Discrepancy	474 J
			Benzo(b)fluoranthene	ug/kg	769	J	Field Duplicate Discrepancy	769 J
			Benzo(g,h,i)perylene	ug/kg	259	J	Field Duplicate Discrepancy	259 J
			Benzo(k)fluoranthene	ug/kg	349	J	Field Duplicate Discrepancy	349 J
			Chrysene	ug/kg	440	J	Field Duplicate Discrepancy	440 J
			Dibenzo(a,h)anthracene	ug/kg	65.4	J	Field Duplicate Discrepancy	65.4 J
			Fluoranthene	ug/kg	889	J	Field Duplicate Discrepancy	889 J
			Indeno(1,2,3-cd)pyrene	ug/kg	231	J	Field Duplicate Discrepancy	231 J
			Phenanthrene	ug/kg	203	J	Field Duplicate Discrepancy	203 J
Pyrene	ug/kg	907	J	Field Duplicate Discrepancy	907 J			

**Table 1**  
**Summary of Qualifiers Added During Data Validation Review**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Sample Date	Analytical Method	Analyte(s)	Units	Laboratory Result/ Qualifier	Data Validation Qualifier	Reason(s) for Qualification	Final Result for Reporting
GB-45C/0.5-1.5D	4/12/2022	SW-846 8270-SIM	Acenaphthylene	ug/kg	7.3 U	UJ	Field Duplicate Discrepancy	7.3 UJ
			Anthracene	ug/kg	23.8	J	Field Duplicate Discrepancy	23.8 J
			Benzo(a)anthracene	ug/kg	159	J	Field Duplicate Discrepancy	159 J
			Benzo(a)pyrene	ug/kg	163	J	Field Duplicate Discrepancy	163 J
			Benzo(b)fluoranthene	ug/kg	318	J	Field Duplicate Discrepancy	318 J
			Benzo(g,h,i)perylene	ug/kg	133	J	Field Duplicate Discrepancy	133 J
			Benzo(k)fluoranthene	ug/kg	136	J	Field Duplicate Discrepancy	136 J
			Chrysene	ug/kg	193	J	Field Duplicate Discrepancy	193 J
			Dibenzo(a,h)anthracene	ug/kg	24.7	J	Field Duplicate Discrepancy	24.7 J
			Fluoranthene	ug/kg	363	J	Field Duplicate Discrepancy	363 J
			Indeno(1,2,3-cd)pyrene	ug/kg	97.8	J	Field Duplicate Discrepancy	97.8 J
			Phenanthrene	ug/kg	134	J	Field Duplicate Discrepancy	134 J
			Pyrene	ug/kg	357	J	Field Duplicate Discrepancy	357 J
GB-45A/3-4	4/12/2022	SW-846 8270-SIM	Acenaphthene	ug/kg	6.7	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	6.7 J
			Anthracene	ug/kg	22.1	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	22.1 J
			Benzo(a)anthracene	ug/kg	59.3	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	59.3 J
			Benzo(a)pyrene	ug/kg	49.5	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	49.5 J
			Benzo(b)fluoranthene	ug/kg	79.8	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	79.8 J
			Benzo(g,h,i)perylene	ug/kg	27.7	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	27.7 J
			Benzo(k)fluoranthene	ug/kg	22.7	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	22.7 J
			Chrysene	ug/kg	53.6	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	53.6 J
			Dibenzo(a,h)anthracene	ug/kg	6.9	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	6.9 J
			Fluoranthene	ug/kg	127	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	127 J
			Fluorene	ug/kg	8.2	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	8.2 J
			Indeno(1,2,3-cd)pyrene	ug/kg	24.7	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	24.7 J
			Phenanthrene	ug/kg	99.2	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	99.2 J
			Pyrene	ug/kg	129	J	MS and/or MSD RECs > QC Limits MS/MSD RPD > QC Limit	129 J



