U.S. General Services Administration

JANUARY 2022 QUARTERLY GROUNDWATER SAMPLING

This quarterly groundwater sampling 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 January 2022. Previously, 19 groundwater monitoring wells were installed at the facility in accordance with GSA's Remedial Investigation Work Plan, approved by the Missouri Department of Natural Resources in March 2021.

In January 2022, the 19 monitoring wells were sampled. The groundwater samples collected were tested for several analytical parameters (including metals, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, total petroleum hydrocarbons, volatile organic compounds, and explosives); laboratory analytical methods are detailed in Section 4.0 of this report. Groundwater analytical results were compared to project action limits (listed on page 292 of the RIWP). The project action limits are the lowest EPA screening level for groundwater.

Laboratory results are presented in Section 5.0 of this report. Copper and zinc were detected in some groundwater samples, but the concentrations were below the action limits. The laboratory did not detect any other compounds.

In addition to this sampling event, GSA has conducted previous quarterly groundwater sampling events in July and October 2021 and is scheduled to complete one additional quarterly groundwater sampling event in April 2022. Once sampling is completed and all analytical results have been received, GSA will complete a baseline human health risk assessment.

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, and GSA will provide responses from the appropriate experts.

Please note: 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.

Goodfellow Federal Complex
Quarterly Groundwater Sampling Report
January 2022

General Services Administration
Kansas City, Missouri

Goodfellow Federal Complex
4300 Goodfellow Boulevard
St. Louis, Missouri

Project No. 128487

March 2022

Goodfellow Federal Complex
Quarterly Groundwater Sampling Report
January 2022

prepared for

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

Project No. 128487

March 2022

prepared by

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
Etegra	Etegra, Inc.
FSP	*Final Field Sampling Plan; Goodfellow Federal Complex, St. Louis, Missouri*
GFC	Goodfellow Federal Complex
GSA	General Services Administration
HASP	*Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri*
IDW	investigation-derived waste
Lab ID	laboratory identification
MDNR	Missouri Department of Natural Resources
mg/L	milligrams per liter
mL/min	milliliters per minute
MS	matrix spike
MSD	matrix spike duplicate
NAPL	non-aqueous phase liquid
NELAP	National Environmental Laboratory Accreditation Program
PAH	polycyclic aromatic hydrocarbon
PAL	project action limit
PCB	polychlorinated biphenyl
QAPP	*Final Quality Assurance Project Plan; Goodfellow Federal Complex, St. Louis, Missouri*
RI	remedial investigation
SLOP	St. Louis Ordnance Plant
SSSP	*Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis Missouri*
TekLab	TekLab, Inc.
VOC	volatile organic compound
Work Plan	*Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri*

1.0 INTRODUCTION

The General Services Administration (GSA) tasked 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 direct-push surface and subsurface soil samples. This Quarterly Groundwater Sampling Report presents a summary of field activities conducted and analytical data collected during the third quarterly groundwater sampling event.

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 64 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 separated stormwater and sanitary sewer collection systems.

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 groundwater sampling activities during January 2022:

- *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)
    - *Final Risk Assessment Work Plan*; *Goodfellow Federal Complex, St. Louis, Missouri;*
- *Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri* (HASP) (Burns & McDonnell, 2021a); and

- *Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis Missouri* (SSSP) (Burns & McDonnell, 2021b).

1.2 Objectives

The following objectives were identified for the January 2022 quarterly sampling event:

- Inspect the well integrity for the 19 site monitoring wells (MW-01 through MW-19);
- Gauge the water levels and total depths for the 19 site monitoring wells; and
- Sample the 19 site monitoring wells.

Burns & McDonnell's scope of services completed for this project were conducted in general accordance with the Work Plan.

1.3 Responsible Agency

The Missouri Department of Natural Resources (MDNR) is the regulatory agency responsible for this project. Deliverables will be submitted to MDNR.

1.4 Contaminants of Concern

The groundwater contaminants of concern that are being investigated as part of this RI include the following:

- Metals, total and dissolved (antimony, arsenic, copper, lead, and zinc);
- Polychlorinated biphenyls (PCBs);
- Polycyclic aromatic hydrocarbons (PAHs);
- Volatile organic compounds (VOCs); and
- Explosives.

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 Quarterly Groundwater 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 the sectional outline for this Quarterly Groundwater Sampling Report.
- Section 3.0, Field Activities, discusses the field activities that were conducted at the GFC during the January 2022 quarterly groundwater sampling event.
- Section 4.0, Laboratory Analytical Methods, presents the analytical methods that groundwater samples were analyzed for during the January 2022 quarterly groundwater sampling event.
- Section 5.0, Groundwater Analytical Results, discusses the groundwater analytical results for the January 2022 quarterly groundwater sampling event.
- Section 6.0, Data Validation, discusses data validation related aspects of the groundwater monitoring program.
- Section 7.0, References, includes a list of references used in the report.

Included as attachments to this Quarterly Groundwater Sampling Report are supporting tables, figures, and appendices. Appendix A includes supporting field documentation; Appendix B includes a groundwater hydrograph; Appendix C includes the analytical laboratory reports; and Appendix D includes the data validation memorandum. The tables, figures, and 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.

3.0 FIELD ACTIVITIES

Field activities were completed to meet the project objectives. Field activities were conducted in general accordance with the FSP. The field activities conducted at the GFC during quarterly groundwater sampling activities consisted of the following activities:

- Conducting monitoring well integrity inspections for 19 monitoring wells;
- Gauging water levels and total depths for the 19 monitoring wells; and
- Conducting low-flow groundwater purging and sampling.

3.1 Health and Safety

Burns & McDonnell conducted the fieldwork under a HASP (Burns & McDonnell, 2021a) and a SSSP (Burns & McDonnell, 2021b) 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 field work conducted during the quarterly groundwater sampling event conducted in January 2022.

3.2 Monitoring Well Inspections

Eighteen of the installed monitoring wells (MW-01 through MW-18) were inspected on January 17, 2022. Monitoring Well MW-19 was inspected on January 18, 2022, due to access issues associated with the Martin Luther King, Jr. holiday. The locations of these monitoring wells are illustrated on Figure 2. Monitoring well construction details for each of these monitoring wells are summarized on Table 1. Each monitoring well was inspected for integrity prior to gauging the water level and total depth. Each of these monitoring wells were observed to be secured with lids and sealed J-plug caps. No integrity or security issues were noted during the inspections. Monitoring well inspection checklists are provided in Appendix A.

3.3 Monitoring Well Gauging

Eighteen monitoring wells (MW-01 through MW-18) were gauged for water levels and well total depths on January 17, 2022. Monitoring Well MW-19 was gauged for water level and well total depth on January 18, 2022, due to access issues associated with the Martin Luther King, Jr. holiday. Monitoring wells were gauged with an electronic interface probe that also detects non-aqueous phase liquid (NAPL) prior to sampling. This was the first event that Monitoring Well MW-11 was able to be gauged, as it was historically dry following well installation and during the July and October 2021 quarterly sampling events. Groundwater elevations were recorded and then used to create a potentiometric surface map for

groundwater flow direction illustrated on Figure 3. Measurable NAPL was not detected/observed in the monitoring wells. Groundwater elevations are provided in Table 2 and ranged from 504.41 feet above mean sea level (MW-19) to 569.56 feet above mean sea level (MW-06). As illustrated on Figure 3, groundwater flow in northern portion of the GFC is toward the east-northeast; groundwater flow in the central portion of the GFC is toward the east; and groundwater flow in the southern portion of the GFC is toward the east-southeast. A groundwater hydrograph is presented in Appendix B.

3.4 Groundwater Sampling

Eighteen of the 19 monitoring wells (MW-01 through MW-10 and MW-12 through MW-19) were purged and sampled using low-flow techniques on January 17 through 20, 2022. Monitoring Well MW-11 was sampled as a grab sample using a bailer due to limited available water column. This was the first event that Monitoring Well MW-11 was able to be sampled, as it was historically dry following well installation and during the July and October 2021 quarterly sampling events. The monitoring wells sampled, and their associated analytical analyses are presented in Table 3. With the exception of Monitoring Well MW-11, the monitoring wells were purged at flow rates of between 100 milliliters per minute (mL/min) and 400 mL/min. Low-flow sampling included the use of polyethylene tubing, a pneumatically operated non-dedicated QED® Sample Pro Portable MicroPurge® bladder pump, and a compressed carbon dioxide cylinder.

During purging, depth to water, and water quality field parameters were recorded every three to five minutes with a YSI® 556 MPS water quality meter equipped to a flow-through cell. Turbidity was measured ex-situ using a Hach® 2100Q turbidity meter. Water quality field parameters included pH, temperature, specific conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity. Groundwater samples were collected after three consecutive water quality field parameter readings and water level measurements had stabilized and/or one well volume of water had been removed. Dissolved metals samples were field filtered through a 0.45-micron filter. Field groundwater sampling reports for each monitoring well are provided in Appendix A.

3.5 Investigation Derived Waste

Non-dedicated sampling equipment was cleaned and decontaminated before each sample location to further maintain sample quality. Equipment decontamination generally consisted of a distilled water and Liquinox® cleaning solution pumped through the bladder pump assembly, scrubbing the outer stainless-steel housing of the bladder pump using a nylon brush and cleaning solution, followed by a distilled water rinse. Field personnel wore new disposable gloves during the decontamination process to increase personal protection and limit potential cross-contamination.

Generated investigation-derived waste (IDW) consisted of decontamination water and minimal volumes of purge groundwater generated from low-flow sampling activities. Approximately 38 gallons of liquid IDW was generated. Liquid IDW was containerized in 55-gallon drums and staged onsite. Following the completion of the fourth quarterly groundwater sampling event, liquid IDW will be characterized and disposed of properly. Used personal protective equipment and general trash were disposed of as municipal solid waste.

4.0 LABORATORY ANALYTICAL METHODS

Groundwater samples were collected in laboratory provided containers (with proper preservative where applicable), labeled, immediately placed on ice in a cooler following sample collection, and the cooler secured with a custody seal prior to shipment to the laboratory. Metals (total and dissolved), PCBs, PAHs, and VOCs samples were submitted with chain-of-custody forms to TekLab, Inc. (TekLab) of Collinsville, Illinois, a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory. Dissolved metals samples were field filtered through a 0.45-micron filter prior to sample collection. Explosives samples were submitted with chain-of-custody forms to Pace Analytical National of Mt. Juliet, Tennessee, a NELAP accredited laboratory.

Groundwater samples were analyzed for the following compounds as outlined in the QAPP:

- Total metals (antimony, arsenic, copper, lead, and zinc) by USEPA Method SW-846 6010B;
- Dissolved metals (antimony, arsenic, copper, lead, and zinc) by USEPA Method SW-846 6010B (20% of monitoring wells);
- PCBs (aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260) by USEPA Method SW-846 8082;
- PAHs by USEPA Method SW-846 8270C;
- VOCs by USEPA Method SW-846 8260B; and
- Explosives by USEPA Method SW-846 8330 (Monitoring Well MW-08 only).

5.0 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results were compared to project action limits (PALs) listed in Table 2 of the QAPP. Groundwater analytical data is summarized in Table 4 and compared to PALs. Table 5 provides historical groundwater analytical results for site monitoring wells compared to PALs. Copies of the laboratory analytical reports for the January 2022 quarterly sampling event are provided in Appendix C.

5.1 Total Metals

Total antimony, arsenic, and lead were not detected in any groundwater samples collected from site monitoring wells above their respective laboratory reporting limits. Total copper was detected in the groundwater sample collected from Monitoring Well MW-13 at trace-level concentration of 0.0715 milligrams per liter (mg/L). Total zinc was detected in groundwater samples collected from Monitoring Wells MW-11, MW-12, MW-13 at trace-level concentrations of 0.0229 mg/L, 0.0167 mg/L, and 0.0227 mg/L, respectively. The detection of total copper was reported well below the PAL of 1,300 mg/L, and all three detections of total zinc were reported below the PAL of 4.69 mg/L.

5.2 Dissolved Metals

Dissolved antimony, arsenic, and lead were not detected in any groundwater samples collected from select site monitoring wells above their respective laboratory reporting limits. Dissolved copper was detected in the groundwater sample collected from Monitoring Well MW-13 at trace-level concentrations of 0.0475 mg/L. Dissolved zinc was detected in groundwater samples collected from Monitoring Well MW-11 at a trace-level concentration of 0.0113 mg/L. The detections of dissolved copper and zinc were reported well below the PALs of 1,300 mg/L and 4.69 mg/L, respectively.

5.3 Polychlorinated Biphenyls

Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 were not detected in any groundwater samples collected from site monitoring wells above their respective laboratory reporting limits.

5.4 Polycyclic Aromatic Hydrocarbons

PAHs were not detected in any groundwater samples collected from site monitoring wells above their respective laboratory reporting limits.

5.5 Volatile Organic Compounds

No VOCs constituents were detected in the groundwater samples collected from site monitoring wells above their respective laboratory reporting limits.

5.6 Explosives

Explosives were not detected in the groundwater sample collected from Monitoring Well MW-08 above their respective laboratory reporting limits.

5.7 Quality Control Samples

Quality control samples were collected in accordance with the QAPP for this sampling event and included two field duplicate samples, one matrix spike (MS) sample/matrix spike duplicate (MSD) sample pair, one equipment rinsate blank sample, and four trip blanks. Copies of the laboratory analytical reports are provided in Appendix C.

Two field duplicate samples (MW-08/DUP and MW-15/DUP) were collected during this sampling event from Monitoring Wells MW-08 and MW-15, respectively. Duplicate Sample MW-15/DUP was analyzed for total metals, dissolved metals, PCBs, PAHs, and VOCs. No analytes were detected above laboratory reporting limits in the parent and duplicate sample pair (MW-15 / MW-15/DUP). Duplicate Sample MW-08/DUP was analyzed for explosives only. No analytes were detected above laboratory reporting limits in the parent and duplicate sample pair (MW-08 / MW-08/DUP).

One MS/MSD sample pair was collected during this sampling event from Monitoring Well MW-04. The MS/MSD sample pair were analyzed for total metals, dissolved metals, PCBs, and VOCs. TekLab does not analyze spike samples for PAH.

One equipment rinsate blank sample (Rinse) was collected during this sampling event. Equipment rinsate blank sample Rinse was collected following decontaminating sampling equipment used at Monitoring Well MW-08 and was analyzed for total metals, PCBs, PAHs, and VOCs. No analytes were detected above laboratory reporting limits in the equipment rinsate blank sample (Rinse).

Four trip blank samples were collected during this sampling event. Trip blank samples were included in coolers containing VOC samples. Two trip blanks were included in each delivery of coolers to the laboratory. The trip blank samples were not assigned unique sample identifications; however, the laboratory did assign them unique laboratory identifications (Lab ID) (22011006-12 and 22011006-13 and 22011097-10 and 22011097-11). Trace-levels of acetone were detected in the trip blank sample assigned to Lab ID 22011006-013 with a concentration of 0.015 mg/L, below the PAL of 3,370 mg/L. Other than the trace-level detection of acetone, no other VOCs constituents were detected in the trip blank samples above their respective laboratory reporting limits. The effects of the acetone detection are discussed in the data validation memorandum (Appendix D).

6.0 DATA VALIDATION

Analytical laboratory data were reviewed in accordance with the QAPP. No data were rejected during the course of the data review, and all sample results are usable for reporting the results of this sampling event (Ayuda, 2022). A copy of the data validation memorandum is provided in Appendix D.

7.0 REFERENCES

Ayuda, 2022. *Review of Analytical Data; Quarterly Groundwater Sampling Event – January 2022; Remedial Investigation for Goodfellow Federal Complex; St. Louis, Missouri.* March.

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.

Etegra, 2021. *Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri*, February.

TABLES

Table 1
Monitoring Well Construction Summary
Goodfellow Federal Complex
St. Louis, Missouri

Monitoring Well ID	Date Installed	Location[1]		Ground Surface Elevation (MSL)	Top of Casing Elevation (MSL)	Installed Total Depth (feet BTOC)	Elevation Top of Screen (feet amsl)	Screen Length (feet)	Formation Screened
		Northing (feet)	Easting (feet)						
MW-01	6/1/2021	1039540.011	886756.158	543.61	543.55	45.37	513.18	15	Overburden/ Weathered Bedrock
MW-02	6/2/2021	1039740.048	886772.671	544.91	544.92	40.15	519.77	15	Overburden/ Weathered Bedrock
MW-03	6/4/2021	1039766.083	887286.651	539.97	539.95	35.54	519.41	15	Overburden/ Weathered Bedrock
MW-04	6/7/2021	1039867.834	886169.816	559.24	559.27	38.48	535.79	15	Overburden/ Weathered Bedrock
MW-05	6/7/2021	1040193.907	886714.163	550.50	550.51	33.34	532.17	15	Overburden/ Weathered Bedrock
MW-06	6/7/2021	1040587.209	886232.490	577.68	577.72	31.11	561.61	15	Overburden/ Weathered Bedrock
MW-07	6/11/2021	1040354.896	887604.510	540.31	540.49	30.45	525.04	15	Overburden/ Weathered Bedrock
MW-08	6/10/2021	1040246.301	887212.279	545.27	545.28	30.61	529.67	15	Overburden/ Weathered Bedrock
MW-09	6/2/2021	1040523.215	886983.470	550.71	550.73	35.78	529.95	15	Overburden/ Weathered Bedrock
MW-10	6/8/2021	1040781.406	886693.211	557.58	557.40	32.39	540.01	15	Overburden/ Weathered Bedrock
MW-11	6/8/2021	1041164.567	886430.240	581.03	581.06	33.02	563.04	15	Overburden/ Weathered Bedrock
MW-12	6/10/2021	1040836.731	887502.433	545.58	545.57	45.80	514.77	15	Overburden/ Weathered Bedrock
MW-13	6/11/2021	1041047.777	887235.784	551.17	551.20	21.16	545.04	15	Overburden/ Weathered Bedrock
MW-14	6/9/2021	1041487.386	886782.388	563.77	563.86	21.16	557.70	15	Overburden/ Weathered Bedrock
MW-15	6/11/2021	1041098.447	887886.420	541.18	541.18	38.65	517.53	15	Overburden/ Weathered Bedrock

Table 1
Monitoring Well Construction Summary
Goodfellow Federal Complex
St. Louis, Missouri

Monitoring Well ID	Date Installed	Location[1]		Ground Surface Elevation (MSL)	Top of Casing Elevation (MSL)	Installed Total Depth (feet BTOC)	Elevation Top of Screen (feet amsl)	Screen Length (feet)	Formation Screened
		Northing (feet)	Easting (feet)						
MW-16	6/11/2021	1041247.606	887513.158	548.80	548.76	38.58	525.18	15	Overburden/ Weathered Bedrock
MW-17	6/3/2021	1041488.726	887088.652	557.77	557.84	24.63	548.21	15	Overburden/ Weathered Bedrock
MW-18	6/10/2021	1041681.762	886623.582	564.77	564.89	28.68	551.21	15	Overburden/ Weathered Bedrock
MW-19	6/11/2021	1041423.948	888125.728	524.51	524.51	40.62	498.89	15	Overburden/ Weathered Bedrock

Notes:

[1] North American Datum 1983 - State Plane, Missouri East 2401

BTOC = below top of casing

ID = identification

MSL = mean sea level

Table 2

Monitoring Well Gauging Measurements and Elevations

Goodfellow Federal Complex

St. Louis, Missouri

Monitoring Well ID	Location[1]		Ground Surface Elevation (MSL)	Top of Casing Elevation (MSL)	Installed Total Depth (feet BTOC)	Measured Total Depth (feet BTOC) (7/6/2021)	Measured Water Level (feet BTOC) (7/6/2021)	Groundwater Elevation (MSL) (7/6/2021)	Measured Total Depth (feet BTOC) (10/25/2021)	Measured Water Level (feet BTOC) (10/25/2021)	Groundwater Elevation (MSL) (10/25/2021)	Measured Total Depth (feet BTOC) (1/17/2022)	Measured Water Level (feet BTOC) (1/17/2022)	Groundwater Elevation (MSL) (1/17/2022)
	Northing (feet)	Easting (feet)												
MW-01	1039540.01	886756.16	543.61	543.55	45.37	45.37	27.15	516.40	45.37	27.18	516.37	45.40	28.39	515.22
MW-02	1039740.05	886772.67	544.91	544.92	40.15	40.15	14.12	530.80	40.14	13.14	531.78	40.17	12.89	532.02
MW-03	1039766.08	887286.65	539.97	539.95	35.54	35.54	11.95	528.00	35.55	13.75	526.20	35.55	14.21	525.76
MW-04	1039867.83	886169.82	559.24	559.27	38.48	38.48	16.99	542.28	38.48	16.86	542.41	38.50	16.89	542.35
MW-05	1040193.91	886714.16	550.50	550.51	33.34	33.34	10.78	539.73	33.39	3.20	547.31	33.38	7.07	543.43
MW-06	1040587.21	886232.49	577.68	577.72	31.11	31.11	22.02	555.70	31.36	8.03	569.69	31.35	8.12	569.56
MW-07	1040354.90	887604.51	540.31	540.49	30.45	30.45	16.40	524.09	30.46	16.45	524.04	30.50	16.73	523.58
MW-08	1040246.30	887212.28	545.27	545.28	30.61	30.61	12.51	532.77	30.62	11.19	534.09	30.64	11.32	533.95
MW-09	1040523.22	886983.47	550.71	550.73	35.78	35.78	13.62	537.11	35.79	12.59	538.14	35.80	12.79	537.92
MW-10	1040781.41	886693.21	557.58	557.40	32.39	32.39	9.56	547.84	32.40	8.66	548.74	32.41	9.23	548.35
MW-11	1041164.57	886430.24	581.03	581.06	33.02	33.02	DRY	NM	33.03	DRY	NM	33.04	29.65	551.38
MW-12	1040836.73	887502.43	545.58	545.57	45.80	45.80	15.67	529.90	45.80	12.23	533.34	45.82	12.80	532.78
MW-13	1041047.78	887235.78	551.17	551.20	21.16	21.16	3.20	548.00	21.19	5.99	545.21	21.20	6.00	545.17
MW-14	1041487.39	886782.39	563.77	563.86	21.16	21.16	DRY	NM	21.19	14.74	549.12	21.20	11.99	551.78
MW-15	1041098.45	887886.42	541.18	541.18	38.65	38.65	21.83	519.35	38.80	21.02	520.16	38.69	21.05	520.13
MW-16	1041247.61	887513.16	548.80	548.76	38.58	38.58	17.18	531.58	38.53	17.02	531.74	38.55	17.29	531.51
MW-17	1041488.73	887088.65	557.77	557.84	24.63	24.63	19.12	538.72	24.65	11.07	546.77	24.67	10.90	546.87
MW-18	1041681.76	886623.58	564.77	564.89	28.68	28.68	14.40	550.49	28.71	14.39	550.50	28.10	14.86	549.91
MW-19	1041423.95	888125.73	524.51	524.51	40.62	40.62	19.63	504.88	40.60	18.67	505.84	40.62**	20.10**	504.41**

Notes:

* Measurable amounts of non-aqueous phase liquids were not identified during monitoring well gauging at any of the monitoring wells.