**Table 1**  
**Summary of Qualifiers Added During Data Validation Review**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Sample Date	Analytical Method	Analyte(s)	Units	Laboratory Result/Qualifier	Data Validation Qualifier	Reason(s) for Qualification	Final Result for Reporting
GB-59/12-13	4/12/2022	SW-846 8260B	1,4-Dioxane	ug/kg	43.9 U	UJ	LCS RECs < QC Limit	43.9 UJ
			2-Methylnaphthalene	ug/kg	0.95 U	UJ	LCS RECs < QC Limit	0.95 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	0.91 U	UJ	LCS RECs < QC Limit	0.91 UJ
GB-59/12-13D	4/12/2022	SW-846 8260B	1,4-Dioxane	ug/kg	63.8 U	UJ	LCS RECs < QC Limit	63.8 UJ
			2-Methylnaphthalene	ug/kg	1.4 U	UJ	LCS RECs < QC Limit	1.4 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	1.3 U	UJ	LCS RECs < QC Limit	1.3 UJ
GB-59/14-15	4/12/2022	SW-846 8260B	1,1,2,2-Tetrachloroethane	ug/kg	1.0 U	R	Lack of MS and/or MSD Recs (0%)	1.0 UR
			1,4-Dioxane	ug/kg	41.3 U	UJ	LCS RECs < QC Limit	41.3 UJ
			2-Methylnaphthalene	ug/kg	0.90 U	UJ	LCS RECs < QC Limit	0.90 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	0.86 U	UJ	LCS RECs < QC Limit	0.86 UJ
			Methyl Acetate	ug/kg	1.1 U	R	Lack of MS and/or MSD Recs (0%)	1.1 UR
GB-64/9-10	4/11/2022	SW-846 6020	Arsenic	mg/kg	9.2	J	Field Duplicate Discrepancy	9.2 J
GB-64/9-10D	4/11/2022	SW-846 6020	Arsenic	mg/kg	15.6	J	Field Duplicate Discrepancy	15.6 J
GB-72/0.5-1.5	4/14/2022	SW-846 8260B	1,4-Dioxane	ug/kg	48.3 U	UJ	LCS RECs < QC Limit	48.3 UJ
			2-Methylnaphthalene	ug/kg	1.0 U	UJ	LCS RECs < QC Limit	1.0 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	1.0 U	UJ	LCS RECs < QC Limit	1.0 UJ
GB-72/4-5	4/14/2022	SW-846 8260B	1,4-Dioxane	ug/kg	40.9 U	UJ	LCS RECs < QC Limit	40.9 UJ
			2-Methylnaphthalene	ug/kg	0.89 U	UJ	LCS RECs < QC Limit	0.89 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	0.85 U	UJ	LCS RECs < QC Limit	0.85 UJ
GB-72/8-9			1,4-Dioxane	ug/kg	43.5 U	UJ	LCS RECs < QC Limit	43.5 UJ
			2-Methylnaphthalene	ug/kg	0.95 U	UJ	LCS RECs < QC Limit	0.95 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	0.90 U	UJ	LCS RECs < QC Limit	0.90 UJ
		SW-846 6010	Arsenic	mg/kg	6.1	J	Field Duplicate Discrepancy	6.1 J
			Copper	mg/kg	17.9	J	Field Duplicate Discrepancy	17.9 J
			Lead	mg/kg	30.9	J	Field Duplicate Discrepancy	30.9 J
			Zinc	mg/kg	59.2	J	Field Duplicate Discrepancy	59.2 J
		SW-846 8270-SIM	Anthracene	ug/kg	20.6	J	Field Duplicate Discrepancy	20.6 J
			Benzo(a)anthracene	ug/kg	56.4	J	Field Duplicate Discrepancy	56.4 J
			Benzo(a)pyrene	ug/kg	48.2	J	Field Duplicate Discrepancy	48.2 J
			Benzo(b)fluoranthene	ug/kg	71.0	J	Field Duplicate Discrepancy	71.0 J
			Benzo(g,h,i)perylene	ug/kg	31.3	J	Field Duplicate Discrepancy	31.3 J
			Benzo(k)fluoranthene	ug/kg	25.2	J	Field Duplicate Discrepancy	25.2 J
			Chrysene	ug/kg	50.1	J	Field Duplicate Discrepancy	50.1 J
			Fluoranthene	ug/kg	130	J	MS and/or MSD RECs Exceeded QC Limits Field Duplicate Discrepancy	130 J
Indeno(1,2,3-cd)pyrene	ug/kg	27.6	J	Field Duplicate Discrepancy	27.6 J			
Phenanthrene	ug/kg	84.2	J	Field Duplicate Discrepancy	84.2 J			
Pyrene	ug/kg	107	J	Field Duplicate Discrepancy	107 J			