**Monitoring Well MW-19 was gauged on January 18, 2022. It was unaccessable on January 17, 2022 due to the Martin Luther King, Jr. holiday.

[1] North American Datum 1983 - State Plane, Missouri East 2401

BTOC = below top of casing

ID = identification

MSL = mean sea level

NM = not measured

Table 3
Sample Collection Summary
Goodfellow Federal Complex
St. Louis, Missouri

Group Name	Monitoring Well ID	Sample Designator	Formation Screened	Water Level Measurements	Sampling Method		Analytical Parameters						Field Measured Parameters						QA/QC Samples	
					Low-flow	Grab	VOCs (8260B)	PAHs (8270C)	PCBs (8082)	Metals[1] (Totals) (6010B)	Metals[1,2] (Dissolved) (6010B)	Explosives (8330)	Temp	pH	Cond	ORP	DO	Turbidity	Field Duplicate	MS/MSD
GFC	MW-01	10252021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-02	10252021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-03	10252021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-04	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	--	X	X	X	X	X	X		X[4]
	MW-05	10252021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	--	X	X	X	X	X	X		
	MW-06	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-07	10282021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-08	10272021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	X	X	X	X	X	X	X	X[3]	
	MW-09	10272021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-10	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-11[5]	--	Overburden/ Weathered Bedrock	X	--	X	X	X	X	X	X	--	--	--	--	--	--	--		
	MW-12	10272021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-13	10272021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	--	X	X	X	X	X	X		
	MW-14	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-15	10282021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	--	X	X	X	X	X	X	X	
	MW-16	10272021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-17	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-18	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-19	10282021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	--	X	X	X	X	X	X		

Notes:

1. Metals analyzed for antimony, arsenic, copper, lead, and zinc.
2. Groundwater samples for dissolved metals were field filtered through a 0.45-micron filter prior to collection.
3. Duplicate sample from MW-08 was only analyzed for explosives.
4. Laboratory did not analyze MS/MSD for PAHs.
5. Monitoring Well MW-11 was colleced as a grab sample using a bailer due to the limited volume of water available.

Cond = specific conductance
DO = dissolved oxygen
GFC = Goodfellow Federal Complex
ID = identification
MS = matrix spike
MSD = matrix spike duplicate
ORP = oxidation-reduction potential
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyl
VOC = volatile organic compound

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-01	MW-02	MW-03	MW-04
			Sample Designator:	01172022	01172022	01172022	01182022
			Sample Date:	1/17/2022	1/17/2022	1/17/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	-	-	-
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10		0.0250 U	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300		0.0050 U	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15		0.0150 U	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69		0.0100 U	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved							
Antimony	mg/L	6		NA	NA	NA	0.0500 U
Arsenic	mg/L	10		NA	NA	NA	0.0250 U
Copper	mg/L	1,300		NA	NA	NA	0.0050 U
Lead	mg/L	15		NA	NA	NA	0.0150 U
Zinc	mg/L	4.69		NA	NA	NA	0.0100 U
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300		0.00100 U	0.00100 U	0.00100 U	0.00100 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-01	MW-02	MW-03	MW-04
			Sample Designator:	01172022	01172022	01172022	01182022
			Sample Date:	1/17/2022	1/17/2022	1/17/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-01	MW-02	MW-03	MW-04
			Sample Designator:	01172022	01172022	01172022	01182022
			Sample Date:	1/17/2022	1/17/2022	1/17/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-01	MW-02	MW-03	MW-04
			Sample Designator:	01172022	01172022	01172022	01182022
			Sample Date:	1/17/2022	1/17/2022	1/17/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		0.01 U	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		0.002 U	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65		0.002 U	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		0.002 U	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		0.01 U	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		0.005 U	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10		0.004 U	0.004 U	0.004 U	0.004 U
Explosives							
Tetryl	mg/L	0.154		NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209		NA	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818		NA	NA	NA	NA
RDX	mg/L	0.0607		NA	NA	NA	NA
Nitrobenzene	mg/L	0.00181		NA	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964		NA	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604		NA	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649		NA	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464		NA	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153		NA	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763		NA	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247		NA	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241		NA	NA	NA	NA
HMX	mg/L	0.782		NA	NA	NA	NA
PETN	mg/L	5.06		NA	NA	NA	NA
Nitroglycerine	mg/L	0.00107		NA	NA	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-01**	**MW-02**	**MW-03**	**MW-04**
		Sample Designator:	**01172022**	**01172022**	**01172022**	**01182022**
		Sample Date:	**1/17/2022**	**1/17/2022**	**1/17/2022**	**1/18/2022**
		Quarterly Event:	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**				

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-06	MW-07
		Sample Designator:	01172022	01182022	01202022
		Sample Date:	1/17/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	0.0500 U	NA	NA
Arsenic	mg/L	10	0.0250 U	NA	NA
Copper	mg/L	1,300	0.0050 U	NA	NA
Lead	mg/L	15	0.0150 U	NA	NA
Zinc	mg/L	4.69	0.0100 U	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-06	MW-07
		Sample Designator:	01172022	01182022	01202022
		Sample Date:	1/17/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-06	MW-07
		Sample Designator:	01172022	01182022	01202022
		Sample Date:	1/17/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-06	MW-07
		Sample Designator:	01172022	01182022	01202022
		Sample Date:	1/17/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-05**	**MW-06**	**MW-07**
		Sample Designator:	**01172022**	**01182022**	**01202022**
		Sample Date:	**1/17/2022**	**1/18/2022**	**1/20/2022**
		Quarterly Event:	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	01202022	01202022	01202022	01192022
			Sample Date:	1/20/2022	1/20/2022	1/20/2022	1/19/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	NA	0.0500 U	0.0500 U
Arsenic	mg/L	10		0.0250 U	NA	0.0250 U	0.0250 U
Copper	mg/L	1,300		0.0050 U	NA	0.0050 U	0.0050 U
Lead	mg/L	15		0.0150 U	NA	0.0150 U	0.0150 U
Zinc	mg/L	4.69		0.0100 U	NA	0.0100 U	0.0100 U
Metals, Dissolved							
Antimony	mg/L	6		NA	NA	NA	NA
Arsenic	mg/L	10		NA	NA	NA	NA
Copper	mg/L	1,300		NA	NA	NA	NA
Lead	mg/L	15		NA	NA	NA	NA
Zinc	mg/L	4.69		NA	NA	NA	NA
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125		0.00100 U	NA	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002		0.00100 U	NA	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00100 U	NA	0.00100 U	0.00400 U
Acenaphthylene	mg/L	2,060		0.00100 U	NA	0.00100 U	0.00400 U
Anthracene	mg/L	2,290		0.00100 U	NA	0.00100 U	0.00400 U
Benzo(a)anthracene	mg/L	0.133		0.00100 U	NA	0.00100 U	0.00400 U
Benzo(a)pyrene	mg/L	0.2		0.00100 U	NA	0.00100 U	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	NA	0.00100 U	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	NA	0.00100 U	0.00400 U
Benzo(k)fluoranthene	mg/L	937		0.00100 U	NA	0.00100 U	0.00400 U
Chrysene	mg/L	81.7		0.00100 U	NA	0.00100 U	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	NA	0.00100 U	0.00400 U
Fluoranthene	mg/L	14,200		0.00100 U	NA	0.00100 U	0.00400 U
Fluorene	mg/L	3,010		0.00100 U	NA	0.00100 U	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	NA	0.00100 U	0.00400 U
Naphthalene	mg/L	0.1		0.00100 U	NA	0.00100 U	0.00400 U
Phenanthrene	mg/L	1,190		0.00100 U	NA	0.00100 U	0.00400 U
Pyrene	mg/L	17,300		0.00100 U	NA	0.00100 U	0.00400 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	01202022	01202022	01202022	01192022
			Sample Date:	1/20/2022	1/20/2022	1/20/2022	1/19/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	NA	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	NA	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	NA	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	NA	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	NA	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	NA	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	NA	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	NA	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	NA	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	NA	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	NA	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	NA	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	NA	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	NA	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	NA	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	NA	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	NA	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	NA	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	NA	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	NA	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	NA	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	NA	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	NA	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	NA	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	NA	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	NA	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	NA	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	NA	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	NA	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	NA	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	NA	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	NA	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	NA	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	NA	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	NA	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	NA	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	NA	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	NA	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	NA	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	NA	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	NA	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	NA	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	NA	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP	MW-09	MW-10
		Sample Designator:	01202022	01202022	01202022	01192022
		Sample Date:	1/20/2022	1/20/2022	1/20/2022	1/19/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**				
Bromodichloromethane	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	NA	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	NA	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	NA	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	NA	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	NA	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	NA	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	NA	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	NA	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	NA	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	NA	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	NA	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	NA	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	NA	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	NA	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	NA	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	NA	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	NA	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	NA	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	NA	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	NA	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	NA	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	NA	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	NA	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	NA	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	NA	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	NA	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	NA	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	NA	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	NA	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	NA	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	01202022	01202022	01202022	01192022
			Sample Date:	1/20/2022	1/20/2022	1/20/2022	1/19/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		0.01 U	NA	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		0.002 U	NA	0.002 U	0.002 U
Styrene	mg/L	1.65		0.002 U	NA	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		0.002 U	NA	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		0.01 U	NA	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		0.002 U	NA	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		0.0005 U	NA	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		0.005 U	NA	0.005 U	0.005 U
Toluene	mg/L	3.16		0.002 U	NA	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		0.002 U	NA	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		0.002 U	NA	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	NA	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		0.002 U	NA	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		0.005 U	NA	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		0.005 U	NA	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		0.002 U	NA	0.002 U	0.002 U
Xylenes, Total	mg/L	10		0.004 U	NA	0.004 U	0.004 U
Explosives							
Tetryl	mg/L	0.154		0.000500 U	0.000500 U	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209		0.00200 U	0.00200 U	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818		0.00200 U	0.00200 U	NA	NA
RDX	mg/L	0.0607		0.00200 U	0.00200 U	NA	NA
Nitrobenzene	mg/L	0.00181		0.000500 U	0.000500 U	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964		0.000500 U	0.000500 U	NA	NA
2-Nitrotoluene	mg/L	0.000604		0.000500 U	0.000500 U	NA	NA
3-Nitrotoluene	mg/L	0.0649		0.000500 U	0.000500 U	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464		0.000500 U	0.000500 U	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153		0.005000 U	0.000500 U	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763		0.000500 U	0.000500 U	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247		0.000500 U	0.000500 U	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241		0.000500 U	0.000500 U	NA	NA
HMX	mg/L	0.782		0.00200 U	0.00200 U	NA	NA
PETN	mg/L	5.06		0.000500 U	0.000500 U	NA	NA
Nitroglycerine	mg/L	0.00107		0.000500 U	0.000500 U	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	01202022	01202022	01202022	01192022
			Sample Date:	1/20/2022	1/20/2022	1/20/2022	1/19/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-11	MW-12	MW-13	MW-14
			Sample Designator:	01182022	01192022	01192022	01182022
			Sample Date:	1/18/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:		-	-	-
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10		0.0250 U	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300		0.0050 U	0.0050 U	**0.0715**	0.0050 U
Lead	mg/L	15		0.0150 U	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69		**0.0229**	**0.0167**	**0.0227**	0.0100 U
Metals, Dissolved							
Antimony	mg/L	6		0.0500 U	NA	0.0500 U	NA
Arsenic	mg/L	10		0.0250 U	NA	0.0250 U	NA
Copper	mg/L	1,300		0.0050 U	NA	**0.0475**	NA
Lead	mg/L	15		0.0150 U	NA	0.0150 U	NA
Zinc	mg/L	4.69		**0.0113**	NA	0.0100 U	NA
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Acenaphthylene	mg/L	2,060		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Anthracene	mg/L	2,290		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Chrysene	mg/L	81.7		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Fluoranthene	mg/L	14,200		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Fluorene	mg/L	3,010		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Naphthalene	mg/L	0.1		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Phenanthrene	mg/L	1,190		0.00400 U	0.00400 U	0.00400 U	0.00100 U
Pyrene	mg/L	17,300		0.00400 U	0.00400 U	0.00400 U	0.00100 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-11	MW-12	MW-13	MW-14
			Sample Designator:	01182022	01192022	01192022	01182022
			Sample Date:	1/18/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:		-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-11	MW-12	MW-13	MW-14
			Sample Designator:	01182022	01192022	01192022	01182022
			Sample Date:	1/18/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:		-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-11	MW-12	MW-13	MW-14
			Sample Designator:	01182022	01192022	01192022	01182022
			Sample Date:	1/18/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:		-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		0.01 U	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		0.002 U	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65		0.002 U	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		0.002 U	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		0.01 U	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		0.005 U	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10		0.004 U	0.004 U	0.004 U	0.004 U
Explosives							
Tetryl	mg/L	0.154		NS	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209		NS	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818		NS	NA	NA	NA
RDX	mg/L	0.0607		NS	NA	NA	NA
Nitrobenzene	mg/L	0.00181		NS	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964		NS	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604		NS	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649		NS	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464		NS	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153		NS	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763		NS	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247		NS	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241		NS	NA	NA	NA
HMX	mg/L	0.782		NS	NA	NA	NA
PETN	mg/L	5.06		NS	NA	NA	NA
Nitroglycerine	mg/L	0.00107		NS	NA	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-11**	**MW-12**	**MW-13**	**MW-14**
		Sample Designator:	**01182022**	**01192022**	**01192022**	**01182022**
		Sample Date:	**1/18/2022**	**1/19/2022**	**1/19/2022**	**1/18/2022**
		Quarterly Event:	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**
		Notes:		**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**				

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15/DUP	MW-16	MW-17
			Sample Designator:	01192022	01192022	01192022	01182022
			Sample Date:	1/19/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10		0.0250 U	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300		0.0050 U	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15		0.0150 U	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69		0.0100 U	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved							
Antimony	mg/L	6		0.0500 U	0.0500 U	NA	NA
Arsenic	mg/L	10		0.0250 U	0.0250 U	NA	NA
Copper	mg/L	1,300		0.0050 U	0.0050 U	NA	NA
Lead	mg/L	15		0.0150 U	0.0150 U	NA	NA
Zinc	mg/L	4.69		0.0100 U	0.0100 U	NA	NA
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190		0.00100 U	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300		0.00100 U	0.00100 U	0.00100 U	0.00100 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15/DUP	MW-16	MW-17
			Sample Designator:	01192022	01192022	01192022	01182022
			Sample Date:	1/19/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15/DUP	MW-16	MW-17
			Sample Designator:	01192022	01192022	01192022	01182022
			Sample Date:	1/19/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15/DUP	MW-16	MW-17
			Sample Designator:	01192022	01192022	01192022	01182022
			Sample Date:	1/19/2022	1/19/2022	1/19/2022	1/18/2022
			Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		0.01 U	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		0.002 U	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65		0.002 U	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		0.002 U	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		0.01 U	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		0.005 U	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10		0.004 U	0.004 U	0.004 U	0.004 U
Explosives							
Tetryl	mg/L	0.154		NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209		NA	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818		NA	NA	NA	NA
RDX	mg/L	0.0607		NA	NA	NA	NA
Nitrobenzene	mg/L	0.00181		NA	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964		NA	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604		NA	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649		NA	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464		NA	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153		NA	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763		NA	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247		NA	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241		NA	NA	NA	NA
HMX	mg/L	0.782		NA	NA	NA	NA
PETN	mg/L	5.06		NA	NA	NA	NA
Nitroglycerine	mg/L	0.00107		NA	NA	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-15**	**MW-15/DUP**	**MW-16**	**MW-17**
		Sample Designator:	**01192022**	**01192022**	**01192022**	**01182022**
		Sample Date:	**1/19/2022**	**1/19/2022**	**1/19/2022**	**1/18/2022**
		Quarterly Event:	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**
		Notes:	**-**	**Duplicate**	**-**	**-**
Parameter	**Units**	**PAL[1]**				

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-19	Rinse[2]
		Sample Designator:	01182022	01182022	01202022
		Sample Date:	1/18/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	Rinsate
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	0.0500 U	NA
Arsenic	mg/L	10	NA	0.0250 U	NA
Copper	mg/L	1,300	NA	0.0050 U	NA
Lead	mg/L	15	NA	0.0150 U	NA
Zinc	mg/L	4.69	NA	0.0100 U	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-19	Rinse[2]
		Sample Designator:	01182022	01182022	01202022
		Sample Date:	1/18/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	Rinsate
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-19	Rinse[2]
		Sample Designator:	01182022	01182022	01202022
		Sample Date:	1/18/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	Rinsate
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-19	Rinse[2]
		Sample Designator:	01182022	01182022	01202022
		Sample Date:	1/18/2022	1/18/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter	3rd Quarter
		Notes:	-	-	Rinsate
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 4
Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-18**	**MW-19**	**Rinse[2]**
		Sample Designator:	**01182022**	**01182022**	**01202022**
		Sample Date:	**1/18/2022**	**1/18/2022**	**1/20/2022**
		Quarterly Event:	**3rd Quarter**	**3rd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**Rinsate**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-08.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-01	MW-01	MW-01
		Sample Designator:	07062021	10252021	01172022
		Sample Date:	7/6/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	0.0500 U	NA
Arsenic	mg/L	10	NA	0.0250 U	NA
Copper	mg/L	1,300	NA	0.0050 U	NA
Lead	mg/L	15	NA	0.0150 U	NA
Zinc	mg/L	4.69	NA	0.0100 U	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-01	MW-01	MW-01
		Sample Designator:	07062021	10252021	01172022
		Sample Date:	7/6/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.0182 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-01	MW-01	MW-01
		Sample Designator:	07062021	10252021	01172022
		Sample Date:	7/6/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-01	MW-01	MW-01
		Sample Designator:	07062021	10252021	01172022
		Sample Date:	7/6/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-01**	**MW-01**	**MW-01**
		Sample Designator:	**07062021**	**10252021**	**01172022**
		Sample Date:	**7/6/2021**	**10/25/2021**	**1/17/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-02	MW-02/DUP	MW-02	MW-02
			Sample Designator:	07072021	07072021	10252021	01172022
			Sample Date:	7/7/2021	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10		0.0250 U	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300		0.0050 U	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15		0.0150 U	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69		0.0100 U	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved							
Antimony	mg/L	6		0.0500 U	0.0500 U	NA	NA
Arsenic	mg/L	10		0.0250 U	0.0250 U	NA	NA
Copper	mg/L	1,300		0.0050 U	0.0050 U	NA	NA
Lead	mg/L	15		0.0150 U	0.0150 U	NA	NA
Zinc	mg/L	4.69		0.0100 U	0.0100 U	NA	NA
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002		0.00105 U	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300		0.00100 U	0.00400 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]							
Gasoline Range Organics	mg/L	18.1		0.5 U	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3		0.5 U	2 U	NA	NA
Oil Range Organics	mg/L	31.8		0.7 U	2.8 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-02	MW-02/DUP	MW-02	MW-02
			Sample Designator:	07072021	07072021	10252021	01172022
			Sample Date:	7/7/2021	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.0135 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-02	MW-02/DUP	MW-02	MW-02
			Sample Designator:	07072021	07072021	10252021	01172022
			Sample Date:	7/7/2021	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.001 U	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-02	MW-02/DUP	MW-02	MW-02
			Sample Designator:	07072021	07072021	10252021	01172022
			Sample Date:	7/7/2021	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		0.01 U	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		0.002 U	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65		0.002 U	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		0.002 U	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		0.01 U	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		0.002 U	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		0.0005 U	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		0.005 U	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		0.005 U	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10		0.004 U	0.004 U	0.004 U	0.004 U
Explosives							
Tetryl	mg/L	0.154		NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209		NA	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818		NA	NA	NA	NA
RDX	mg/L	0.0607		NA	NA	NA	NA
Nitrobenzene	mg/L	0.00181		NA	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964		NA	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604		NA	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649		NA	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464		NA	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153		NA	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763		NA	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247		NA	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241		NA	NA	NA	NA
HMX	mg/L	0.782		NA	NA	NA	NA
PETN	mg/L	5.06		NA	NA	NA	NA
Nitroglycerine	mg/L	0.00107		NA	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-02**	**MW-02/DUP**	**MW-02**	**MW-02**
		Sample Designator:	**07072021**	**07072021**	**10252021**	**01172022**
		Sample Date:	**7/7/2021**	**7/7/2021**	**10/25/2021**	**1/17/2022**
		Quarterly Event:	**1st Quarter**	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**Duplicate**	**-**	**-**
Parameter	**Units**	**PAL[1]**				

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-03	MW-03	MW-03
		Sample Designator:	07072021	10252021	01172022
		Sample Date:	7/7/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-03	MW-03	MW-03
			Sample Designator:	07072021	10252021	01172022
			Sample Date:	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-03	MW-03	MW-03
			Sample Designator:	07072021	10252021	01172022
			Sample Date:	7/7/2021	10/25/2021	1/17/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-03	MW-03	MW-03
		Sample Designator:	07072021	10252021	01172022
		Sample Date:	7/7/2021	10/25/2021	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-03**	**MW-03**	**MW-03**
		Sample Designator:	**07072021**	**10252021**	**01172022**
		Sample Date:	**7/7/2021**	**10/25/2021**	**1/17/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-04	MW-04	MW-04
		Sample Designator:	07072021	10262021	01182022
		Sample Date:	7/7/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	0.0500 U	0.0500 U
Arsenic	mg/L	10	NA	0.0250 U	0.0250 U
Copper	mg/L	1,300	NA	0.0050 U	0.0050 U
Lead	mg/L	15	NA	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NA	0.0100 U	0.0100 U
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-04	MW-04	MW-04
			Sample Designator:	07072021	10262021	01182022
			Sample Date:	7/7/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.0180 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-04	MW-04	MW-04
			Sample Designator:	07072021	10262021	01182022
			Sample Date:	7/7/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-04	MW-04	MW-04
		Sample Designator:	07072021	10262021	01182022
		Sample Date:	7/7/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-04**	**MW-04**	**MW-04**
		Sample Designator:	**07072021**	**10262021**	**01182022**
		Sample Date:	**7/7/2021**	**10/26/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-05	MW-05
		Sample Designator:	07072021	10252021	01172022
		Sample Date:	7/7/2021	10/25/201	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	0.0500 U	NA	0.0500 U
Arsenic	mg/L	10	0.0250 U	NA	0.0250 U
Copper	mg/L	1,300	0.0050 U	NA	0.0050 U
Lead	mg/L	15	0.0150 U	NA	0.0150 U
Zinc	mg/L	4.69	0.0100 U	NA	0.0100 U
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-05	MW-05	MW-05
			Sample Designator:	07072021	10252021	01172022
			Sample Date:	7/7/2021	10/25/201	1/17/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-05	MW-05
		Sample Designator:	07072021	10252021	01172022
		Sample Date:	7/7/2021	10/25/201	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-05	MW-05	MW-05
		Sample Designator:	07072021	10252021	01172022
		Sample Date:	7/7/2021	10/25/201	1/17/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-05**	**MW-05**	**MW-05**
		Sample Designator:	**07072021**	**10252021**	**01172022**
		Sample Date:	**7/7/2021**	**10/25/201**	**1/17/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-06	MW-06	MW-06
		Sample Designator:	07072021	10262021	01182022
		Sample Date:	7/7/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-06	MW-06	MW-06
			Sample Designator:	07072021	10262021	01182022
			Sample Date:	7/7/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-06	MW-06	MW-06
			Sample Designator:	07072021	10262021	01182022
			Sample Date:	7/7/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-06	MW-06	MW-06
		Sample Designator:	07072021	10262021	01182022
		Sample Date:	7/7/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-06**	**MW-06**	**MW-06**
		Sample Designator:	**07072021**	**10262021**	**01182022**
		Sample Date:	**7/7/2021**	**10/26/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-07	MW-07	MW-07
		Sample Designator:	07082021	10282021	01202022
		Sample Date:	7/8/2021	10/28/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-07	MW-07	MW-07
			Sample Designator:	07082021	10282021	01202022
			Sample Date:	7/8/2021	10/28/2021	1/20/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.0144 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-07	MW-07	MW-07
		Sample Designator:	07082021	10282021	01202022
		Sample Date:	7/8/2021	10/28/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-07	MW-07	MW-07
		Sample Designator:	07082021	10282021	01202022
		Sample Date:	7/8/2021	10/28/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-07**	**MW-07**	**MW-07**
		Sample Designator:	**07082021**	**10282021**	**01202022**
		Sample Date:	**7/8/2021**	**10/28/2021**	**1/20/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-08	MW-08/DUP
			Sample Designator:	07092021	07092021	10272021	10272021
			Sample Date:	7/9/2021	7/9/2021	10/27/2021	10/27/2021
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	2nd Quarter
			Notes:	-	Duplicate	-	Duplicate
Parameter	**Units**	**PAL[1]**					
Metals, Total							
Antimony	mg/L	6		0.0500 U	NA	0.0500 U	NA
Arsenic	mg/L	10		0.0250 U	NA	0.0250 U	NA
Copper	mg/L	1,300		**0.0540**	NA	0.0050 U	NA
Lead	mg/L	15		0.0150 U	NA	0.0150 U	NA
Zinc	mg/L	4.69		**0.0413**	NA	0.0100 U	NA
Metals, Dissolved							
Antimony	mg/L	6		NA	NA	NA	NA
Arsenic	mg/L	10		NA	NA	NA	NA
Copper	mg/L	1,300		NA	NA	NA	NA
Lead	mg/L	15		NA	NA	NA	NA
Zinc	mg/L	4.69		NA	NA	NA	NA
Polychlorinated Biphenyls							
Aroclor 1016	mg/L	0.0172		0.00100 U	NA	0.00100 U	NA
Aroclor 1221	mg/L	0.002		0.00100 U	NA	0.00100 U	NA
Aroclor 1232	mg/L	0.002		0.00100 U	NA	0.00100 U	NA
Aroclor 1242	mg/L	0.00101		0.00100 U	NA	0.00100 U	NA
Aroclor 1248	mg/L	0.002		0.00100 U	NA	0.00100 U	NA
Aroclor 1254	mg/L	0.00125		0.00100 U	NA	0.00100 U	NA
Aroclor 1260	mg/L	0.002		0.00100 U	NA	0.00100 U	NA
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	1,610		0.00100 U	NA	0.00100 U	NA
Acenaphthylene	mg/L	2,060		0.00100 U	NA	0.00100 U	NA
Anthracene	mg/L	2,290		0.00100 U	NA	0.00100 U	NA
Benzo(a)anthracene	mg/L	0.133		0.00100 U	NA	0.00100 U	NA
Benzo(a)pyrene	mg/L	0.2		0.00100 U	NA	0.00100 U	NA
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	NA	0.00100 U	NA
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	NA	0.00100 U	NA
Benzo(k)fluoranthene	mg/L	937		0.00100 U	NA	0.00100 U	NA
Chrysene	mg/L	81.7		0.00100 U	NA	0.00100 U	NA
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	NA	0.00100 U	NA
Fluoranthene	mg/L	14,200		0.00100 U	NA	0.00100 U	NA
Fluorene	mg/L	3,010		0.00100 U	NA	0.00100 U	NA
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	NA	0.00100 U	NA
Naphthalene	mg/L	0.1		0.00100 U	NA	0.00100 U	NA
Phenanthrene	mg/L	1,190		0.00100 U	NA	0.00100 U	NA
Pyrene	mg/L	17,300		0.00100 U	NA	0.00100 U	NA
Total Petroleum Hydrocarbons[2]							
Gasoline Range Organics	mg/L	18.1		NA	NA	NA	NA
Diesel Range Organics	mg/L	34.3		0.5 U	NA	NA	NA
Oil Range Organics	mg/L	31.8		0.7 U	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-08	MW-08/DUP
			Sample Designator:	07092021	07092021	10272021	10272021
			Sample Date:	7/9/2021	7/9/2021	10/27/2021	10/27/2021
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	2nd Quarter
			Notes:	-	Duplicate	-	Duplicate
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	NA	0.002 U	NA
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	NA	0.002 U	NA
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	NA	0.002 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	NA	0.005 U	NA
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	NA	0.0005 U	NA
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	NA	0.03 U	NA
1,1-Dichloroethane	mg/L	0.0114		0.002 U	NA	0.002 U	NA
1,1-Dichloroethene	mg/L	0.0276		0.002 U	NA	0.002 U	NA
1,1-Dichloropropene	mg/L	NE		0.002 U	NA	0.002 U	NA
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	NA	0.002 U	NA
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	NA	0.002 U	NA
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	NA	0.002 U	NA
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	NA	0.002 U	NA
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	NA	0.002 U	NA
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	NA	0.002 U	NA
1,2-Dibromoethane	mg/L	0.004		0.002 U	NA	0.002 U	NA
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	NA	0.002 U	NA
1,2-Dichloroethane	mg/L	0.00355		0.002 U	NA	0.002 U	NA
1,2-Dichloroethene, Total	mg/L	70		0.004 U	NA	0.004 U	NA
1,2-Dichloropropane	mg/L	0.00577		0.002 U	NA	0.002 U	NA
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	NA	0.002 U	NA
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	NA	0.002 U	NA
1,3-Dichloropropane	mg/L	NE		0.002 U	NA	0.002 U	NA
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	NA	0.004 U	NA
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	NA	0.004 U	NA
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	NA	0.002 U	NA
1-Chlorobutane	mg/L	NE		0.005 U	NA	0.005 U	NA
2,2-Dichloropropane	mg/L	NE		0.002 U	NA	0.002 U	NA
2-Butanone	mg/L	354		0.01 U	NA	0.01 U	NA
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	NA	0.005 U	NA
2-Chlorotoluene	mg/L	17.1		0.002 U	NA	0.002 U	NA
2-Hexanone	mg/L	1.46		0.01 U	NA	0.01 U	NA
2-Nitropropane	mg/L	0.02		0.01 U	NA	0.01 U	NA
4-Chlorotoluene	mg/L	0.0666		0.002 U	NA	0.002 U	NA
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	NA	0.01 U	NA
Acetone	mg/L	3370		0.01 U	NA	0.0103 U	NA
Acetonitrile	mg/L	6.82		0.01 U	NA	0.01 U	NA
Acrolein	mg/L	0.04		0.02 U	NA	0.02 U	NA
Acrylonitrile	mg/L	0.0117		0.005 U	NA	0.005 U	NA
Allyl chloride	mg/L	0.01		0.005 U	NA	0.005 U	NA
Benzene	mg/L	0.00246		0.0005 U	NA	0.0005 U	NA
Bromobenzene	mg/L	0.125		0.002 U	NA	0.002 U	NA
Bromochloromethane	mg/L	0.106		0.002 U	NA	0.002 U	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP	MW-08	MW-08/DUP
		Sample Designator:	07092021	07092021	10272021	10272021
		Sample Date:	7/9/2021	7/9/2021	10/27/2021	10/27/2021
		Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	2nd Quarter
		Notes:	-	Duplicate	-	Duplicate
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004	0.002 U	NA	0.002 U	NA
Bromoform	mg/L	0.214	0.002 U	NA	0.002 U	NA
Bromomethane	mg/L	0.01	0.005 U	NA	0.005 U	NA
Carbon disulfide	mg/L	0.177	0.002 U	NA	0.002 U	NA
Carbon tetrachloride	mg/L	0.004	0.002 U	NA	0.002 U	NA
Chlorobenzene	mg/L	0.0702	0.002 U	NA	0.002 U	NA
Chloroethane	mg/L	3.13	0.002 U	NA	0.002 U	NA
Chloroform	mg/L	0.004	0.002 U	NA	0.002 U	NA
Chloromethane	mg/L	0.0331	0.005 U	NA	0.005 U	NA
Chloroprene	mg/L	0.01	0.005 U	NA	0.005 U	NA
cis-1,2-Dichloroethene	mg/L	70	0.002 U	NA	0.002 U	NA
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA	0.002 U	NA
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	NA	0.002 U	NA
Cyclohexanone	mg/L	404	0.02 U	NA	0.02 U	NA
Dibromochloromethane	mg/L	80	0.002 U	NA	0.002 U	NA
Dibromomethane	mg/L	0.0199	0.002 U	NA	0.002 U	NA
Dichlorodifluoromethane	mg/L	0.004	0.002 U	NA	0.002 U	NA
Diisopropyl ether	mg/L	0.0697	0.002 U	NA	0.002 U	NA
Ethyl acetate	mg/L	2.13	0.01 U	NA	0.01 U	NA
Ethyl ether	mg/L	NE	0.005 U	NA	0.005 U	NA
Ethyl methacrylate	mg/L	2.76	0.005 U	NA	0.005 U	NA
Ethylbenzene	mg/L	0.00609	0.002 U	NA	0.002 U	NA
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	NA	0.002 U	NA
Hexachlorobutadiene	mg/L	0.01	0.005 U	NA	0.005 U	NA
Hexachloroethane	mg/L	0.01	0.005 U	NA	0.005 U	NA
Iodomethane	mg/L	NE	0.005 U	NA	0.005 U	NA
Isopropylbenzene	mg/L	0.1790	0.002 U	NA	0.002 U	NA
m,p-Xylenes	mg/L	NE	0.002 U	NA	0.002 U	NA
Methacrylonitrile	mg/L	0.495	0.005 U	NA	0.005 U	NA
Methyl Methacrylate	mg/L	10.1	0.005 U	NA	0.005 U	NA
Methyl tert-butyl ether	mg/L	0.664	0.002 U	NA	0.002 U	NA
Methylacrylate	mg/L	0.417	0.005 U	NA	0.005 U	NA
Methylene chloride	mg/L	0.685	0.002 U	NA	0.002 U	NA
Naphthalene	mg/L	0.01	0.005 U	NA	0.005 U	NA
n-Butyl acetate	mg/L	NE	0.002 U	NA	0.002 U	NA
n-Butylbenzene	mg/L	8.76	0.002 U	NA	0.002 U	NA
n-Heptane	mg/L	0.01	0.005 U	NA	0.005 U	NA
n-Hexane	mg/L	0.01	0.005 U	NA	0.005 U	NA
Nitrobenzene	mg/L	0.151	0.05 U	NA	0.05 U	NA
n-Propylbenzene	mg/L	0.452	0.002 U	NA	0.002 U	NA
o-Xylene	mg/L	0.0873	0.002 U	NA	0.002 U	NA
Pentachloroethane	mg/L	NE	0.005 U	NA	0.005 U	NA
p-Isopropyltoluene	mg/L	98.5	0.002 U	NA	0.002 U	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP	MW-08	MW-08/DUP
		Sample Designator:	07092021	07092021	10272021	10272021
		Sample Date:	7/9/2021	7/9/2021	10/27/2021	10/27/2021
		Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	2nd Quarter
		Notes:	-	Duplicate	-	Duplicate
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Propionitrile	mg/L	NE	0.01 U	NA	0.01 U	NA
sec-Butylbenzene	mg/L	6.23	0.002 U	NA	0.002 U	NA
Styrene	mg/L	1.65	0.002 U	NA	0.002 U	NA
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	NA	0.002 U	NA
tert-Butyl alcohol	mg/L	0.286	0.01 U	NA	0.01 U	NA
tert-Butylbenzene	mg/L	9.43	0.002 U	NA	0.002 U	NA
Tetrachloroethene	mg/L	0.00972	0.0005 U	NA	0.0005 U	NA
Tetrahydrofuran	mg/L	109	0.005 U	NA	0.005 U	NA
Toluene	mg/L	3.16	0.002 U	NA	0.002 U	NA
trans-1,2-Dichloroethene	mg/L	100	0.002 U	NA	0.002 U	NA
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA	0.002 U	NA
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	NA	0.002 U	NA
Trichloroethene	mg/L	0.004	0.002 U	NA	0.002 U	NA
Trichlorofluoromethane	mg/L	5.36	0.005 U	NA	0.005 U	NA
Vinyl acetate	mg/L	1.61	0.005 U	NA	0.005 U	NA
Vinyl chloride	mg/L	0.004	0.002 U	NA	0.002 U	NA
Xylenes, Total	mg/L	10	0.004 U	NA	0.004 U	NA
Explosives						
Tetryl	mg/L	0.154	0.000500 U	0.000500 U	0.0005 U	0.0005 U
2,4-Dinitrotoluene	mg/L	0.00209	0.00200 U	0.00200 U	0.002 U	0.002 U
4-Nitrotoluene (4-NT)	mg/L	0.00818	0.00200 U	0.00200 U	0.002 U	0.002 U
RDX	mg/L	0.0607	0.00200 U	0.00200 U	0.002 U	0.002 U
Nitrobenzene	mg/L	0.00181	0.000500 U	0.000500 U	0.0005 U	0.0005 U
2,6-Dinitrotoluene	mg/L	0.000964	0.000500 U	0.000500 U	0.0005 U	0.0005 U
2-Nitrotoluene	mg/L	0.000604	0.000500 U	0.000500 U	0.0005 U	0.0005 U
3-Nitrotoluene	mg/L	0.0649	0.000500 U	0.000500 U	0.0005 U	0.0005 U
1,3,5-Trinitrobenzene	mg/L	0.464	0.000500 U	0.000500 U	0.0005 U	0.0005 U
1,3-Dinitrobenzene	mg/L	0.00153	0.000500 U	0.000500 U	0.005 U	0.0005 U
2,4,6-Trinitrotoluene	mg/L	0.00763	0.000500 U	0.000500 U	0.0005 U	0.0005 U
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	0.000500 U	0.000500 U	0.0005 U	0.0005 U
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	0.000500 U	0.000500 U	0.0005 U	0.0005 U
HMX	mg/L	0.782	0.00200 U	0.00200 U	0.002 U	0.002 U
PETN	mg/L	5.06	0.000500 U	0.000500 U	0.0005 U	0.0005 U
Nitroglycerine	mg/L	0.00107	0.000500 U	0.000500 U	0.0005 U	0.0005 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-08	MW-08/DUP	MW-08	MW-08/DUP
			Sample Designator:	07092021	07092021	10272021	10272021
			Sample Date:	7/9/2021	7/9/2021	10/27/2021	10/27/2021
			Quarterly Event:	1st Quarter	1st Quarter	2nd Quarter	2nd Quarter
			Notes:	-	Duplicate	-	Duplicate
Parameter	**Units**	**PAL[1]**					