**Table 1**  
**Summary of Qualifiers Added During Data Validation Review**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Sample Date	Analytical Method	Analyte(s)	Units	Laboratory Result/Qualifier	Data Validation Qualifier	Reason(s) for Qualification	Final Result for Reporting
GB-72/8-9D	4/14/2022	SW-846 8260B	1,4-Dioxane	ug/kg	48.7 U	UJ	LCS RECs < QC Limit	48.7 UJ
			2-Methylnaphthalene	ug/kg	1.1 U	UJ	LCS RECs < QC Limit	1.1 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	1.0 U	UJ	LCS RECs < QC Limit	1.0 UJ
		SW-846 6010	Arsenic	mg/kg	3.6	J	Field Duplicate Discrepancy	3.6 J
			Copper	mg/kg	12.7	J	Field Duplicate Discrepancy	12.7 J
			Lead	mg/kg	20.8	J	Field Duplicate Discrepancy	20.8 J
			Zinc	mg/kg	42.4	J	Field Duplicate Discrepancy	42.4 J
		SW-846 8270-SIM	Anthracene	ug/kg	3.4 U	UJ	Field Duplicate Discrepancy	3.4 UJ
			Benzo(a)anthracene	ug/kg	3.8 U	UJ	Field Duplicate Discrepancy	3.8 UJ
			Benzo(a)pyrene	ug/kg	2.9 U	UJ	Field Duplicate Discrepancy	2.9 UJ
			Benzo(b)fluoranthene	ug/kg	3.9 U	UJ	Field Duplicate Discrepancy	3.9 UJ
			Benzo(g,h,i)perylene	ug/kg	3.6 U	UJ	Field Duplicate Discrepancy	3.6 UJ
			Benzo(k)fluoranthene	ug/kg	4.5 U	UJ	Field Duplicate Discrepancy	4.5 UJ
			Chrysene	ug/kg	3.9 U	UJ	Field Duplicate Discrepancy	3.9 UJ
			Fluoranthene	ug/kg	11.6	J	Field Duplicate Discrepancy; MS and/or MSD RECs Exceeded QC Limits	11.6 J
	Indeno(1,2,3-cd)pyrene	ug/kg	3.5 U	UJ	Field Duplicate Discrepancy	3.5 UJ		
	Phenanthrene	ug/kg	6.6 U	UJ	Field Duplicate Discrepancy	6.6 UJ		
	Pyrene	ug/kg	9.3	J	Field Duplicate Discrepancy	9.3 J		
GB-72/12-13	4/14/2022	SW-846 8260B	1,4-Dioxane	ug/kg	48.7 U	UJ	LCS RECs < QC Limit	48.7 UJ
			2-Methylnaphthalene	ug/kg	1.1 U	UJ	LCS RECs < QC Limit	1.1 UJ
			Dichloro-2-butene, trans-1,4-	ug/kg	1.0 U	UJ	LCS RECs < QC Limit	1.0 UJ

**Notes:**

J(-/+ ) - estimated (low bias/high bias)