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP
		Sample Designator:	01202022	01202022
		Sample Date:	1/20/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Metals, Total				
Antimony	mg/L	6	0.0500 U	NA
Arsenic	mg/L	10	0.0250 U	NA
Copper	mg/L	1,300	0.0050 U	NA
Lead	mg/L	15	0.0150 U	NA
Zinc	mg/L	4.69	0.0100 U	NA
Metals, Dissolved				
Antimony	mg/L	6	NA	NA
Arsenic	mg/L	10	NA	NA
Copper	mg/L	1,300	NA	NA
Lead	mg/L	15	NA	NA
Zinc	mg/L	4.69	NA	NA
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	0.0172	0.00100 U	NA
Aroclor 1221	mg/L	0.002	0.00100 U	NA
Aroclor 1232	mg/L	0.002	0.00100 U	NA
Aroclor 1242	mg/L	0.00101	0.00100 U	NA
Aroclor 1248	mg/L	0.002	0.00100 U	NA
Aroclor 1254	mg/L	0.00125	0.00100 U	NA
Aroclor 1260	mg/L	0.002	0.00100 U	NA
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	mg/L	1,610	0.00100 U	NA
Acenaphthylene	mg/L	2,060	0.00100 U	NA
Anthracene	mg/L	2,290	0.00100 U	NA
Benzo(a)anthracene	mg/L	0.133	0.00100 U	NA
Benzo(a)pyrene	mg/L	0.2	0.00100 U	NA
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	NA
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	NA
Benzo(k)fluoranthene	mg/L	937	0.00100 U	NA
Chrysene	mg/L	81.7	0.00100 U	NA
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	NA
Fluoranthene	mg/L	14,200	0.00100 U	NA
Fluorene	mg/L	3,010	0.00100 U	NA
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	NA
Naphthalene	mg/L	0.1	0.00100 U	NA
Phenanthrene	mg/L	1,190	0.00100 U	NA
Pyrene	mg/L	17,300	0.00100 U	NA
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	NA	NA
Diesel Range Organics	mg/L	34.3	NA	NA
Oil Range Organics	mg/L	31.8	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP
		Sample Designator:	01202022	01202022
		Sample Date:	1/20/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	NA
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	NA
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	NA
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	NA
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	NA
1,1-Dichloroethane	mg/L	0.0114	0.002 U	NA
1,1-Dichloroethene	mg/L	0.0276	0.002 U	NA
1,1-Dichloropropene	mg/L	NE	0.002 U	NA
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	NA
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	NA
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	NA
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	NA
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	NA
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	NA
1,2-Dibromoethane	mg/L	0.004	0.002 U	NA
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	NA
1,2-Dichloroethane	mg/L	0.00355	0.002 U	NA
1,2-Dichloroethene, Total	mg/L	70	0.004 U	NA
1,2-Dichloropropane	mg/L	0.00577	0.002 U	NA
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	NA
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	NA
1,3-Dichloropropane	mg/L	NE	0.002 U	NA
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	NA
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	NA
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	NA
1-Chlorobutane	mg/L	NE	0.005 U	NA
2,2-Dichloropropane	mg/L	NE	0.002 U	NA
2-Butanone	mg/L	354	0.01 U	NA
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	NA
2-Chlorotoluene	mg/L	17.1	0.002 U	NA
2-Hexanone	mg/L	1.46	0.01 U	NA
2-Nitropropane	mg/L	0.02	0.01 U	NA
4-Chlorotoluene	mg/L	0.0666	0.002 U	NA
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	NA
Acetone	mg/L	3370	0.01 U	NA
Acetonitrile	mg/L	6.82	0.01 U	NA
Acrolein	mg/L	0.04	0.02 U	NA
Acrylonitrile	mg/L	0.0117	0.005 U	NA
Allyl chloride	mg/L	0.01	0.005 U	NA
Benzene	mg/L	0.00246	0.0005 U	NA
Bromobenzene	mg/L	0.125	0.002 U	NA
Bromochloromethane	mg/L	0.106	0.002 U	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP
		Sample Designator:	01202022	01202022
		Sample Date:	1/20/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Bromodichloromethane	mg/L	0.004	0.002 U	NA
Bromoform	mg/L	0.214	0.002 U	NA
Bromomethane	mg/L	0.01	0.005 U	NA
Carbon disulfide	mg/L	0.177	0.002 U	NA
Carbon tetrachloride	mg/L	0.004	0.002 U	NA
Chlorobenzene	mg/L	0.0702	0.002 U	NA
Chloroethane	mg/L	3.13	0.002 U	NA
Chloroform	mg/L	0.004	0.002 U	NA
Chloromethane	mg/L	0.0331	0.005 U	NA
Chloroprene	mg/L	0.01	0.005 U	NA
cis-1,2-Dichloroethene	mg/L	70	0.002 U	NA
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	NA
Cyclohexanone	mg/L	404	0.02 U	NA
Dibromochloromethane	mg/L	80	0.002 U	NA
Dibromomethane	mg/L	0.0199	0.002 U	NA
Dichlorodifluoromethane	mg/L	0.004	0.002 U	NA
Diisopropyl ether	mg/L	0.0697	0.002 U	NA
Ethyl acetate	mg/L	2.13	0.01 U	NA
Ethyl ether	mg/L	NE	0.005 U	NA
Ethyl methacrylate	mg/L	2.76	0.005 U	NA
Ethylbenzene	mg/L	0.00609	0.002 U	NA
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	NA
Hexachlorobutadiene	mg/L	0.01	0.005 U	NA
Hexachloroethane	mg/L	0.01	0.005 U	NA
Iodomethane	mg/L	NE	0.005 U	NA
Isopropylbenzene	mg/L	0.1790	0.002 U	NA
m,p-Xylenes	mg/L	NE	0.002 U	NA
Methacrylonitrile	mg/L	0.495	0.005 U	NA
Methyl Methacrylate	mg/L	10.1	0.005 U	NA
Methyl tert-butyl ether	mg/L	0.664	0.002 U	NA
Methylacrylate	mg/L	0.417	0.005 U	NA
Methylene chloride	mg/L	0.685	0.002 U	NA
Naphthalene	mg/L	0.01	0.005 U	NA
n-Butyl acetate	mg/L	NE	0.002 U	NA
n-Butylbenzene	mg/L	8.76	0.002 U	NA
n-Heptane	mg/L	0.01	0.005 U	NA
n-Hexane	mg/L	0.01	0.005 U	NA
Nitrobenzene	mg/L	0.151	0.05 U	NA
n-Propylbenzene	mg/L	0.452	0.002 U	NA
o-Xylene	mg/L	0.0873	0.002 U	NA
Pentachloroethane	mg/L	NE	0.005 U	NA
p-Isopropyltoluene	mg/L	98.5	0.002 U	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-08	MW-08/DUP
		Sample Designator:	01202022	01202022
		Sample Date:	1/20/2022	1/20/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
Propionitrile	mg/L	NE	0.01 U	NA
sec-Butylbenzene	mg/L	6.23	0.002 U	NA
Styrene	mg/L	1.65	0.002 U	NA
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	NA
tert-Butyl alcohol	mg/L	0.286	0.01 U	NA
tert-Butylbenzene	mg/L	9.43	0.002 U	NA
Tetrachloroethene	mg/L	0.00972	0.0005 U	NA
Tetrahydrofuran	mg/L	109	0.005 U	NA
Toluene	mg/L	3.16	0.002 U	NA
trans-1,2-Dichloroethene	mg/L	100	0.002 U	NA
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	NA
Trichloroethene	mg/L	0.004	0.002 U	NA
Trichlorofluoromethane	mg/L	5.36	0.005 U	NA
Vinyl acetate	mg/L	1.61	0.005 U	NA
Vinyl chloride	mg/L	0.004	0.002 U	NA
Xylenes, Total	mg/L	10	0.004 U	NA
Explosives				
Tetryl	mg/L	0.154	0.000500 U	0.000500 U
2,4-Dinitrotoluene	mg/L	0.00209	0.00200 U	0.00200 U
4-Nitrotoluene (4-NT)	mg/L	0.00818	0.00200 U	0.00200 U
RDX	mg/L	0.0607	0.00200 U	0.00200 U
Nitrobenzene	mg/L	0.00181	0.000500 U	0.000500 U
2,6-Dinitrotoluene	mg/L	0.000964	0.000500 U	0.000500 U
2-Nitrotoluene	mg/L	0.000604	0.000500 U	0.000500 U
3-Nitrotoluene	mg/L	0.0649	0.000500 U	0.000500 U
1,3,5-Trinitrobenzene	mg/L	0.464	0.000500 U	0.000500 U
1,3-Dinitrobenzene	mg/L	0.00153	0.005000 U	0.000500 U
2,4,6-Trinitrotoluene	mg/L	0.00763	0.000500 U	0.000500 U
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	0.000500 U	0.000500 U
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	0.000500 U	0.000500 U
HMX	mg/L	0.782	0.00200 U	0.00200 U
PETN	mg/L	5.06	0.000500 U	0.000500 U
Nitroglycerine	mg/L	0.00107	0.000500 U	0.000500 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	**GFC**	**GFC**
			Sample Point:	**MW-08**	**MW-08/DUP**
			Sample Designator:	**01202022**	**01202022**
			Sample Date:	**1/20/2022**	**1/20/2022**
			Quarterly Event:	**3rd Quarter**	**3rd Quarter**
			Notes:	**-**	**Duplicate**
Parameter	**Units**	**PAL[1]**		

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-09	MW-09	MW-09
		Sample Designator:	07092021	10272021	01202022
		Sample Date:	7/9/2021	10/27/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	0.05 U	NA
Arsenic	mg/L	10	NA	0.025 U	NA
Copper	mg/L	1,300	NA	0.005 U	NA
Lead	mg/L	15	NA	0.015 U	NA
Zinc	mg/L	4.69	NA	0.0100 U	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-09	MW-09	MW-09
			Sample Designator:	07092021	10272021	01202022
			Sample Date:	7/9/2021	10/27/2021	1/20/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-09	MW-09	MW-09
		Sample Designator:	07092021	10272021	01202022
		Sample Date:	7/9/2021	10/27/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-09	MW-09	MW-09
		Sample Designator:	07092021	10272021	01202022
		Sample Date:	7/9/2021	10/27/2021	1/20/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-09**	**MW-09**	**MW-09**
		Sample Designator:	**07092021**	**10272021**	**01202022**
		Sample Date:	**7/9/2021**	**10/27/2021**	**1/20/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-10	MW-10	MW-10
		Sample Designator:	07082021	10262021	01192022
		Sample Date:	7/8/2021	10/26/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00400 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00400 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00400 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00400 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00400 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00400 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00400 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00400 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00400 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00400 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00400 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00400 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-10	MW-10	MW-10
			Sample Designator:	07082021	10262021	01192022
			Sample Date:	7/8/2021	10/26/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.0207 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-10	MW-10	MW-10
			Sample Designator:	07082021	10262021	01192022
			Sample Date:	7/8/2021	10/26/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-10	MW-10	MW-10
		Sample Designator:	07082021	10262021	01192022
		Sample Date:	7/8/2021	10/26/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-10**	**MW-10**	**MW-10**
		Sample Designator:	**07082021**	**10262021**	**01192022**
		Sample Date:	**7/8/2021**	**10/26/2021**	**1/19/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-11	MW-11	MW-11
		Sample Designator:	NS	NS	01182022
		Sample Date:	NS	NS	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	Dry	
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	NS	NS	0.0500 U
Arsenic	mg/L	10	NS	NS	0.0250 U
Copper	mg/L	1,300	NS	NS	0.0050 U
Lead	mg/L	15	NS	NS	0.0150 U
Zinc	mg/L	4.69	NS	NS	**0.0229**
Metals, Dissolved					
Antimony	mg/L	6	NS	NS	0.0500 U
Arsenic	mg/L	10	NS	NS	0.0250 U
Copper	mg/L	1,300	NS	NS	0.0050 U
Lead	mg/L	15	NS	NS	0.0150 U
Zinc	mg/L	4.69	NS	NS	**0.0113**
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	NS	NS	0.00100 U
Aroclor 1221	mg/L	0.002	NS	NS	0.00100 U
Aroclor 1232	mg/L	0.002	NS	NS	0.00100 U
Aroclor 1242	mg/L	0.00101	NS	NS	0.00100 U
Aroclor 1248	mg/L	0.002	NS	NS	0.00100 U
Aroclor 1254	mg/L	0.00125	NS	NS	0.00100 U
Aroclor 1260	mg/L	0.002	NS	NS	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	NS	NS	0.00400 U
Acenaphthylene	mg/L	2,060	NS	NS	0.00400 U
Anthracene	mg/L	2,290	NS	NS	0.00400 U
Benzo(a)anthracene	mg/L	0.133	NS	NS	0.00400 U
Benzo(a)pyrene	mg/L	0.2	NS	NS	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65	NS	NS	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000	NS	NS	0.00400 U
Benzo(k)fluoranthene	mg/L	937	NS	NS	0.00400 U
Chrysene	mg/L	81.7	NS	NS	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985	NS	NS	0.00400 U
Fluoranthene	mg/L	14,200	NS	NS	0.00400 U
Fluorene	mg/L	3,010	NS	NS	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	NS	0.00400 U
Naphthalene	mg/L	0.1	NS	NS	0.00400 U
Phenanthrene	mg/L	1,190	NS	NS	0.00400 U
Pyrene	mg/L	17,300	NS	NS	0.00400 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	NS	NS	NS
Diesel Range Organics	mg/L	34.3	NS	NS	NS
Oil Range Organics	mg/L	31.8	NS	NS	NS

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-11	MW-11	MW-11
			Sample Designator:	NS	NS	01182022
			Sample Date:	NS	NS	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	Dry	Dry	
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		NS	NS	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		NS	NS	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		NS	NS	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		NS	NS	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		NS	NS	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		NS	NS	0.03 U
1,1-Dichloroethane	mg/L	0.0114		NS	NS	0.002 U
1,1-Dichloroethene	mg/L	0.0276		NS	NS	0.002 U
1,1-Dichloropropene	mg/L	NE		NS	NS	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		NS	NS	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		NS	NS	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		NS	NS	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		NS	NS	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		NS	NS	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		NS	NS	0.002 U
1,2-Dibromoethane	mg/L	0.004		NS	NS	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		NS	NS	0.002 U
1,2-Dichloroethane	mg/L	0.00355		NS	NS	0.002 U
1,2-Dichloroethene, Total	mg/L	70		NS	NS	0.004 U
1,2-Dichloropropane	mg/L	0.00577		NS	NS	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		NS	NS	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		NS	NS	0.002 U
1,3-Dichloropropane	mg/L	NE		NS	NS	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		NS	NS	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		NS	NS	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		NS	NS	0.002 U
1-Chlorobutane	mg/L	NE		NS	NS	0.005 U
2,2-Dichloropropane	mg/L	NE		NS	NS	0.002 U
2-Butanone	mg/L	354		NS	NS	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		NS	NS	0.005 U
2-Chlorotoluene	mg/L	17.1		NS	NS	0.002 U
2-Hexanone	mg/L	1.46		NS	NS	0.01 U
2-Nitropropane	mg/L	0.02		NS	NS	0.01 U
4-Chlorotoluene	mg/L	0.0666		NS	NS	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		NS	NS	0.01 U
Acetone	mg/L	3370		NS	NS	0.01 U
Acetonitrile	mg/L	6.82		NS	NS	0.01 U
Acrolein	mg/L	0.04		NS	NS	0.02 U
Acrylonitrile	mg/L	0.0117		NS	NS	0.005 U
Allyl chloride	mg/L	0.01		NS	NS	0.005 U
Benzene	mg/L	0.00246		NS	NS	0.0005 U
Bromobenzene	mg/L	0.125		NS	NS	0.002 U
Bromochloromethane	mg/L	0.106		NS	NS	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-11	MW-11	MW-11
			Sample Designator:	NS	NS	01182022
			Sample Date:	NS	NS	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	Dry	Dry	
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		NS	NS	0.002 U
Bromoform	mg/L	0.214		NS	NS	0.002 U
Bromomethane	mg/L	0.01		NS	NS	0.005 U
Carbon disulfide	mg/L	0.177		NS	NS	0.002 U
Carbon tetrachloride	mg/L	0.004		NS	NS	0.002 U
Chlorobenzene	mg/L	0.0702		NS	NS	0.002 U
Chloroethane	mg/L	3.13		NS	NS	0.002 U
Chloroform	mg/L	0.004		NS	NS	0.002 U
Chloromethane	mg/L	0.0331		NS	NS	0.005 U
Chloroprene	mg/L	0.01		NS	NS	0.005 U
cis-1,2-Dichloroethene	mg/L	70		NS	NS	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		NS	NS	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		NS	NS	0.002 U
Cyclohexanone	mg/L	404		NS	NS	0.02 U
Dibromochloromethane	mg/L	80		NS	NS	0.002 U
Dibromomethane	mg/L	0.0199		NS	NS	0.002 U
Dichlorodifluoromethane	mg/L	0.004		NS	NS	0.002 U
Diisopropyl ether	mg/L	0.0697		NS	NS	0.002 U
Ethyl acetate	mg/L	2.13		NS	NS	0.01 U
Ethyl ether	mg/L	NE		NS	NS	0.005 U
Ethyl methacrylate	mg/L	2.76		NS	NS	0.005 U
Ethylbenzene	mg/L	0.00609		NS	NS	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		NS	NS	0.002 U
Hexachlorobutadiene	mg/L	0.01		NS	NS	0.005 U
Hexachloroethane	mg/L	0.01		NS	NS	0.005 U
Iodomethane	mg/L	NE		NS	NS	0.005 U
Isopropylbenzene	mg/L	0.1790		NS	NS	0.002 U
m,p-Xylenes	mg/L	NE		NS	NS	0.002 U
Methacrylonitrile	mg/L	0.495		NS	NS	0.005 U
Methyl Methacrylate	mg/L	10.1		NS	NS	0.005 U
Methyl tert-butyl ether	mg/L	0.664		NS	NS	0.002 U
Methylacrylate	mg/L	0.417		NS	NS	0.005 U
Methylene chloride	mg/L	0.685		NS	NS	0.002 U
Naphthalene	mg/L	0.01		NS	NS	0.005 U
n-Butyl acetate	mg/L	NE		NS	NS	0.002 U
n-Butylbenzene	mg/L	8.76		NS	NS	0.002 U
n-Heptane	mg/L	0.01		NS	NS	0.005 U
n-Hexane	mg/L	0.01		NS	NS	0.005 U
Nitrobenzene	mg/L	0.151		NS	NS	0.05 U
n-Propylbenzene	mg/L	0.452		NS	NS	0.002 U
o-Xylene	mg/L	0.0873		NS	NS	0.002 U
Pentachloroethane	mg/L	NE		NS	NS	0.005 U
p-Isopropyltoluene	mg/L	98.5		NS	NS	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-11	MW-11	MW-11
		Sample Designator:	NS	NS	01182022
		Sample Date:	NS	NS	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	Dry	
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	NS	NS	0.01 U
sec-Butylbenzene	mg/L	6.23	NS	NS	0.002 U
Styrene	mg/L	1.65	NS	NS	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	NS	NS	0.002 U
tert-Butyl alcohol	mg/L	0.286	NS	NS	0.01 U
tert-Butylbenzene	mg/L	9.43	NS	NS	0.002 U
Tetrachloroethene	mg/L	0.00972	NS	NS	0.0005 U
Tetrahydrofuran	mg/L	109	NS	NS	0.005 U
Toluene	mg/L	3.16	NS	NS	0.002 U
trans-1,2-Dichloroethene	mg/L	100	NS	NS	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	NS	NS	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	NS	NS	0.002 U
Trichloroethene	mg/L	0.004	NS	NS	0.002 U
Trichlorofluoromethane	mg/L	5.36	NS	NS	0.005 U
Vinyl acetate	mg/L	1.61	NS	NS	0.005 U
Vinyl chloride	mg/L	0.004	NS	NS	0.002 U
Xylenes, Total	mg/L	10	NS	NS	0.004 U
Explosives					
Tetryl	mg/L	0.154	NS	NS	NS
2,4-Dinitrotoluene	mg/L	0.00209	NS	NS	NS
4-Nitrotoluene (4-NT)	mg/L	0.00818	NS	NS	NS
RDX	mg/L	0.0607	NS	NS	NS
Nitrobenzene	mg/L	0.00181	NS	NS	NS
2,6-Dinitrotoluene	mg/L	0.000964	NS	NS	NS
2-Nitrotoluene	mg/L	0.000604	NS	NS	NS
3-Nitrotoluene	mg/L	0.0649	NS	NS	NS
1,3,5-Trinitrobenzene	mg/L	0.464	NS	NS	NS
1,3-Dinitrobenzene	mg/L	0.00153	NS	NS	NS
2,4,6-Trinitrotoluene	mg/L	0.00763	NS	NS	NS
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NS	NS	NS
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NS	NS	NS
HMX	mg/L	0.782	NS	NS	NS
PETN	mg/L	5.06	NS	NS	NS
Nitroglycerine	mg/L	0.00107	NS	NS	NS

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-11**	**MW-11**	**MW-11**
		Sample Designator:	**NS**	**NS**	**01182022**
		Sample Date:	**NS**	**NS**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**Dry**	**Dry**	
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-12	MW-12	MW-12
		Sample Designator:	0709/2021	10272021	01192022
		Sample Date:	7/9/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	**0.0206**	**0.0211**	**0.0167**
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00400 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00400 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00400 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00400 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00400 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00400 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00400 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00400 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00400 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00400 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00400 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00400 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	NA	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-12	MW-12	MW-12
			Sample Designator:	0709/2021	10272021	01192022
			Sample Date:	7/9/2021	10/27/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-12	MW-12	MW-12
		Sample Designator:	0709/2021	10272021	01192022
		Sample Date:	7/9/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-12	MW-12	MW-12
		Sample Designator:	0709/2021	10272021	01192022
		Sample Date:	7/9/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-12**	**MW-12**	**MW-12**
		Sample Designator:	**0709/2021**	**10272021**	**01192022**
		Sample Date:	**7/9/2021**	**10/27/2021**	**1/19/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-13	MW-13	MW-13
		Sample Designator:	07082021	10272021	01192022
		Sample Date:	7/8/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	**0.0129**	0.0050 U	**0.0715**
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	**0.0227**
Metals, Dissolved					
Antimony	mg/L	6	0.0500 U	NA	0.0500 U
Arsenic	mg/L	10	0.0250 U	NA	0.0250 U
Copper	mg/L	1,300	**0.0129**	NA	**0.0475**
Lead	mg/L	15	0.0150 U	NA	0.0150 U
Zinc	mg/L	4.69	**0.0196**	NA	0.0100 U
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00400 U	0.00100 U	0.00400 U
Acenaphthylene	mg/L	2,060	0.00400 U	0.00100 U	0.00400 U
Anthracene	mg/L	2,290	0.00400 U	0.00100 U	0.00400 U
Benzo(a)anthracene	mg/L	0.133	0.00400 U	0.00100 U	0.00400 U
Benzo(a)pyrene	mg/L	0.2	0.00400 U	0.00100 U	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65	0.00400 U	0.00100 U	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00400 U	0.00100 U	0.00400 U
Benzo(k)fluoranthene	mg/L	937	0.00400 U	0.00100 U	0.00400 U
Chrysene	mg/L	81.7	0.00400 U	0.00100 U	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985	0.00400 U	0.00100 U	0.00400 U
Fluoranthene	mg/L	14,200	0.00400 U	0.00100 U	0.00400 U
Fluorene	mg/L	3,010	0.00400 U	0.00100 U	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00400 U	0.00100 U	0.00400 U
Naphthalene	mg/L	0.1	0.00400 U	0.00100 U	0.00400 U
Phenanthrene	mg/L	1,190	0.00400 U	0.00100 U	0.00400 U
Pyrene	mg/L	17,300	0.00400 U	0.00100 U	0.00400 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	2 U	NA	NA
Oil Range Organics	mg/L	31.8	2.8 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-13	MW-13	MW-13
			Sample Designator:	07082021	10272021	01192022
			Sample Date:	7/8/2021	10/27/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.0225 U	0.0332 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-13	MW-13	MW-13
			Sample Designator:	07082021	10272021	01192022
			Sample Date:	7/8/2021	10/27/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-13	MW-13	MW-13
		Sample Designator:	07082021	10272021	01192022
		Sample Date:	7/8/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	**0.0059 J+**	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-13**	**MW-13**	**MW-13**
		Sample Designator:	**07082021**	**10272021**	**01192022**
		Sample Date:	**7/8/2021**	**10/27/2021**	**1/19/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-14	MW-14	MW-14
		Sample Designator:	NS	10262021	01182022
		Sample Date:	NS	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	NS	0.0500 U	0.0500 U
Arsenic	mg/L	10	NS	0.0250 U	0.0250 U
Copper	mg/L	1,300	NS	0.0050 U	0.0050 U
Lead	mg/L	15	NS	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NS	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NS	NA	NA
Arsenic	mg/L	10	NS	NA	NA
Copper	mg/L	1,300	NS	NA	NA
Lead	mg/L	15	NS	NA	NA
Zinc	mg/L	4.69	NS	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	NS	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	NS	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	NS	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	NS	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	NS	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	NS	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	NS	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	NS	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	NS	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	NS	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	NS	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	NS	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	NS	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	NS	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	NS	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	NS	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	NS	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	NS	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	NS	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	NS	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	NS	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	NS	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	NS	NA	NA
Diesel Range Organics	mg/L	34.3	NS	NA	NA
Oil Range Organics	mg/L	31.8	NS	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-14	MW-14	MW-14
		Sample Designator:	NS	10262021	01182022
		Sample Date:	NS	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/L	0.00699	NS	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	NS	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	NS	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	NS	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	NS	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	NS	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	NS	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	NS	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	NS	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	NS	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	NS	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	NS	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	NS	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	NS	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	NS	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	NS	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	NS	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	NS	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	NS	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	NS	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	NS	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	NS	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	NS	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	NS	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	NS	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	NS	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	NS	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	NS	0.002 U	0.002 U
2-Butanone	mg/L	354	NS	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	NS	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	NS	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	NS	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	NS	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	NS	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	NS	0.01 U	0.01 U
Acetone	mg/L	3370	NS	0.0180 U	0.01 U
Acetonitrile	mg/L	6.82	NS	0.01 U	0.01 U
Acrolein	mg/L	0.04	NS	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	NS	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	NS	0.005 U	0.005 U
Benzene	mg/L	0.00246	NS	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	NS	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	NS	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-14	MW-14	MW-14
		Sample Designator:	NS	10262021	01182022
		Sample Date:	NS	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	NS	0.002 U	0.002 U
Bromoform	mg/L	0.214	NS	0.002 U	0.002 U
Bromomethane	mg/L	0.01	NS	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	NS	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	NS	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	NS	0.002 U	0.002 U
Chloroethane	mg/L	3.13	NS	0.002 U	0.002 U
Chloroform	mg/L	0.004	NS	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	NS	0.005 U	0.005 U
Chloroprene	mg/L	0.01	NS	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	NS	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	NS	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	NS	0.002 U	0.002 U
Cyclohexanone	mg/L	404	NS	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	NS	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	NS	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	NS	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	NS	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	NS	0.01 U	0.01 U
Ethyl ether	mg/L	NE	NS	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	NS	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	NS	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	NS	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	NS	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	NS	0.005 U	0.005 U
Iodomethane	mg/L	NE	NS	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	NS	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	NS	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	NS	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	NS	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	NS	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	NS	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	NS	0.002 U	0.002 U
Naphthalene	mg/L	0.01	NS	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	NS	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	NS	0.002 U	0.002 U
n-Heptane	mg/L	0.01	NS	0.005 U	0.005 U
n-Hexane	mg/L	0.01	NS	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	NS	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	NS	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	NS	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	NS	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	NS	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-14	MW-14	MW-14
		Sample Designator:	NS	10262021	01182022
		Sample Date:	NS	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	Dry	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	NS	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	NS	0.002 U	0.002 U
Styrene	mg/L	1.65	NS	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	NS	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	NS	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	NS	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	NS	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	NS	0.005 U	0.005 U
Toluene	mg/L	3.16	NS	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	NS	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	NS	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	NS	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	NS	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	NS	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	NS	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	NS	0.002 U	0.002 U
Xylenes, Total	mg/L	10	NS	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NS	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NS	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NS	NA	NA
RDX	mg/L	0.0607	NS	NA	NA
Nitrobenzene	mg/L	0.00181	NS	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NS	NA	NA
2-Nitrotoluene	mg/L	0.000604	NS	NA	NA
3-Nitrotoluene	mg/L	0.0649	NS	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NS	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NS	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NS	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NS	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NS	NA	NA
HMX	mg/L	0.782	NS	NA	NA
PETN	mg/L	5.06	NS	NA	NA
Nitroglycerine	mg/L	0.00107	NS	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-14**	**MW-14**	**MW-14**
		Sample Designator:	**NS**	**10262021**	**01182022**
		Sample Date:	**NS**	**10/26/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**Dry**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-15	MW-15	MW-15/DUP
		Sample Designator:	07092021	10282021	10282021
		Sample Date:	7/9/2021	10/28/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter	2nd Quarter
		Notes:	-	-	Duplicate
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	0.0500 U	0.0500 U
Arsenic	mg/L	10	NA	0.0250 U	0.0250 U
Copper	mg/L	1,300	NA	0.0050 U	0.0050 U
Lead	mg/L	15	NA	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NA	0.0100 U	0.0100 U
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	NA	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15	MW-15/DUP
			Sample Designator:	07092021	10282021	10282021
			Sample Date:	7/9/2021	10/28/2021	10/28/2021
			Quarterly Event:	1st Quarter	2nd Quarter	2nd Quarter
			Notes:	-	-	Duplicate
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-15	MW-15	MW-15/DUP
		Sample Designator:	07092021	10282021	10282021
		Sample Date:	7/9/2021	10/28/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter	2nd Quarter
		Notes:	-	-	Duplicate
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-15	MW-15	MW-15/DUP
		Sample Designator:	07092021	10282021	10282021
		Sample Date:	7/9/2021	10/28/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter	2nd Quarter
		Notes:	-	-	Duplicate
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-15	MW-15	MW-15/DUP
			Sample Designator:	07092021	10282021	10282021
			Sample Date:	7/9/2021	10/28/2021	10/28/2021
			Quarterly Event:	1st Quarter	2nd Quarter	2nd Quarter
			Notes:	-	-	Duplicate
Parameter	**Units**	**PAL[1]**				

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-15	MW-15/DUP
		Sample Designator:	01192022	01192022
		Sample Date:	1/19/2022	1/19/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Metals, Total				
Antimony	mg/L	6	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U
Metals, Dissolved				
Antimony	mg/L	6	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	NA	NA
Diesel Range Organics	mg/L	34.3	NA	NA
Oil Range Organics	mg/L	31.8	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-15	MW-15/DUP
		Sample Designator:	01192022	01192022
		Sample Date:	1/19/2022	1/19/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-15	MW-15/DUP
		Sample Designator:	01192022	01192022
		Sample Date:	1/19/2022	1/19/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Bromodichloromethane	mg/L	0.004	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U
Cyclohexanone	mg/L	404	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC
		Sample Point:	MW-15	MW-15/DUP
		Sample Designator:	01192022	01192022
		Sample Date:	1/19/2022	1/19/2022
		Quarterly Event:	3rd Quarter	3rd Quarter
		Notes:	-	Duplicate
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
Propionitrile	mg/L	NE	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U
Explosives				
Tetryl	mg/L	0.154	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA
RDX	mg/L	0.0607	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA
HMX	mg/L	0.782	NA	NA
PETN	mg/L	5.06	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	**GFC**	**GFC**
			Sample Point:	**MW-15**	**MW-15/DUP**
			Sample Designator:	**01192022**	**01192022**
			Sample Date:	**1/19/2022**	**1/19/2022**
			Quarterly Event:	**3rd Quarter**	**3rd Quarter**
			Notes:	**-**	**Duplicate**
Parameter	**Units**	**PAL[1]**		

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-16	MW-16	MW-16
		Sample Designator:	07082021	10272021	01192022
		Sample Date:	7/8/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-16	MW-16	MW-16
			Sample Designator:	07082021	10272021	01192022
			Sample Date:	7/8/2021	10/27/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-16	MW-16	MW-16
			Sample Designator:	07082021	10272021	01192022
			Sample Date:	7/8/2021	10/27/2021	1/19/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-16	MW-16	MW-16
		Sample Designator:	07082021	10272021	01192022
		Sample Date:	7/8/2021	10/27/2021	1/19/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-16**	**MW-16**	**MW-16**
		Sample Designator:	**07082021**	**10272021**	**01192022**
		Sample Date:	**7/8/2021**	**10/27/2021**	**1/19/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-17	MW-17	MW-17
		Sample Designator:	07292021	10262021	01182022
		Sample Date:	7/29/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA
Lead	mg/L	15	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.001 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-17	MW-17	MW-17
			Sample Designator:	07292021	10262021	01182022
			Sample Date:	7/29/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.0103 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-17	MW-17	MW-17
			Sample Designator:	07292021	10262021	01182022
			Sample Date:	7/29/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-17	MW-17	MW-17
		Sample Designator:	07292021	10262021	01182022
		Sample Date:	7/29/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-17**	**MW-17**	**MW-17**
		Sample Designator:	**07292021**	**10262021**	**01182022**
		Sample Date:	**7/29/2021**	**10/26/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-18	MW-18
		Sample Designator:	07082021	10262021	01182022
		Sample Date:	7/8/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	0.0500 U	NA	NA
Arsenic	mg/L	10	0.0250 U	NA	NA
Copper	mg/L	1,300	0.0050 U	NA	NA
Lead	mg/L	15	0.0150 U	NA	NA
Zinc	mg/L	4.69	0.0100 U	NA	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	**0.00102**	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	NA	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-18	MW-18	MW-18
			Sample Designator:	07082021	10262021	01182022
			Sample Date:	7/8/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	mg/L	0.00699		0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351		0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		0.01 U	0.0219 U	0.01 U
Acetonitrile	mg/L	6.82		0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-18	MW-18	MW-18
			Sample Designator:	07082021	10262021	01182022
			Sample Date:	7/8/2021	10/26/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-18	MW-18	MW-18
		Sample Designator:	07082021	10262021	01182022
		Sample Date:	7/8/2021	10/26/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-18**	**MW-18**	**MW-18**
		Sample Designator:	**07082021**	**10262021**	**01182022**
		Sample Date:	**7/8/2021**	**10/26/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-19	MW-19	MW-19
		Sample Designator:	07092021	10282021	01182022
		Sample Date:	7/9/2021	10/28/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Metals, Total					
Antimony	mg/L	6	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	0.0100 U	**0.0105**	0.0100 U
Metals, Dissolved					
Antimony	mg/L	6	NA	NA	0.0500 U
Arsenic	mg/L	10	NA	NA	0.0250 U
Copper	mg/L	1,300	NA	NA	0.0050 U
Lead	mg/L	15	NA	NA	0.0150 U
Zinc	mg/L	4.69	NA	NA	0.0100 U
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00400 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00400 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00400 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00400 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00400 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00400 U	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00400 U	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00400 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00400 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00400 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00400 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00400 U	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00400 U	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1	0.00400 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00400 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00400 U	0.00100 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	NA	NA	NA
Diesel Range Organics	mg/L	34.3	2 U	NA	NA
Oil Range Organics	mg/L	31.8	2.8 U	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-19	MW-19	MW-19
		Sample Designator:	07092021	10282021	01182022
		Sample Date:	7/9/2021	10/28/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-19	MW-19	MW-19
			Sample Designator:	07092021	10282021	01182022
			Sample Date:	7/9/2021	10/28/2021	1/18/2022
			Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
			Notes:	-	-	-
Parameter	**Units**	**PAL[1]**				
Volatile Organic Compounds (continued)						
Bromodichloromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		0.002 U	0.002 U	0.002 U

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-19	MW-19	MW-19
		Sample Designator:	07092021	10282021	01182022
		Sample Date:	7/9/2021	10/28/2021	1/18/2022
		Quarterly Event:	1st Quarter	2nd Quarter	3rd Quarter
		Notes:	-	-	-
Parameter	**Units**	**PAL[1]**			
Volatile Organic Compounds (continued)					
Propionitrile	mg/L	NE	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U
Explosives					
Tetryl	mg/L	0.154	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA

Table 5
Historical Groundwater Analytical Results
Goodfellow Federal Complex
St. Louis, Missouri

		Group Name:	**GFC**	**GFC**	**GFC**
		Sample Point:	**MW-19**	**MW-19**	**MW-19**
		Sample Designator:	**07092021**	**10282021**	**01182022**
		Sample Date:	**7/9/2021**	**10/28/2021**	**1/18/2022**
		Quarterly Event:	**1st Quarter**	**2nd Quarter**	**3rd Quarter**
		Notes:	**-**	**-**	**-**
Parameter	**Units**	**PAL[1]**			

Notes:

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

[2] Total petroleum hydrocarbons were inadvertantly analysed by the laboratory during the first quarterly sampling event. Total petroleum hydrocarbons are part of the groundwater analytical suite.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

J+ = Qualified as estimated due to non-conformance discovered during data validation.

mg/L = milligrams per liter

NA = not analyzed

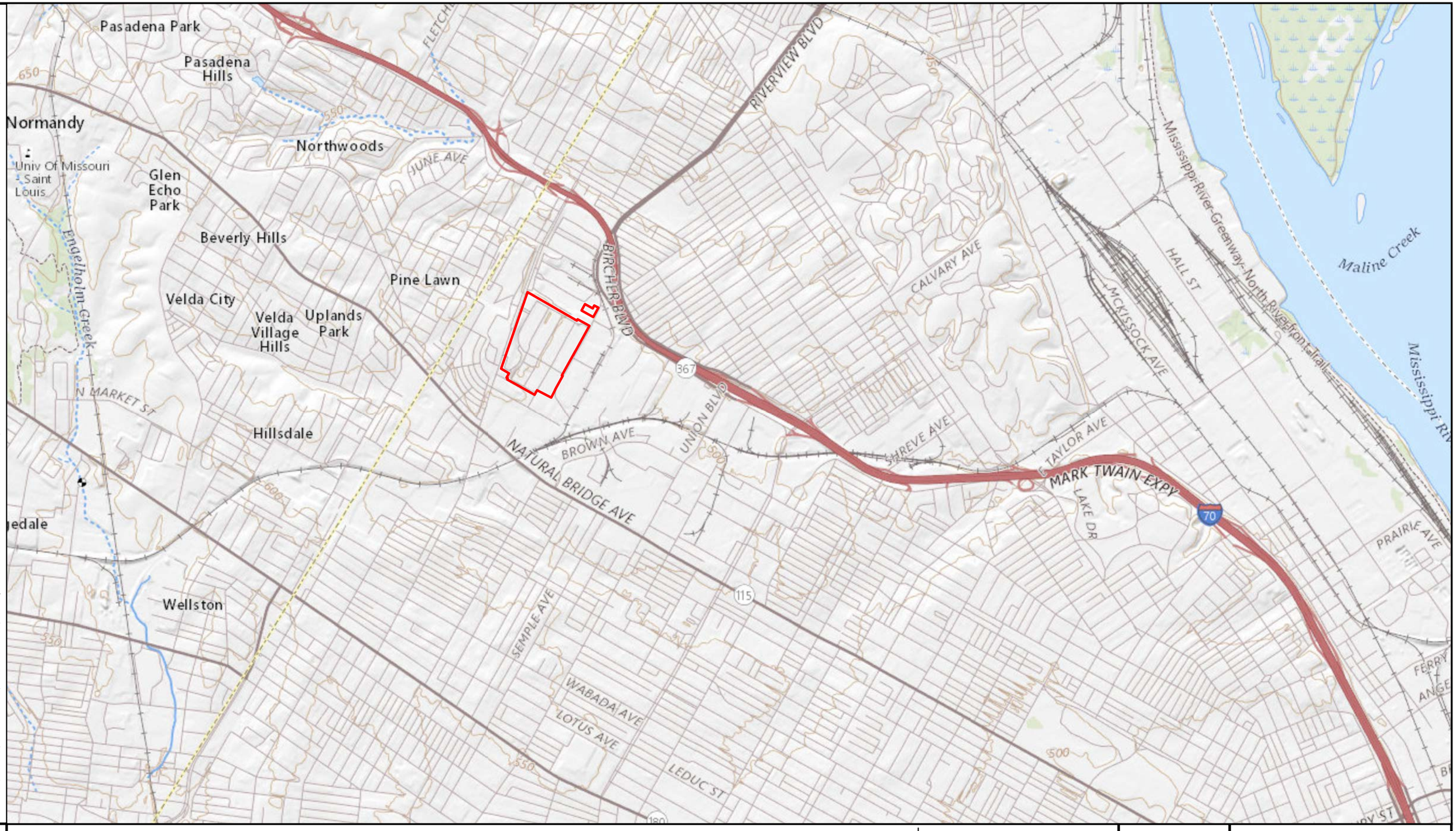
NE = not established

NS = not sampled

PAL = Project Action Limit

U = compound was not detected

FIGURES



Site Boundary

Notes:
Site is approximately 66 acres.

NORTH

1 0.5 0 1

Miles

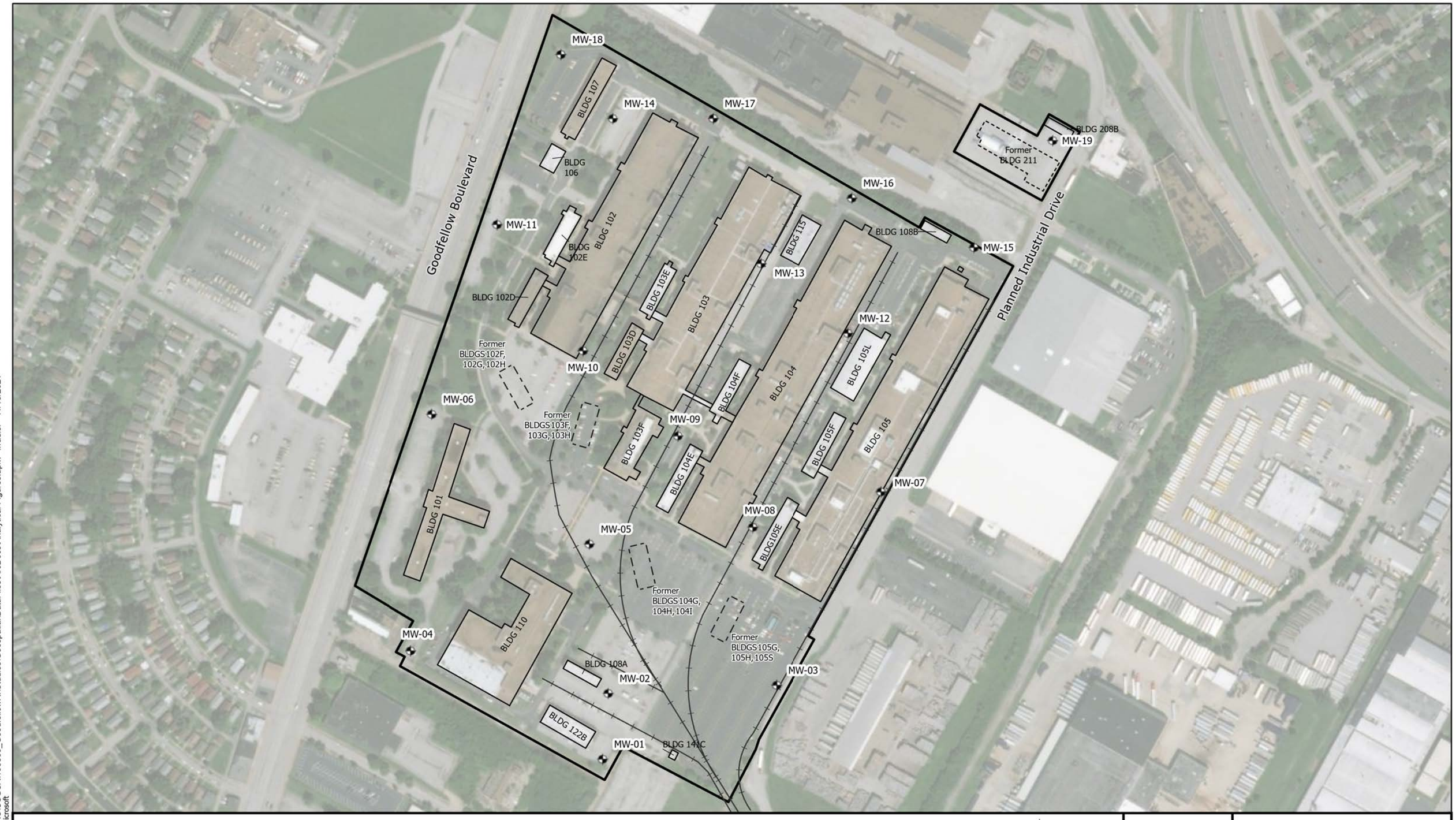
BURNS McDONNELL

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

Source: ESRI, Burns & McDonnell

Issued: 8/16/2021

Path: Z:\Clients\ENS\USGSA\128487_GoodfellowMW\Studies\Geospatial\DataFiles\ArcDocs\figures\figures.aprx irradler 8/16/2021
Service Layer Credits: USGS The National Map: National Boundaries Dataset, 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; Natural Earth 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.