LCS - laboratory control sample

mg/kg - milligram per kilogram

MS/MSD - matrix spike/matrix spike duplicate

QC - quality control

R - data was rejected

REC - percent recovery

RPD - relative percent difference

SIM - select ion monitoring

U - qualified as nondetect

ug/kg - micrograms per kilogram

ug/L - micrograms per liter

UJ - qualified as estimated at the reporting limit

UR - qualified as rejected at the reporting limit

**Table 2**  
**Rinsate and Trip Blank Detections**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Rinsate/Trip Blank With Detections	Sample Date	Analytical Method	Analyte(s) Detected in Rinsate/Trip Blank	Units	Rinsate/Trip Blank Result		Qualifiers Added to Associated Field Samples During Data Validation
ERB04112022 Rinsate blank	4/12/2022	SW-846 8270C-SIM (SVOC)	Benzo(a)anthracene	ug/L	0.034		No data validation qualifiers added. Associated sample(s) were either nondetect or greater than 5x (or 10x) the noted blank detection.
			Benzo(b)fluoranthene	ug/L	0.048		
			Chrysene	ug/L	0.039		
			Pyrene	ug/L	0.070		
ERB04122022 Rinsate blank	4/12/2022	SW-846 8260 (VOC)	Chloroform	ug/L	0.22		

**Notes:**

ERB - equipment rinsate blank  
SIM - select ion monitoring  
SVOC - semi volatile organic compound  
ug/L - micrograms per Liter  
VOC - volatile organic compound

**Table 3**  
**Surrogate Results Outside QC Limits**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Identification	Analytical Method	Surrogate Spike(s)	Surrogate REC (%)	Lower Limit (%)	Upper Limit (%)	Sample Dilution	Reason for Qualification
ERB04122022	SW-846 8260 (VOC)	Toluene-d8	123	80	120	1	Detections qualified as estimated high bias J+. Nondetects did not require qualification.
	SW-846 8260 (GRO)	Toluene-d8	127	80	120	1	GRO is nondetect, which did not require qualification.
GB-19C/1-2	SW-846 8270-SIM (SVOC)	2-Fluorobiphenyl	0	40	120	10	Surrogate spike likely diluted out of sample during extraction process. Also, two surrogates of the same fraction are allowed outside limits before qualifiers are necessary for this analysis. No conclusion could be made for the noted surrogate spike for this sample/analysis.
		Terphenyl-d14	0	45	130	10	
GB-44A/5-6	SW-846 8270-SIM (SVOC)	2-Fluorobiphenyl	126	40	120	1	Detections qualified as estimated high bias J+. Nondetects did not require qualification.
		Terphenyl-d14	158	45	130	1	
GB-72/0.5-1.5	SW-846 8260B (VOC)	4-Bromofluorobenzene	123	80	120	1	All VOC results are nondetects, which did not require qualification.
TRIP BLANK	SW-846 8260 (VOC)	Toluene-d8	128	80	120	1	All VOC results are nondetects, which did not require qualification.

**Notes:**

GRO - gasoline range organics  
J(+) - estimated high bias  
% - percent  
QC - quality control  
REC - percent recovery  
SIM - selective ion monitoring  
SVOC - semi volatile organic compounds  
VOC - volatile organic compounds

**Table 4**  
**LCS Results Outside QC Limits**  
**Goodfellow Federal Complex - St. Louis, Missouri**

QC Batch	Analytical Method	Analyte(s)	LCS REC %	Lower Limit (%)	Upper Limit (%)	Reason for Qualification
782793	SW-846 8260B (VOC)	1,4-Dioxane	72	75	120	Detections - qualified as estimated low bias (J-). Nondetects - qualified as estimated at the reporting limit (UJ) (see text).
		2-Methylnaphthalene	79	80	120	Detections - qualified as estimated low bias (J-). Nondetects - qualified as estimated at the reporting limit (UJ) (see text).
		Dichloro-2-butene, trans-1,4-	76	80	120	Detections - qualified as estimated low bias (J-). Nondetects - qualified as estimated at the reporting limit (UJ) (see text).
781708	SW-846 8270C-SIM (SVOC)	Benzo(a)pyrene	53	56	119	Detections - qualified as estimated low bias (J-). Nondetects - qualified as estimated at the reporting limit (UJ) (see text).