Legend

- Monitoring Well
- Former Railroad Track
- Former Powder Storage Bunkers (102G, 103G, 104H, and 105H)
- Site Boundary

NORTH

0 125 250 500

Feet

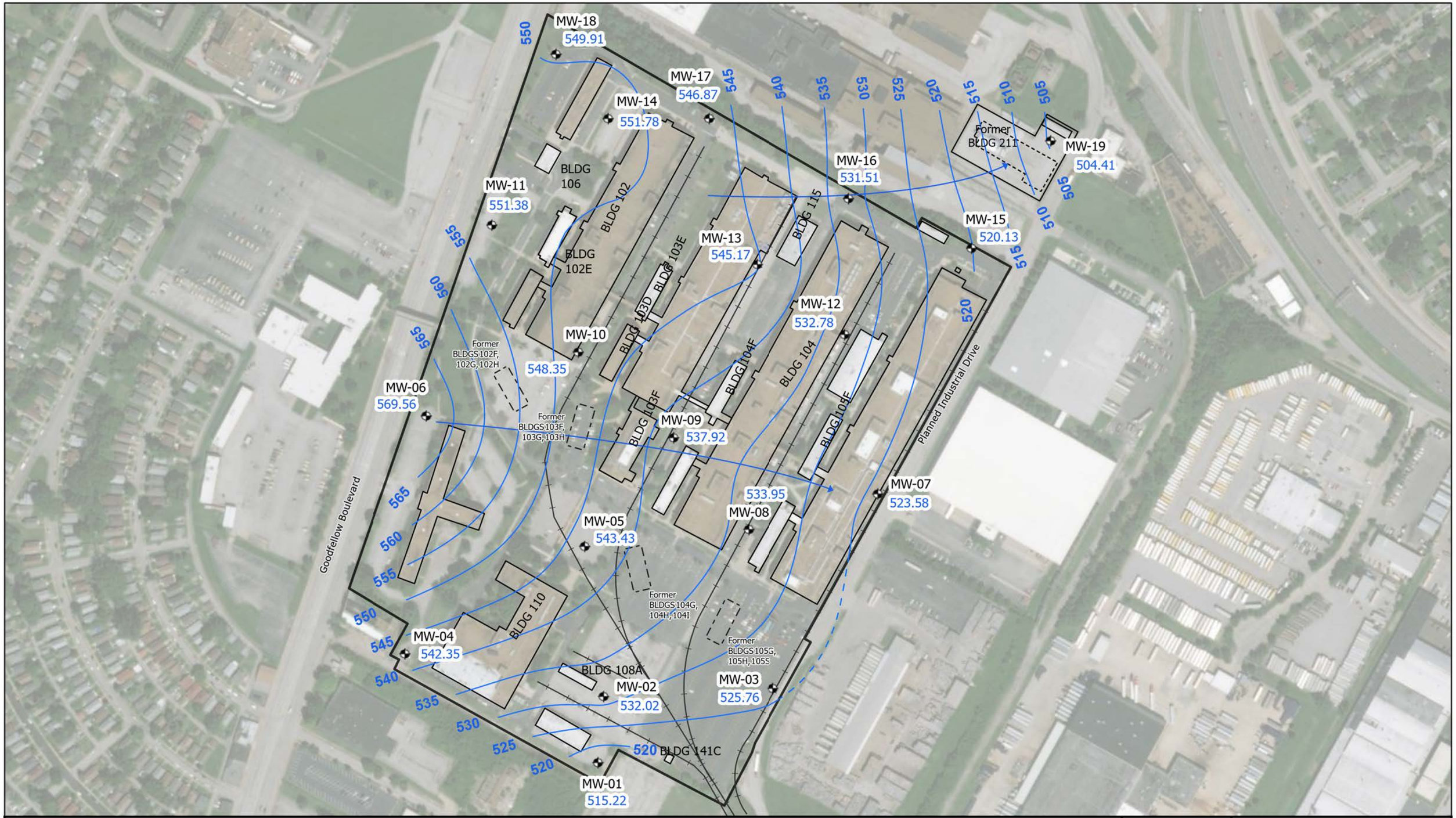
BURNS McDONNELL

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

Issued: 11/15/2021

Source: ESRI, Burns & McDonnell

Path: \\bmcd\dfs\Clients\ENS\USGSA\133835_GoodfellowRI\Studies\Geospatial\DataFiles\ArcDocs\Analytical Figures.aprx irradler 11/15/2021
Service Layer Credits: Maxar, Microsoft



- Monitoring Well
- Former Railroad Track
- Piezometric Surface Contour (dashed where inferred)
- Approximate Groundwater Flow Direction
- Former Powder Storage Bunkers (102G, 103G, 104H, and 105H)
- Site Boundary

Notes:
1. Monitoring Wells MW-01 through MW-18 were gauged on January 17, 2022. Monitoring Well MW-19 was gauged on January 18, 2022, due to access issues associated with the Martin Luther King, Jr. holiday.
2. Elevations presented in feet above mean sea level.

NORTH

0 125 250 500

Feet

BURNS McDONNELL

Figure 3
Potentiometric Surface Map
January 2022
Goodfellow Federal Complex
St. Louis, Missouri

Issued: 2/11/2022

Path: Z:\Clients\ENS\USGSA\133835_GoodfellowRIStudies\Geospatial\DataFilesArcDocs\Analytical Figures_january2021.aprx irradler 2/11/2022
Service Layer Credits: Maxar

Source: ESRI, Burns & McDonnell

APPENDIX A – SUPPORTING FIELD DOCUMENTATION

- **Monitoring Well Inspection Checklists**
- **Daily Instrument Calibration Log**
- **Field Groundwater Sampling Reports**
- **Field Notes**

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-01**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?		X					
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-02**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-03**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?		X					
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-04**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-05**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-06**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-07**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-08**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-09**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-10**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-11**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?		X					Vault lid and Jplug was tight.
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-12**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-13**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-14**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-15**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-16**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-17**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-18**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Monitoring Well Inspection Checklist
Goodfelow Federal Complex
St. Louis, Missouri

Name of Inspector(s): Ben Lockwood **Well ID: MW-19**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	1/17/2022	X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition				X			
Well casing condition				X			
Condition of well pad				X			
Condition of J-plug				X			
Is positive pressure observed?			X				
Is negative pressure observed?			X				

Take pictures to document needed repairs or site conditions that need to be addressed.
Document any conditions that may affect the integrity of the well, e.g. construction, lawn maintenance, etc.

Daily Instrument Calibration Log

Project Number: 128487
Project Name: Goodfellow Federal Complex
Field Site Manager: Ben Lockwood

	Time	DO	pH	Specific Conductivity	Turbidity	ORP	Notes
Acceptance Criteria:		+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	
Units:		mg/L	Standard Units	mS/cm	NTU	mV	
Standard Used:		in Air	4.00 / 7.00 / 10.00	1409	10 / 100 / 800	220	
1/17/2022	0925	10.04	4.00 / 7.00 / 10.01	1421	10.0 / 101 / 808	221.4	
1/18/2022	0757	10.02	4.00 / 7.00 / 10.01	1426	10.3 / 104 / 812	220.7	
1/19/2022	0812	9.98	4.00 / 7.00 / 10.02	1431	10.2 / 105 / 806	222.2	
1/20/2022	0835	9.99	4.00 / 7.00 / 10.01	1418	10.1 / 103 / 803	221.9	

EQUIPMENT TYPE (Manufacturer, Model No. Version)

Muit-Meter YSI 556 MPS

Turbidity Meter Hach 2100Q

Notes:

% = percent
mS/cm = millisiemens per centimeter
DO = dissolved oxygen
mg/L = milligram per liter
mV = millivolt
ORP = oxidation-reduction potential
NTU = Nephelometric Turbidity Units

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-01

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

28.39 DEPTH TO WATER (FT) 45.4 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

38 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
10:04	28.30	400	0.53	16.5	1.29	2.278	6.49	97.9	130
10:09	28.23	400	1.06	16.5	0.67	2.279	6.52	84.7	93.0
10:14	28.24	400	1.59	16.6	0.51	2.308	6.65	80.0	73.0
10:19	28.23	400	2.11	16.6	0.54	2.333	6.61	75.0	35.2
10:24	28.25	400	2.64	16.5	0.45	2.336	6.61	74.3	25.2
10:29	28.25	400	3.17	16.5	0.38	2.322	6.63	71.9	20.2
10:34	28.25	400	3.70	16.5	0.34	2.297	6.65	70.0	17.2
10:39	28.25	400	4.23	16.5	0.25	2.270	6.67	67.7	19.2
10:44	28.25	400	4.76	16.5	0.27	2.243	6.69	66.0	17.2
10:49	28.25	400	5.28	16.5	0.24	2.229	6.70	64.7	15.5

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
10:49	5.28	16.5	0.24	2.229	6.70	64.70	15.5	28.25	Clear

SAMPLE ID: MW-01 01172022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 5.28 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-01

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-02

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.89 DEPTH TO WATER (FT) 40.17 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

32 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
13:35	12.84	200	0.26	17.0	0.82	1.577	6.91	51.4	12.1
13:40	13.78	200	0.53	17.6	0.42	1.581	6.83	55.1	13.5
13:45	14.39	100	0.40	17.0	0.29	1.579	6.81	56.9	13.3
13:50	15.70	100	0.53	17.0	0.21	1.577	6.80	56.3	11.0
13:55	15.70	100	0.66	16.9	0.19	1.579	6.79	55.3	11.4
14:00	15.70	100	0.79	17.0	0.20	1.578	6.78	53.5	10.4

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
14:00	0.79	17.0	0.20	1.578	6.78	53.50	10.4	15.70	Clear

SAMPLE ID: MW-02 01172022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.79 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-02

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-03

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.47 DEPTH TO WATER (FT) 35.55 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

28 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
11:45	12.95	100	0.13	15.6	3.23	1.624	7.15	81.0	22.5
11:50	13.43	100	0.26	16.5	3.70	1.676	7.05	85.7	19.2
11:55	13.92	100	0.40	16.7	2.62	1.691	7.04	87.9	20.0
12:00	14.26	100	0.53	16.7	2.64	1.699	7.01	88.8	16.2
12:05	15.24	100	0.66	16.8	2.59	1.703	7.00	88.6	14.6
12:10	15.24	100	0.79	16.9	2.58	1.700	6.99	88.1	12.2
12:15	15.24	100	0.92	16.8	2.53	1.702	6.99	88.5	11.0

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
12:15	0.92	16.8	2.53	1.702	6.99	88.50	11	15.24	Clear

SAMPLE ID: MW-03 01172022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.92 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-03

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-04

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

16.89 DEPTH TO WATER (FT) 38.5 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

31 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
8:02	16.80	240	0.32	17	0.93	2.026	6.77	99.7	24.8
8:07	16.84	160	0.63	16.8	0.61	2.047	6.86	79.0	18.2
8:12	16.98	160	0.95	16.9	0.60	2.047	6.89	74.3	14.5
8:17	16.98	160	1.27	16.9	0.61	2.046	6.90	73.6	14.9
8:22	16.98	160	1.59	16.9	0.62	2.043	6.90	74.1	11.5

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
8:22	1.59	16.9	0.62	2.043	6.90	74.10	11.5	16.98	Clear

SAMPLE ID: MW-04 01182022 SAMPLE ID FOR QC: MW-04 01182022 MS/MSD

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 1.59 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-04

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: MS/MSD SAMPLED FOR VOCs, PAHs, PCBs, AND METALS

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-05

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

7.07 DEPTH TO WATER (FT) 33.38 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

26 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
14:50	7.98	200	0.26	16.3	1.44	3.76	7.42	69.4	45.4
14:55	8.25	200	0.53	17.7	0.30	3.869	7.34	60.9	62.0
15:00	8.73	200	0.79	17.8	0.18	3.871	7.33	57.5	58.8
15:05	9.21	200	1.06	17.8	0.11	3.861	7.32	52.9	41.5
15:10	9.66	200	1.32	17.9	0.21	3.82	7.32	49.5	37.3
15:15	10.59	200	1.59	18.0	0.60	3.911	7.32	49.4	18.0
15:20	10.59	200	1.85	18.1	0.62	4.000	7.32	51.5	8.17
15:25	10.59	200	2.11	18.1	0.64	4.059	7.32	52.4	7.45

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
15:25	2.11	18.1	0.64	4.059	7.32	52.40	7.45	10.59	Clear

SAMPLE ID: MW-05 01172022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 2.11 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-05

DATE: 1/17/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-06

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

8.12 DEPTH TO WATER (FT) 31.35 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

28 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
9:26	7.98	160	0.21	15.16	5.79	2.350	7.28	82.0	66.7
9:31	8.36	160	0.42	16.4	5.43	2.391	7.22	98.7	97.0
9:36	9.68	160	0.63	16.6	5.24	2.390	7.20	94.5	67.2
9:41	9.68	160	0.85	16.8	5.32	2.388	7.20	97.8	46.0
9:46	9.68	160	1.06	16.8	5.28	2.389	7.19	98.9	35.8

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
9:46	1.06	16.8	5.28	2.389	7.19	98.90	35.8	9.68	Clear

SAMPLE ID: MW-06 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.06 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-06

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-07

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

16.73 DEPTH TO WATER (FT) 30.5 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

23 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
12:15	16.96	200	0.26	17.7	4.15	0.973	6.86	91.8	7.88
12:20	17.18	200	0.53	18	3.87	0.974	6.77	87.2	8.86
12:25	17.34	200	0.79	18.1	3.96	0.972	6.77	85.0	7.49
12:30	17.52	200	1.06	18.1	3.90	0.972	6.77	82.8	8.19
12:35	17.91	200	1.32	18.1	4.04	0.973	6.76	80.8	6.55
12:40	17.91	200	1.59	18.2	4.08	0.977	6.77	80.7	5.72
12:45	17.91	200	1.85	18.2	4.06	0.978	6.77	79.7	4.98

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
12:45	1.85	18.2	4.06	0.978	6.77	79.70	4.98	17.91	Clear

SAMPLE ID: MW-07 01202022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.85 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-07

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-08

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

11.32 DEPTH TO WATER (FT) 30.64 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

23 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
10:20	11.65	100	0.13	16.2	3.38	1.821	7.1	102.7	13.1
10:25	11.88	100	0.26	16.0	2.80	1.813	7.00	99.6	7.50
10:30	12.34	100	0.40	15.4	2.91	1.812	6.98	99.3	5.56
10:35	12.34	100	0.53	15.1	2.90	1.805	6.97	100.2	7.15
10:40	12.34	100	0.66	15.3	2.86	1.802	6.97	101.7	5.53

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
10:40	0.66	15.3	2.86	1.802	6.97	101.70	5.53	12.34	Clear

SAMPLE ID: MW-08 01202022 SAMPLE ID FOR QC: MW-08 10272021 EXPLOSIVES DUPLICATE

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Explosives

IDW TOTAL: 0.66 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-08

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DUPLICATE SAMPLED FOR EXPLOSIVES ONLY (PACE ANALYTICAL)

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-09

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.79 DEPTH TO WATER (FT) 35.8 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

28 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
9:05	12.68	160	0.21	14.3	2.22	4.304	6.68	155.5	29.1
9:10	13.48	160	0.42	14.0	1.53	4.328	6.95	127.5	28.3
9:15	13.75	100	0.63	13.2	1.48	4.309	6.98	122.2	28.9
9:20	14.13	100	0.85	10.9	1.42	4.333	7.01	115.2	19.8
9:25	14.46	100	1.06	11.6	1.40	4.257	6.99	115.1	26.0
9:30	14.46	100	1.27	12.0	1.43	4.262	6.99	114.6	19.2
9:35	14.46	100	1.48	12.4	1.42	4.267	7.00	114.7	19.2

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
9:35	1.48	12.4	1.42	4.267	7.00	114.70	19.2	14.46	Clear

SAMPLE ID: MW-09 01202022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.48 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-09

DATE: 1/20/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-10

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

9.23 DEPTH TO WATER (FT) 32.41 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

25 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
8:35	9.61	160	0.21	16.6	2.84	1.5	6.99	107.1	27.3
8:40	10.04	160	0.42	16	2.92	1.501	7.10	94.9	38.1
8:45	10.41	160	0.63	16.2	2.91	1.499	7.13	93.0	41.4
8:50	11.17	160	0.85	16.2	2.77	1.499	7.15	93.0	39.7
8:55	11.17	160	1.06	16.3	2.73	1.497	7.17	93.6	33.9
9:00	11.17	160	1.27	16.2	2.75	1.5	7.18	93.4	27.9

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
9:00	1.27	16.2	2.75	1.500	7.18	93.40	27.9	11.17	Clear

SAMPLE ID: MW-10 1192022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.27 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-10

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-11

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

29.65 DEPTH TO WATER (FT) 33.04 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

NA DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☐ NONDEDICATED BLADDER PUMP ☑ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
No Water Parameters Collected									

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.

SAMPLE ID: MW-11 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 0 GAL WATER QUALITY INSTRUMENT MODEL NO.: NA

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-11

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: Not enough water to low flow sample. Sample collected with Bailer. No parameters collected. DISSOLVED METALS FIELD FILTERED

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-12

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.8 DEPTH TO WATER (FT) 45.82 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

38 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
11:50	12.71	100	0.13	13.2	2.28	0.642	7.58	87.1	64.6
11:55	13.13	100	0.26	14.9	1.35	0.640	7.52	84.4	131
12:00	13.38	100	0.40	15.5	1.01	0.641	7.49	83.5	153
12:05	13.63	100	0.53	15.2	0.81	0.639	7.48	82.1	168
12:10	13.90	100	0.66	15.4	0.73	0.640	7.46	80.6	168
12:15	14.26	100	0.79	15.4	0.64	0.640	7.45	79.3	155
12:20	14.26	100	0.92	15.6	0.66	0.642	7.44	78.2	157
12:25	14.26	100	1.06	15.7	0.59	0.642	7.44	78.6	132

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
12:25	1.06	15.7	0.59	0.642	7.44	78.60	132	14.26	Clear

SAMPLE ID: MW-12 01192022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.06 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-12

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-13

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

6.00 DEPTH TO WATER (FT) 21.28 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

14 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
9:48	6.30	160	0.21	14.8	1.19	1.151	7.74	62.1	103
9:53	6.42	160	0.42	14.8	1.05	1.154	7.69	60.4	239
9:58	6.40	160	0.63	14.9	0.99	1.148	7.67	62.4	288
10:03	6.25	160	0.85	14.7	0.89	1.147	7.66	65.5	252
10:08	6.26	160	1.06	14.4	0.89	1.144	7.66	69.9	201
10:13	6.32	160	1.27	14.4	0.91	1.132	7.66	73.2	176
10:18	6.40	160	1.48	14.4	1.01	1.129	7.66	79.8	204
10:23	6.45	160	1.69	14.4	1.15	1.115	7.66	87.0	166
10:28	6.53	160	1.90	14.4	1.26	1.103	7.67	91.9	138
10:33	6.63	160	2.11	14.2	1.39	1.091	7.68	96.9	116
10:38	6.72	160	2.32	14.3	1.54	1.08	7.68	99.2	93.8
10:43	6.78	160	2.54	14.4	1.58	1.076	7.70	99.8	80.5
10:48	6.99	160	2.75	14.0	1.65	1.073	7.71	99.4	59.0
10:53	6.99	160	2.96	14.2	1.67	1.074	7.71	98.9	50.0
10:58	6.99	160	3.17	14.1	1.64	1.075	7.72	100.2	56.2

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
10:58	3.17	14.1	1.64	1.075	7.72	100.20	56.2	6.99	Cloudy

SAMPLE ID: MW-13 01192022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 3.17 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-13

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-14

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

11.99 DEPTH TO WATER (FT) 21.2 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
MONITORING WELL MW-14 WAS DRY - NO SAMPLE COLLECTED									
13:10	12.27	120	0.32	17	6.36	1.091	7.28	86.3	33.4
13:15	12.44	120	0.48	17.3	6.17	1.097	7.26	88.7	28.6
13:20	12.72	120	0.63	17.3	6.28	1.132	7.26	90.5	37.8
13:25	12.89	120	0.79	17.4	6.27	1.183	7.25	91.6	37.7
13:30	13.17	120	0.95	17.4	6.25	1.217	7.24	92.2	32.2
13:35	13.17	120	1.11	17.4	6.18	1.223	7.23	92.3	31.5
13:40	13.17	120	1.27	17.4	6.25	1.218	7.23	92.5	24.9

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
13:40	1.27	17.4	6.25	1.218	7.23	92.50	24.9	13.17	Clear

SAMPLE ID: MW-14 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.27 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-14

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6) [redacted]	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-15

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

21.05 DEPTH TO WATER (FT) 38.69 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

31 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
15:00	21.05	150	0.20	14.6	2.83	5.292	6.88	105.6	17.2
15:05	21.27	150	0.40	15.0	2.41	5.401	6.78	110.5	13.5
15:10	21.73	150	0.59	15.4	2.22	5.426	6.75	114.5	14.7
15:15	21.73	150	0.79	15.5	2.20	5.428	6.74	116.7	12.4
15:20	21.73	150	0.99	15.6	2.21	5.421	6.74	117.6	13.6

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
15:20	0.99	15.6	2.21	5.421	6.74	117.60	13.6	21.73	Clear

SAMPLE ID: MW-15 01192022 SAMPLE ID FOR QC: MW-15 01192022/DUP

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 0.99 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-15

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DUPLICATE SAMPLED FOR VOCs, PAHs, PCBs, AND METALS

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-16

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

17.29 DEPTH TO WATER (FT) 38.55 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

31 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
13:56	17.32	100	0.13	14	4.31	34.4	7.24	97.0	16.7
14:01	18.10	100	0.26	14.6	4.04	3.439	7.17	100.7	14.6
14:06	18.10	100	0.40	14.5	3.93	3.464	7.17	102.1	13.0
14:11	18.10	100	0.53	14.5	3.97	3.463	7.17	103.4	12.3

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
14:11	0.53	14.5	3.97	3.463	7.17	103.40	12.3	18.10	Clear

SAMPLE ID: MW-16 01192022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.53 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-16

DATE: 1/19/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-17

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

10.9 DEPTH TO WATER (FT) 24.67 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

19 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
15:40	10.84	160	0.21	16.8	0.54	3.835	6.98	69.9	10.5
15:45	10.95	160	0.42	16.9	0.13	3.825	6.93	65.2	14.4
15:50	11.05	160	0.63	17.0	0.07	3.826	6.92	63.5	16.2
15:55	11.14	160	0.85	17.0	0.07	3.829	6.92	62.1	11.6
16:00	11.32	160	1.06	17.0	0.05	3.841	6.92	60.5	11.9
16:05	11.32	160	1.27	17.0	0.05	3.851	6.92	59.4	9.31
16:10	11.32	160	1.48	16.9	0.04	3.867	6.92	58.4	7.44

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
16:10	1.48	16.9	0.04	3.867	6.92	58.40	7.4	11.32	Clear

SAMPLE ID: MW-17 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.48 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-17

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-18

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

14.56 DEPTH TO WATER (FT) 28.7 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

21 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
14:29	14.56	160	0.21	17.6	6.79	9.067	6.86	90.5	12.5
14:34	14.70	160	0.42	17.8	2.91	9.080	6.83	91.5	10.6
14:39	14.92	160	0.63	17.8	2.85	9.091	6.83	91.7	7.67
14:44	14.92	160	0.85	17.8	2.75	9.079	6.82	91.6	6.07
14:49	14.92	160	1.06	17.8	2.77	9.090	6.82	91.4	5.81

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
14:49	1.06	17.8	2.77	9.090	6.82	91.40	5.8	14.92	Clear

SAMPLE ID: MW-18 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.06 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-18

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-19

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

20.1 DEPTH TO WATER (FT) 40.67 TOTAL DEPTH (FT) 2" WELL DIAMETER (IN)

33 DEPTH TO TOP OF PUMP (FT)

PUMPING EQUIPMENT

☐ DEDICATED BLADDER PUMP ☑ NONDEDICATED BLADDER PUMP ☐ BAILER

☐ OTHER:

Time (24 hr)	Depth to Water (ft TOC)	Flow Rate (ml/min)	Volume Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTUs)
10:55	20.41	160	0.21	15.7	4.48	1.665	6.96	90.7	43.4
11:00	20.90	160	0.42	15.9	3.57	1.701	6.90	97.0	43.9
11:05	21.32	160	0.63	16.0	3.39	1.705	6.88	98.9	35.0
11:10	22.17	160	0.85	16.0	3.42	1.706	6.87	99.7	35.9
11:15	22.17	160	1.06	16.0	3.45	1.706	6.88	99.6	34.1
11:20	22.17	160	1.27	16.1	3.41	1.702	6.86	99.7	27.8

Sample Time (24 hr)	Total Purged (gals)	Temp (°C)	D.O. (mg/L)	Conductivity (mS/cm)	pH	ORP (mV)	Turbidity (NTUs)	Depth to Water (ft TOC)	Obs.
11:20	1.27	16.1	3.41	1.702	6.86	99.70	27.8	22.17	Clear

SAMPLE ID: MW-19 01182022 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals, Dissolved Metals

IDW TOTAL: 1.27 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-19

DATE: 1/18/2022 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	1/21/2022
REVIEWED:	Justin Carter		1/29/2022

1/17/22 178487 B. Lockwood

WEATHER: 30s PART CLOUDY

TASK: Q1 GW Sampling

715 Lockwood onsite

720 NO ICE IN CONTAINMENT ONSITE DUE TO SNOW. HOWEVER SNOW WILL NOT BE ABLE TO GAUGE WELLS. SNOW MUST BE BEGIN STORAGE

725 DRUMS IN GOOD SHAPE, NO LEAKS OR BUSTS. MOB TO MW-01 TO BEGIN GAUGING

WELL ID	DTW (BGS)	TD (BGS)	NOTES
MW-01	28.39	45.40	SLIGHT PRESSURE
MW-02	12.89	40.17	
MW-03	14.21	35.55	SLIGHT PRESSURE
MW-04	16.89	38.50	
MW-05	7.07	33.38	
MW-06	8.12	31.35	
MW-07	~~16.~~ 16.73	30.50	
MW-08	11.32	30.64	
MW-09	12.79	35.80	
MW-10	9.23	32.41	
MW-11	25.65	33.04	VAULT FULL
MW-12	12.80	45.82	
MW-13	6.00	21.20	
MW-14	11.99	21.20	DRY

1/17/22 178487 B. Lockwood

WELL ID	DTW (BGS)	TD (BGS)	NOTES
MW-15	21.05	38.69	
MW-16	17.29	38.55	
MW-17	10.90	24.67	
MW-18	14.56	28.70	
MW-19	20.10	40.02	

925 FINISH GAUGING WELLS, MOB TO MW-01 TO BEGIN SAMPLING. CALIBRATE YSI PRO HACH

1000 BEGIN PURGING MW-01

1050 FINISH PURGING MW-01, COLLECTING MW-01 01172022 (5)

1100 FINISH SAMPLING MW-01, BEGIN CLEANUP.

1120 FINISH CLEANUP, MOB TO MW-03

1140 BEGIN PURGING MW-03

1217 FINISH PURGING MW-03, BEGIN COLLECTING MW-03 01172022 (5)

1233 FINISH SAMPLING MW-03, BEGIN CLEANUP

1247 FINISH CLEANUP, QUICK BREAK

1320 SETUP ON MW-02

1330 BEGIN PURGING MW-02

1402 FINISH PURGING MW-02, BEGIN COLLECTING MW-02 01172022 (5)

1413 FINISH SAMPLING MW-02, BEGIN CLEANUP.

Rite in the Rain

1430 Finish cleanup. Mob to MW-05
1435 Begin setup on MW-05
1445 Begin purging MW-05
1527 Begin collecting MW-05 01172022 ?
Field Filtered (6).
1538 Finish sampling MW-05. Begin cleanup
1550 Finish cleanup. Mob to 107 to drop off frozen sensitive equipment.
1605 Lakwood offsite.

(b) (6)
[redacted]

Weather: 30s High 50, mostly Sunny
Task: O.I GW Sampling.

720 Lakwood onsite. Mob to 107 for equipment.
730 Mob to MW-04
[illegible] Calibrate YSI [illegible] Begin purging MW-04
822 Finish purging MW-04, collect MW-04 01182022 w/ MS/MSD and Field Filtered (18)
855 Finish sampling MW-04, Begin cleanup
910 Finish cleanup, Mob to MW-06
921 Begin purging MW-06
948 Finish purging, Begin sampling MW-06 01182022 (5)
1000 Finish sampling MW-06, Begin cleanup
1018 Finish cleanup. Called [illegible] office for access for MW-19. Will be 10-15 min.
1034 Setup on MW-19 [illegible] (see p. 19)
1049 Begin purging MW-19
1122 Finish purging MW-19, Begin collecting MW-19 01182022 w/ Field Filtered (6)
1138 Finish sampling MW-19. Begin cleanup
1155 Lakwood to Drop [illegible] Take Lunch
1215 Lakwood offsite for ~~lunch~~ [illegible]
1225 Lakwood onsite. Mob to MW-11
1240 Collect MW-11 01182022 with Field Filter (8)
1248 Mob to MW-14

1253 Begin Setup on MW-14

1304 Begin pumping MW-14

1342 Finish Purging, collect MW-14_01182022 (5)

1355 Finish Sampling MW-14, Begin cleanup

1408 Finish Cleanup, MOB to MW-18

1412 Begin Setup on MW-18

1414 Call TOKENS to set up courier for tomorrow afternoon

1422 Begin Pumping MW-18

1451 Finish purging MW-18, Begin collecting MW-18_01182022 (5)

1503 Finish sampling MW-18, Begin Cleanup

1520 Finish Cleanup MOB to MW-17

1525 Begin Setup on MW-17

1535 Begin Purging MW-17

1612 Finish Purging, Begin Sampling MW-17_01182022 (5)

1623 Finish Sampling MW-17, Begin Cleanup

1640 Finish cleanup, MOB to 107 to Drop off equip & coolers.

1658 Lakwood Offsite

(b) (6) [redacted]

Monitor 3D-46 Sung

Task: 01 GW Sampling

800 Lakwood onsite 10 107 to Pick up equipment

808 MOB to MW-10

812 Calibrate YSI/Hach & Setup on MW-10

827 Begin purging MW-10.

900 Finish Purging MW-10 Begin Sampling MW-10_01192022 (5)

910 Finish Sampling MW-10, Begin Cleanup

923 Finish Cleanup, MOB to MW-09

925 Car Parked on MW-09, will MOB to MW-13 & Return to MW-09 Later

930 Setup on MW-13

938 Begin Pumping MW-13

1100 Finish Purging MW-13, Begin Sampling MW-13_01192022 & Field Filter (6)

1122 Finish Sampling MW-13, Begin Cleanup

1123 Finish Cleanup MOB to DW

1128 MOB to MW-12

1135 Begin Setup on MW-12

1142 Begin Purging MW-12

1215 Begin Collecting MW-12_01192022 (5)

1235 Finish Sampling, Begin Cleanup

1252 Finish Cleanup, mob to 107 for coolers
1300 Offsite to meet Conner ? lunch
1320 Lockwood onsite, mob to mw-16
1335 Begin setup on mw-16
1348 Begin purging mw-16
1413 Finish purging mw-16, begin collecting mw-16 01192022 (5)
1426 Finish collecting mw-16, begin cleanup
1440 Finish cleanup, mob to mw-15
1445 Begin setup on mw-15
1505 Begin purging mw-15
1527 Finish purging mw-15, begin collecting mw-15 01192022 + DUP with PFAS filters (12)
1548 Finish sampling mw-15 begin cleanup
1600 Finish cleanup
1610 Lockwood offsite

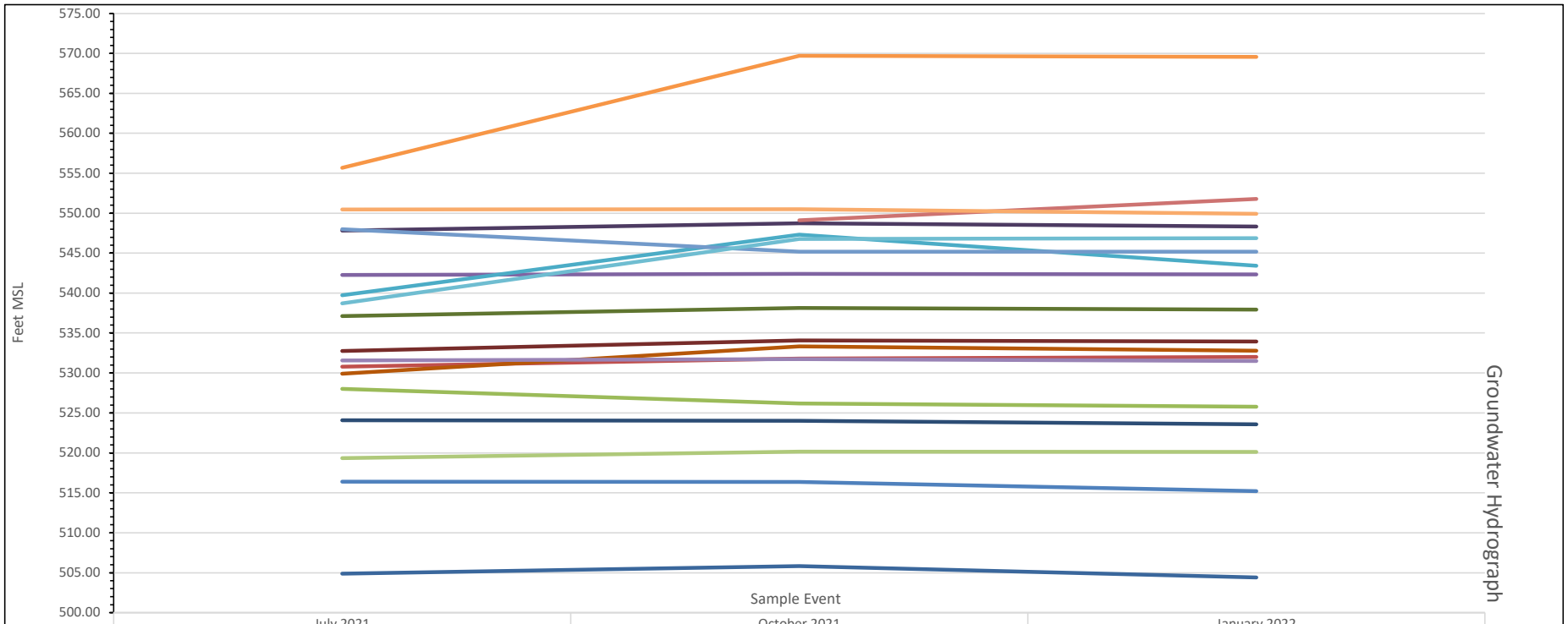
[redacted]

Weather < 32°
[illegible]

830 Lockwood onsite
835 mob to mw-09
900 Begin purging mw-09
938 Finish purging mw-09. Begin sampling mw-09 01202022
948 Finish sampling, begin cleanup
1000 Finish cleanup, mob to mw-08
1008 Begin setup on mw-08
1016 Begin purging mw-08
1042 Finish purging mw-08, begin collecting mw-08 01202022 + Explosives (11) w/ DUP
1075 Finish sampling mw-08, begin cleanup
1135 collect RinsE-01202022
1156 Finish cleanup, mob to mw-07
1157 Begin setup on mw-07
1208 Finish setup, begin purging mw-07
1245 Begin collecting mw-07 01202022
1257 Finish collecting mw-07, begin cleanup
1315 Finish cleanup, mob to drums to pack up
1340 Lockwood offsite to TekLab

[redacted]

APPENDIX B – GROUNDWATER HYDROGRAPH



	July 2021	October 2021	January 2022
MW-01	516.40	516.37	515.22
MW-02	530.80	531.78	532.02
MW-03	528.00	526.20	525.76
MW-04	542.28	542.41	542.35
MW-05	539.73	547.31	543.43
MW-06	555.70	569.69	569.56
MW-07	524.09	524.04	523.58
MW-08	532.77	534.09	533.95
MW-09	537.11	538.14	537.92
MW-10	547.84	548.74	548.35
MW-11			551.38
MW-12	529.90	533.34	532.78
MW-13	548.00	545.21	545.17
MW-14		549.12	551.78
MW-15	519.35	520.16	520.13
MW-16	531.58	531.74	531.51
MW-17	538.72	546.77	546.87
MW-18	550.49	550.50	549.91
MW-19	504.88	505.84	504.41

APPENDIX C – ANALYTICAL LABORATORY REPORTS

January 27, 2022

Justin Carter
Burns & McDonnell Waste Consultants
9400 Ward Parkway
P.O. Box 419173
Kansas City, MO 64114
TEL: (816) 333-9400
FAX: (816) 822-3494

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: BMCD KC GSA Goodfellow Groundwater **WorkOrder:** 22011006

Dear Justin Carter:

TEKLAB, INC received 13 samples on 1/19/2022 1:53:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

(b) (6)

Emily E. Hayer
Project Manager
(618)344-1004 ex 44
ehayer@teklabinc.com

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011006
Report Date: 27-Jan-22

This reporting package includes the following:

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011006
Report Date: 27-Jan-22

Cooler Receipt Temp: 1.8 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
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Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-001 **Client Sample ID:** MW-01 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 10:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/21/2022 19:16	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/21/2022 19:16	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/21/2022 19:16	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/21/2022 19:16	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/21/2022 19:16	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:42	186966
Surr: Decachlorobiphenyl	*	10-152		**82.1**	%REC	1	01/21/2022 18:42	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128	S	**135.4**	%REC	1	01/21/2022 18:42	186966
Surrogate recovery is outside control limits due to matrix interference.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:02	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**85.5**	%REC	1	01/20/2022 19:02	186944
Surr: Nitrobenzene-d5	*	29.1-125		**99.6**	%REC	1	01/20/2022 19:02	186944
Surr: p-Terphenyl-d14	*	35.2-164		**105.5**	%REC	1	01/20/2022 19:02	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-001 **Client Sample ID:** MW-01 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 10:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 13:43	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 13:43	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 13:43	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 13:43	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 13:43	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 13:43	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 13:43	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 13:43	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 13:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-001 **Client Sample ID:** MW-01 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 10:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 13:43	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 13:43	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 13:43	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 13:43	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 13:43	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**96.4**	%REC	1	01/21/2022 13:43	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-001
Client Sample ID: MW-01 01172022
Matrix: AQUEOUS
Collection Date: 01/17/2022 10:50

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: 4-Bromofluorobenzene	*	80-120		**97.2**	%REC	1	01/21/2022 13:43	187024
Surr: Toluene-d8	*	80-120		**93.6**	%REC	1	01/21/2022 13:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-002 **Client Sample ID:** MW-02 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 14:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/21/2022 19:18	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/21/2022 19:18	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/21/2022 19:18	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/21/2022 19:18	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/21/2022 19:18	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 18:58	186966
Surr: Decachlorobiphenyl	*	10-152		**59.7**	%REC	1	01/21/2022 18:58	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**117.5**	%REC	1	01/21/2022 18:58	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:39	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**73.2**	%REC	1	01/20/2022 21:39	186944
Surr: Nitrobenzene-d5	*	29.1-125		**95.9**	%REC	1	01/20/2022 21:39	186944
Surr: p-Terphenyl-d14	*	35.2-164		**84.2**	%REC	1	01/20/2022 21:39	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-002 **Client Sample ID:** MW-02 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 14:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:10	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:10	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:10	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 14:10	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 14:10	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 14:10	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 14:10	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 14:10	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-002 **Client Sample ID:** MW-02 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 14:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 14:10	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:10	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:10	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 14:10	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 14:10	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**93.9**	%REC	1	01/21/2022 14:10	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/21/2022 14:10	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-002
Client Sample ID: MW-02 01172022
Matrix: AQUEOUS
Collection Date: 01/17/2022 14:02

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.4**	%REC	1	01/21/2022 14:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-003 **Client Sample ID:** MW-03 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 12:17

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/21/2022 19:20	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/21/2022 19:20	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/21/2022 19:20	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/21/2022 19:20	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/21/2022 19:20	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:13	186966
Surr: Decachlorobiphenyl	*	10-152		**54.9**	%REC	1	01/21/2022 19:13	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**87.2**	%REC	1	01/21/2022 19:13	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:19	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**75.9**	%REC	1	01/20/2022 22:19	186944
Surr: Nitrobenzene-d5	*	29.1-125		**100.4**	%REC	1	01/20/2022 22:19	186944
Surr: p-Terphenyl-d14	*	35.2-164		**77.3**	%REC	1	01/20/2022 22:19	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-003 **Client Sample ID:** MW-03 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 12:17

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:37	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:37	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 14:37	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 14:37	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 14:37	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 14:37	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 14:37	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 14:37	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 14:37	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-003 **Client Sample ID:** MW-03 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 12:17

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 14:37	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:37	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 14:37	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 14:37	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 14:37	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.9**	%REC	1	01/21/2022 14:37	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.2**	%REC	1	01/21/2022 14:37	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-003
Client Sample ID: MW-03 01172022
Matrix: AQUEOUS
Collection Date: 01/17/2022 12:17