**Notes:**

J(-) - estimated (low bias)  
 % - percent  
 LCS - laboratory control sample  
 QC - quality control  
 REC - percent recovery  
 SVOC - semi volatile organic compound  
 UJ - estimated at the reporting limit  
 VOC - volatile organic compound

**Table 5**  
**MS/MSD Results Outside QC Limits**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Spiked Sample Identification(s)	Analysis Batch	Analytical Method	Analyte(s)	MS REC %	MSD REC %	Lower Limit (%)	Upper Limit (%)	MS/MSD RPD %	RPD Limit (%)	Reason for Qualification			
B-11AA/1-2	782204	SW-846 8270-SIM	Acenaphthene	-147	-204	10	150	45	42	MS/MSDs were outside their QC limits for these analytes. This is likely due to matrix interference(s). These analytes were detected and qualified as estimated (J) for the noted spiked sample.			
			Anthracene	71	-173	10	160	91	54				
			Benzo(a)anthracene	-8	-52	10	160	28	62				
			Benzo(b)fluoranthene	-5	-33	10	165	17	61				
			Chrysene	173	-31	10	150	84	57	Spike concentration was less than one-fourth the concentration for this analyte in the noted parent sample. No conclusion could be made regarding the accuracy of this spike.			
			Fluoranthene	-463	-556	10	180	41	54				
			Fluorene	-221	-288	20	145	48	39				
			Naphthalene	-98	-222	10	165	51	54				
			Phenanthrene	-863	-1,010	10	170	60	51				
Pyrene	-259	-319	10	180	34	61							
GB-09C/5-6	782204	SW-846 8270-SIM	Benzo(a)anthracene	-113	-146	10	160	16	62	MS/MSDs were outside their QC limits for these analytes. This is likely due to matrix interference(s). These analytes were detected and qualified as estimated (J) for the noted spiked sample.			
			Benzo(a)pyrene	-70	-98	10	150	17	66				
			Benzo(g,h,i)perylene	-17	-25	10	155	6	58				
			Benzo(k)fluoranthene	-3	-13	10	165	7	53				
			Chrysene	-107	-131	10	150	13	57				
			Indeno(1,2,3-cd)pyrene	-7	-19	10	150	9	59	Spike concentration was less than one-fourth the concentration for this analyte in the noted parent sample. No conclusion could be made regarding the accuracy of this spike.			
			Benzo(b)fluoranthene	-195	-238	10	165	22	61				
			Fluorene	-221	-288	20	145	48	39				
			Fluoranthene	-351	-457	10	180	29	54				
Phenanthrene	-51	-144	10	170	30	51	Pyrene	-233	-295	10	180	19	61
Pyrene	-233	-295	10	180	19	61							
GB-44A/5-6	782452	SW-846 8270-SIM	Acenaphthene	383	311	10	150	17	42	Detections qualified as estimated (J). Nondetects did not require qualification.			
			Acenaphthylene	113	264	30	125	73	44				
			Anthracene	903	1,350	10	160	32	54				
			Benzo(a)anthracene	885	1,880	10	160	57	62				
			Benzo(a)pyrene	680	1,410	10	150	56	66				
			Benzo(b)fluoranthene	935	2,120	10	165	61	61				
			Benzo(g,h,i)perylene	388	727	10	155	45	58				
			Benzo(k)fluoranthene	296	623	10	165	52	53				
			Chrysene	805	1,660	10	150	53	57				
			Dibenzo(a,h)anthracene	151	220	10	175	30	48				
			Fluorene	645	591	20	145	8	39				
			Indeno(1,2,3-cd)pyrene	331	566	10	150	39	59				
			Fluoranthene	1,240	4,270	10	180	82	54		Spike concentration was less than one-fourth the concentration for this analyte in the noted parent sample. No conclusion could be made regarding the accuracy of this spike.		
			Phenanthrene	958	3,290	10	170	87	51				
			Pyrene	890	3,690	10	180	89	61				

**Table 5**  
**MS/MSD Results Outside QC Limits**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Spiked Sample Identification(s)	Analysis Batch	Analytical Method	Analyte(s)	MS REC %	MSD REC %	Lower Limit (%)	Upper Limit (%)	MS/MSD RPD %	RPD Limit (%)	Reason for Qualification
GB-45A/3-4	781706	SW-846 8270-SIM	Acenaphthene	225	111	10	150	63	42	Detections qualified as estimated (J). Nondetects did not require qualification.
			Acenaphthylene	163	96	30	125	51	44	
			Anthracene	532	200	10	160	80	54	
			Benzo(a)anthracene	986	382	10	160	74	62	
			Benzo(a)pyrene	859	315	10	150	78	66	
			Benzo(b)fluoranthene	1,250	426	10	165	80	61	
			Benzo(g,h,i)perylene	580	188	10	155	88	58	
			Benzo(k)fluoranthene	484	215	10	165	68	53	
			Chrysene	907	345	10	150	75	57	
			Dibenzo(a,h)anthracene	195	97	10	175	61	48	
			Fluoranthene	2,280	679	10	180	90	54	
			Fluorene	236	121	20	145	59	39	
			Indeno(1,2,3-cd)pyrene	504	172	10	150	84	59	
			Naphthalene	282	94	10	165	98	54	
Phenanthrene	2,140	559	10	170	100	51				
Pyrene	1,740	701	10	180	69	61				
GB-59/14-15	782793	SW-846 8260B	1,1,2,2-Tetrachloroethane	0	0	10	145	NC	35	Due to lack of MS/MSD recovery and nondetect results in the noted spiked sample, these analytes were rejected (R).
			Methyl Acetate	0	0	30	120	NC	35	
			1,1-Dichloroethene	108	128	35	120	16	35	For the noted spiked sample, these VOCs were nondetect, and did not require qualification.
			2-Butanone	168	190	20	145	11	35	
			2-Hexanone	180	210	15	150	15	35	
			Cyclohexanone	109	131	35	120	18	35	
			Trichloroethene	145	166	25	140	12	35	
			Acetone	156	174	10	165	10	35	

**Table 5**  
**MS/MSD Results Outside QC Limits**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Spiked Sample Identification(s)	Analysis Batch	Analytical Method	Analyte(s)	MS REC %	MSD REC %	Lower Limit (%)	Upper Limit (%)	MS/MSD RPD %	RPD Limit (%)	Reason for Qualification
GB-72/8-9D	782203	SW-846 8270-SIM	Fluoranthene	199	128	10	180	37	54	Fluoranthene was detected and qualified estimated (J) <i>Note: because this MS/MSD was performed on a field duplicate sample, both samples were qualified for this analyte. (see Table 1)</i>

**Notes:**

EPA - Environmental Protection Agency

% - percent

J(-/+) - estimated (low bias [-]/high bias [+])

MS/MSD - matrix spike/matrix spike duplicate

NC - not calculated

QC - quality control

R - data was rejected

REC - percent recovery

RPD - relative percent difference

SIM - select ion monitoring

UJ - estimated at the reporting limit

UR - qualified as rejected at the reporting limit



**Table 6**  
**Field Duplicate Analysis - Detections Only**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Name:		GB-19C/1-2		GB-19C/1-2D		Meets QC
Compound	Units	Results	Qual	Results	Qual	
Acenaphthene	ug/kg	14,600	J	26.7	R	See Text, Section 10
Acenaphthylene	ug/kg	1,400	J	11.8	R	
Anthracene	ug/kg	28,400	J	68.6	R	
Benzo(a)anthracene	ug/kg	37,000	J	196	R	
Benzo(a)pyrene	ug/kg	27,100	J	171	R	
Benzo(b)fluoranthene	ug/kg	51,800	J	309	R	
Benzo(g,h,i)perylene	ug/kg	12,900	J	97.0	R	
Benzo(k)fluoranthene	ug/kg	10,400	J	66.5	R	
Chrysene	ug/kg	31,000	J	180	R	
Dibenzo(a,h)anthracene	ug/kg	3,480	J	23.6	R	
Fluoranthene	ug/kg	117,000	J	406	R	
Fluorene	ug/kg	13,600	J	22.7	R	
Indeno(1,2,3-cd)pyrene	ug/kg	12,100	J	87.2	R	
Naphthalene	ug/kg	13,900	J	9.5	R	
Phenanthrene	ug/kg	135,000	J	293	R	
Pyrene	ug/kg	92,200	J	387	R	

**Table 6**  
**Field Duplicate Analysis - Detections Only**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Name:		GB-45C/0.5-1.5		GB-45C/0.5-1.5D		
Compound	Units	Results	Qual	Results	Qual	Meets QC
Acenaphthylene	ug/kg	68.3	J	7.3	UJ	RPD 161%
Anthracene	ug/kg	133	J	23.8	J	RPD 139% STF
Benzo(a)anthracene	ug/kg	513	J	159	J	RPD 105%
Benzo(a)pyrene	ug/kg	474	J	163	J	RPD 98%
Benzo(b)fluoranthene	ug/kg	769	J	318	J	RPD 83%
Benzo(g,h,i)perylene	ug/kg	259	J	133	J	RPD 64%
Benzo(k)fluoranthene	ug/kg	349	J	136	J	RPD 88%
Chrysene	ug/kg	440	J	193	J	RPD 41%
Dibenzo(a,h)anthracene	ug/kg	65.4	J	24.7	J	RPD 90% STF
Fluoranthene	ug/kg	889	J	363	J	RPD 41%
Indeno(1,2,3-cd)pyrene	ug/kg	231	J	97.8	J	RPD 81%
Phenanthrene	ug/kg	203	J	134	J	RPD 41%
Pyrene	ug/kg	907	J	357	J	RPD 41%

Sample Name:		GB-59/12-13		GB-59/12-13D		
Compound	Units	Results	Qual	Results	Qual	Meets QC
No detections						

Sample Name:		GB-64/9-10		GB-64/9-10D		
Compound	Units	Results	Qual	Results	Qual	Meets QC
Arsenic	mg/kg	9.2	J	15.6	J	RPD 52%

**Table 6**  
**Field Duplicate Analysis - Detections Only**  
**Goodfellow Federal Complex - St. Louis, Missouri**

Sample Name:		GB-72/8-9		GB-72/8-9D		Meets QC
Compound	Units	Results	Qual	Results	Qual	
Acetone	ug/kg	22.4 J		24.2 UJ		Yes
Anthracene	ug/kg	20.6 J		3.4 UJ		RPD 143%
Arsenic	mg/kg	6.1 J		3.6 J		RPD 52%
Benzo(a)anthracene	ug/kg	56.4 J		3.8 UJ		RPD 175%
Benzo(a)pyrene	ug/kg	48.2 J		2.9 UJ		RPD 177%
Benzo(b)fluoranthene	ug/kg	71.0 J		3.9 UJ		RPD 179%
Benzo(g,h,i)perylene	ug/kg	31.3 J		3.6 UJ		RPD 159%
Benzo(k)fluoranthene	ug/kg	25.2 J		4.5 UJ		RPD 139%
Chrysene	ug/kg	50.1 J		3.9 UJ		RPD 171%
Copper	mg/kg	17.9 J		12.7 J		RPD 34%
Fluoranthene	ug/kg	130 J		11.6 J		RPD 167%
Indeno(1,2,3-cd)pyrene	ug/kg	27.6 J		3.5 UJ		RPD 155%
Lead	mg/kg	30.9 J		20.8 J		RPD 39%
Phenanthrene	ug/kg	84.2 J		6.6 UJ		RPD 171%
Pyrene	ug/kg	107 J		9.3 J		RPD 168%
Zinc	mg/kg	59.2 J		42.4 J		RPD 33%

**Notes:**

% - percent

J - estimated (by lab or during review)

mg/kg - milligrams per kilogram

ND - Analyte not detected in both duplicate pair

RPD - relative percent difference

R - data was rejected (see text)

STF - sensitivity test failure

U - nondetect

UJ - estimated at the reporting limit

ug/kg - micrograms per kilogram



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