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.3**	%REC	1	01/21/2022 14:37	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-004 **Client Sample ID:** MW-05 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 15:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:56	187070
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/20/2022 20:41	186923
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/20/2022 20:41	186923
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/20/2022 20:41	186923
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/20/2022 20:41	186923
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/21/2022 19:21	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/21/2022 19:21	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/21/2022 19:21	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/21/2022 19:21	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/21/2022 19:21	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:28	186966
Surr: Decachlorobiphenyl	*	10-152		**66.6**	%REC	1	01/21/2022 19:28	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**103.4**	%REC	1	01/21/2022 19:28	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 22:58	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**68.8**	%REC	1	01/20/2022 22:58	186944
Surr: Nitrobenzene-d5	*	29.1-125		**90.1**	%REC	1	01/20/2022 22:58	186944
Surr: p-Terphenyl-d14	*	35.2-164		**86.2**	%REC	1	01/20/2022 22:58	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 15:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-004 **Client Sample ID:** MW-05 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 15:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/21/2022 15:03	187024
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:03	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:03	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:03	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 15:03	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 15:03	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 15:03	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 15:03	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-004 **Client Sample ID:** MW-05 01172022

Matrix: AQUEOUS **Collection Date:** 01/17/2022 15:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloroprene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Cyclohexanone	*	20.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 15:03	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 15:03	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 15:03	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 15:03	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-004
Client Sample ID: MW-05 01172022
Matrix: AQUEOUS
Collection Date: 01/17/2022 15:27

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 15:03	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.2**	%REC	1	01/21/2022 15:03	187024
Surr: 4-Bromofluorobenzene	*	80-120		**95.7**	%REC	1	01/21/2022 15:03	187024
Surr: Toluene-d8	*	80-120		**92.1**	%REC	1	01/21/2022 15:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-005 **Client Sample ID:** MW-04 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 8:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/20/2022 18:20	186949
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/20/2022 18:20	186949
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/20/2022 18:20	186949
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/20/2022 18:20	186949
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/20/2022 18:20	186949
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/21/2022 19:23	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/21/2022 19:23	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/21/2022 19:23	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/21/2022 19:23	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/21/2022 19:23	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 19:44	186966
Aroclor 1260	NELAP	1.00	R	**ND**	µg/L	1	01/21/2022 19:44	186966
Surr: Decachlorobiphenyl	*	10-152		**55.9**	%REC	1	01/21/2022 19:44	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**85.6**	%REC	1	01/21/2022 19:44	186966
RPD for MS/MSD was outside control limits.								
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 19:42	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**84.7**	%REC	1	01/20/2022 19:42	186944
Surr: Nitrobenzene-d5	*	29.1-125		**94.7**	%REC	1	01/20/2022 19:42	186944
Surr: p-Terphenyl-d14	*	35.2-164		**61.1**	%REC	1	01/20/2022 19:42	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:30	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:30	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:30	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 15:30	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-005 **Client Sample ID:** MW-04 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 8:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	01/21/2022 15:30	187024
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/21/2022 15:30	187024
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,1-Dichloroethene	NELAP	2.0	S	ND	µg/L	1	01/21/2022 15:30	187024
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:30	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:30	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 15:30	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 15:30	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 15:30	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-005 **Client Sample ID:** MW-04 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 8:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 15:30	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Diisopropyl ether	*	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Iodomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Naphthalene	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
n-Butyl acetate	*	2.0		ND	µg/L	1	01/21/2022 15:30	187024
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
n-Heptane	*	5.0		ND	µg/L	1	01/21/2022 15:30	187024
n-Hexane	*	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/21/2022 15:30	187024
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
o-Xylene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Propionitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Styrene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/21/2022 15:30	187024
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/21/2022 15:30	187024
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/21/2022 15:30	187024
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/21/2022 15:30	187024
Toluene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 15:30	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-005 **Client Sample ID:** MW-04 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 8:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichloroethene	NELAP	2.0	S	**ND**	µg/L	1	01/21/2022 15:30	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:30	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 15:30	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 15:30	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 15:30	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**93.9**	%REC	1	01/21/2022 15:30	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/21/2022 15:30	187024
Surr: Toluene-d8	*	80-120		**91.9**	%REC	1	01/21/2022 15:30	187024

Matrix spike duplicate did not recover within control limits due to sample composition.

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-006 **Client Sample ID:** MW-06 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 9:48

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:05	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:05	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:05	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:05	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 20:05	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:30	186966
Surr: Decachlorobiphenyl	*	10-152		**62.9**	%REC	1	01/21/2022 20:30	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**97.8**	%REC	1	01/21/2022 20:30	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 20:35	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**68.8**	%REC	1	01/20/2022 20:35	186944
Surr: Nitrobenzene-d5	*	29.1-125		**101.1**	%REC	1	01/20/2022 20:35	186944
Surr: p-Terphenyl-d14	*	35.2-164		**53.1**	%REC	1	01/20/2022 20:35	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-006 **Client Sample ID:** MW-06 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 9:48

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 16:50	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 16:50	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 16:50	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 16:50	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 16:50	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 16:50	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 16:50	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 16:50	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 16:50	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-006 **Client Sample ID:** MW-06 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 9:48

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 16:50	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 16:50	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 16:50	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 16:50	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 16:50	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.1**	%REC	1	01/21/2022 16:50	187024
Surr: 4-Bromofluorobenzene	*	80-120		**97.0**	%REC	1	01/21/2022 16:50	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-006
Client Sample ID: MW-06 01182022
Matrix: AQUEOUS
Collection Date: 01/18/2022 9:48

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.2**	%REC	1	01/21/2022 16:50	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-007 **Client Sample ID:** MW-19 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 11:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/20/2022 18:26	186949
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/20/2022 18:26	186949
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/20/2022 18:26	186949
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/20/2022 18:26	186949
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/20/2022 18:26	186949
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:07	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:07	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:07	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:07	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 20:07	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 20:45	186966
Surr: Decachlorobiphenyl	*	10-152		**75.4**	%REC	1	01/21/2022 20:45	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**103.4**	%REC	1	01/21/2022 20:45	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/20/2022 21:13	186944
Surr: 2-Fluorobiphenyl	*	1.39-137		**77.2**	%REC	1	01/20/2022 21:13	186944
Surr: Nitrobenzene-d5	*	29.1-125		**102.9**	%REC	1	01/20/2022 21:13	186944
Surr: p-Terphenyl-d14	*	35.2-164		**65.1**	%REC	1	01/20/2022 21:13	186944
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 17:17	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-007 **Client Sample ID:** MW-19 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 11:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/21/2022 17:17	187024
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:17	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:17	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:17	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 17:17	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 17:17	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 17:17	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 17:17	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:17	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-007 **Client Sample ID:** MW-19 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 11:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloroprene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Cyclohexanone	*	20.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 17:17	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 17:17	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 17:17	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 17:17	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-007 **Client Sample ID:** MW-19 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 11:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 17:17	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.7**	%REC	1	01/21/2022 17:17	187024
Surr: 4-Bromofluorobenzene	*	80-120		**95.7**	%REC	1	01/21/2022 17:17	187024
Surr: Toluene-d8	*	80-120		**92.2**	%REC	1	01/21/2022 17:17	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-008 **Client Sample ID:** MW-11 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/20/2022 18:27	186949
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/20/2022 18:27	186949
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/20/2022 18:27	186949
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/20/2022 18:27	186949
Zinc	NELAP	0.0100		**0.0113**	mg/L	1	01/20/2022 18:27	186949
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:08	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:08	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:08	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:08	186940
Zinc	NELAP	0.0100		**0.0229**	mg/L	1	01/24/2022 20:08	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:00	186966
Surr: Decachlorobiphenyl	*	10-152		**63.2**	%REC	1	01/21/2022 21:00	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**107.7**	%REC	1	01/21/2022 21:00	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Acenaphthylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Benzo(a)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Benzo(a)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Benzo(b)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Benzo(g,h,i)perylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Benzo(k)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Chrysene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Dibenzo(a,h)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Fluorene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Naphthalene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Phenanthrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 13:45	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**60.8**	%REC	1	01/25/2022 13:45	187073
Surr: Nitrobenzene-d5	*	29.1-125		**79.5**	%REC	1	01/25/2022 13:45	187073
Surr: p-Terphenyl-d14	*	35.2-164		**87.5**	%REC	1	01/25/2022 13:45	187073
Elevated reporting limit due to sample composition.								
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:43	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:43	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:43	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 17:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-008 **Client Sample ID:** MW-11 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	01/21/2022 17:43	187024
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/21/2022 17:43	187024
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:43	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:43	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 17:43	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 17:43	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 17:43	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-008 **Client Sample ID:** MW-11 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 17:43	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Diisopropyl ether	*	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Iodomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Naphthalene	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
n-Butyl acetate	*	2.0		ND	µg/L	1	01/21/2022 17:43	187024
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
n-Heptane	*	5.0		ND	µg/L	1	01/21/2022 17:43	187024
n-Hexane	*	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/21/2022 17:43	187024
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
o-Xylene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Propionitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Styrene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/21/2022 17:43	187024
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/21/2022 17:43	187024
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/21/2022 17:43	187024
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/21/2022 17:43	187024
Toluene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 17:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-008 **Client Sample ID:** MW-11 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:43	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:43	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 17:43	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 17:43	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 17:43	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**93.0**	%REC	1	01/21/2022 17:43	187024
Surr: 4-Bromofluorobenzene	*	80-120		**95.4**	%REC	1	01/21/2022 17:43	187024
Surr: Toluene-d8	*	80-120		**91.9**	%REC	1	01/21/2022 17:43	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-009 **Client Sample ID:** MW-14 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 13:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:10	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:10	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:10	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:10	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 20:10	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:15	186966
Surr: Decachlorobiphenyl	*	10-152		**87.4**	%REC	1	01/21/2022 21:15	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**117.3**	%REC	1	01/21/2022 21:15	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 14:25	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**69.5**	%REC	1	01/25/2022 14:25	187073
Surr: Nitrobenzene-d5	*	29.1-125		**88.3**	%REC	1	01/25/2022 14:25	187073
Surr: p-Terphenyl-d14	*	35.2-164		**101.4**	%REC	1	01/25/2022 14:25	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-009 **Client Sample ID:** MW-14 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 13:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:10	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:10	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:10	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 18:10	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 18:10	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 18:10	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 18:10	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 18:10	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-009 **Client Sample ID:** MW-14 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 13:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 18:10	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:10	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:10	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 18:10	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 18:10	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.2**	%REC	1	01/21/2022 18:10	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.2**	%REC	1	01/21/2022 18:10	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-009
Client Sample ID: MW-14 01182022
Matrix: AQUEOUS
Collection Date: 01/18/2022 13:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.7**	%REC	1	01/21/2022 18:10	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-010 **Client Sample ID:** MW-18 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 14:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:12	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:12	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:12	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:12	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 20:12	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:31	186966
Surr: Decachlorobiphenyl	*	10-152		**72.4**	%REC	1	01/21/2022 21:31	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**113.2**	%REC	1	01/21/2022 21:31	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:05	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**83.0**	%REC	1	01/25/2022 15:05	187073
Surr: Nitrobenzene-d5	*	29.1-125		**100.0**	%REC	1	01/25/2022 15:05	187073
Surr: p-Terphenyl-d14	*	35.2-164		**85.1**	%REC	1	01/25/2022 15:05	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-010 **Client Sample ID:** MW-18 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 14:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:36	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:36	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 18:36	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 18:36	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 18:36	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 18:36	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 18:36	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 18:36	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 18:36	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-010 **Client Sample ID:** MW-18 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 14:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 18:36	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:36	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 18:36	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 18:36	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 18:36	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.4**	%REC	1	01/21/2022 18:36	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/21/2022 18:36	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-010
Client Sample ID: MW-18 01182022
Matrix: AQUEOUS
Collection Date: 01/18/2022 14:51

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**93.0**	%REC	1	01/21/2022 18:36	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-011 **Client Sample ID:** MW-17 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 16:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 20:14	186940
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 20:14	186940
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 20:14	186940
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 20:14	186940
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 20:14	186940
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 21:46	186966
Surr: Decachlorobiphenyl	*	10-152		**62.9**	%REC	1	01/21/2022 21:46	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**102.9**	%REC	1	01/21/2022 21:46	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 15:44	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**80.4**	%REC	1	01/25/2022 15:44	187073
Surr: Nitrobenzene-d5	*	29.1-125		**94.2**	%REC	1	01/25/2022 15:44	187073
Surr: p-Terphenyl-d14	*	35.2-164		**74.8**	%REC	1	01/25/2022 15:44	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-011 **Client Sample ID:** MW-17 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 16:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/21/2022 19:03	187024
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/21/2022 19:03	187024
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/21/2022 19:03	187024
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
2-Butanone	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
Acetone	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 19:03	187024
Acrolein	NELAP	20.0		ND	µg/L	1	01/21/2022 19:03	187024
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
Benzene	NELAP	0.5		ND	µg/L	1	01/21/2022 19:03	187024
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Bromoform	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Bromomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 19:03	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 19:03	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 19:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-011 **Client Sample ID:** MW-17 01182022

Matrix: AQUEOUS **Collection Date:** 01/18/2022 16:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
n-Heptane	*	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
n-Hexane	*	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/21/2022 19:03	187024
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 19:03	187024
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Styrene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/21/2022 19:03	187024
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 19:03	187024
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 19:03	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.2**	%REC	1	01/21/2022 19:03	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/21/2022 19:03	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-011
Client Sample ID: MW-17 01182022
Matrix: AQUEOUS
Collection Date: 01/18/2022 16:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.9**	%REC	1	01/21/2022 19:03	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-012 **Client Sample ID:** TB

Matrix: TRIP BLANK **Collection Date:** 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2-Butanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Acetone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Acrolein	NELAP	20.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Benzene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 11:31	187024
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Bromoform	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Bromomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-012 **Client Sample ID:** TB

Matrix: TRIP BLANK **Collection Date:** 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 11:31	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Diisopropyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/21/2022 11:31	187024
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Iodomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Naphthalene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
n-Butyl acetate	*	2.0		ND	µg/L	1	01/21/2022 11:31	187024
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
n-Heptane	*	5.0		ND	µg/L	1	01/21/2022 11:31	187024
n-Hexane	*	5.0		ND	µg/L	1	01/21/2022 11:31	187024
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/21/2022 11:31	187024
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
o-Xylene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Propionitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 11:31	187024
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Styrene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:31	187024
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/21/2022 11:31	187024
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:31	187024
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/21/2022 11:31	187024
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/21/2022 11:31	187024

Client: Burns & McDonnell Waste Consultants
Work Order: 22011006
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011006-012
Client Sample ID: TB
Matrix: TRIP BLANK
Collection Date: 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 11:31	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.1**	%REC	1	01/21/2022 11:31	187024
Surr: 4-Bromofluorobenzene	*	80-120		**97.5**	%REC	1	01/21/2022 11:31	187024
Surr: Toluene-d8	*	80-120		**93.4**	%REC	1	01/21/2022 11:31	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-013 **Client Sample ID:** TB

Matrix: TRIP BLANK **Collection Date:** 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2-Butanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:57	187024
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:57	187024
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Acetone	NELAP	10.0		**15.0**	µg/L	1	01/21/2022 11:57	187024
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Acrolein	NELAP	20.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Benzene	NELAP	0.5		**ND**	µg/L	1	01/21/2022 11:57	187024
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Bromoform	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Bromomethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-013 **Client Sample ID:** TB

Matrix: TRIP BLANK **Collection Date:** 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Chloroethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Chloroform	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Chloromethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Chloroprene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Cyclohexanone	*	20.0		ND	µg/L	1	01/21/2022 11:57	187024
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Diisopropyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/21/2022 11:57	187024
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Iodomethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Naphthalene	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
n-Butyl acetate	*	2.0		ND	µg/L	1	01/21/2022 11:57	187024
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
n-Heptane	*	5.0		ND	µg/L	1	01/21/2022 11:57	187024
n-Hexane	*	5.0		ND	µg/L	1	01/21/2022 11:57	187024
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/21/2022 11:57	187024
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
o-Xylene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Propionitrile	NELAP	10.0		ND	µg/L	1	01/21/2022 11:57	187024
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Styrene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/21/2022 11:57	187024
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/21/2022 11:57	187024
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/21/2022 11:57	187024
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/21/2022 11:57	187024
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/21/2022 11:57	187024

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011006-013 **Client Sample ID:** TB

Matrix: TRIP BLANK **Collection Date:** 01/19/2022 13:53

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Toluene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/21/2022 11:57	187024
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.7**	%REC	1	01/21/2022 11:57	187024
Surr: 4-Bromofluorobenzene	*	80-120		**96.5**	%REC	1	01/21/2022 11:57	187024
Surr: Toluene-d8	*	80-120		**93.1**	%REC	1	01/21/2022 11:57	187024

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011006
Report Date: 27-Jan-22

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
22011006-001	MW-01 01172022	Aqueous	4	01/17/2022 10:50
22011006-002	MW-02 01172022	Aqueous	4	01/17/2022 14:02
22011006-003	MW-03 01172022	Aqueous	4	01/17/2022 12:17
22011006-004	MW-05 01172022	Aqueous	5	01/17/2022 15:27
22011006-005	MW-04 01182022	Aqueous	5	01/18/2022 8:22
22011006-006	MW-06 01182022	Aqueous	4	01/18/2022 9:48
22011006-007	MW-19 01182022	Aqueous	5	01/18/2022 11:22
22011006-008	MW-11 01182022	Aqueous	5	01/18/2022 12:40
22011006-009	MW-14 01182022	Aqueous	4	01/18/2022 13:42
22011006-010	MW-18 01182022	Aqueous	4	01/18/2022 14:51
22011006-011	MW-17 01182022	Aqueous	4	01/18/2022 16:12
22011006-012	TB	Trip Blank	1	01/19/2022 13:53
22011006-013	TB	Trip Blank	1	01/19/2022 13:53

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
22011006-001A	MW-01 01172022	01/17/2022 10:50	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 9:20	01/21/2022 18:42
22011006-001B	MW-01 01172022	01/17/2022 10:50	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 19:02
22011006-001C	MW-01 01172022	01/17/2022 10:50	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/21/2022 19:16
22011006-001D	MW-01 01172022	01/17/2022 10:50	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 13:43
22011006-002A	MW-02 01172022	01/17/2022 14:02	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 9:20	01/21/2022 18:58
22011006-002B	MW-02 01172022	01/17/2022 14:02	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 21:39
22011006-002C	MW-02 01172022	01/17/2022 14:02	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/21/2022 19:18
22011006-002D	MW-02 01172022	01/17/2022 14:02	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 14:10
22011006-003A	MW-03 01172022	01/17/2022 12:17	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 9:20	01/21/2022 19:13
22011006-003B	MW-03 01172022	01/17/2022 12:17	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 22:19
22011006-003C	MW-03 01172022	01/17/2022 12:17	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/21/2022 19:20
22011006-003D	MW-03 01172022	01/17/2022 12:17	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 14:37
22011006-004A	MW-05 01172022	01/17/2022 15:27	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 9:20	01/21/2022 19:28
22011006-004B	MW-05 01172022	01/17/2022 15:27	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 22:58
22011006-004C	MW-05 01172022	01/17/2022 15:27	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/21/2022 19:21
22011006-004D	MW-05 01172022	01/17/2022 15:27	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/19/2022 23:17	01/20/2022 20:41
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/24/2022 14:25	01/24/2022 20:56
22011006-004E	MW-05 01172022	01/17/2022 15:27	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 15:03

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
22011006-005A	MW-04 01182022	01/18/2022 8:22	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 9:20	01/21/2022 19:44
22011006-005B	MW-04 01182022	01/18/2022 8:22	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 19:42
22011006-005C	MW-04 01182022	01/18/2022 8:22	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/21/2022 19:23
22011006-005D	MW-04 01182022	01/18/2022 8:22	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/20/2022 8:50	01/20/2022 18:20
22011006-005E	MW-04 01182022	01/18/2022 8:22	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 15:30
22011006-006A	MW-06 01182022	01/18/2022 9:48	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 20:30
22011006-006B	MW-06 01182022	01/18/2022 9:48	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 20:35
22011006-006C	MW-06 01182022	01/18/2022 9:48	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:05
22011006-006D	MW-06 01182022	01/18/2022 9:48	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 16:50
22011006-007A	MW-19 01182022	01/18/2022 11:22	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 20:45
22011006-007B	MW-19 01182022	01/18/2022 11:22	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/20/2022 11:18	01/20/2022 21:13
22011006-007C	MW-19 01182022	01/18/2022 11:22	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:07
22011006-007D	MW-19 01182022	01/18/2022 11:22	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/20/2022 8:50	01/20/2022 18:26
22011006-007E	MW-19 01182022	01/18/2022 11:22	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 17:17
22011006-008A	MW-11 01182022	01/18/2022 12:40	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 21:00
22011006-008B	MW-11 01182022	01/18/2022 12:40	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 13:45
22011006-008C	MW-11 01182022	01/18/2022 12:40	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:08
22011006-008D	MW-11 01182022	01/18/2022 12:40	01/19/2022 13:53		

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/20/2022 8:50	01/20/2022 18:27
22011006-008E	MW-11 01182022	01/18/2022 12:40	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 17:43
22011006-009A	MW-14 01182022	01/18/2022 13:42	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 21:15
22011006-009B	MW-14 01182022	01/18/2022 13:42	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 14:25
22011006-009C	MW-14 01182022	01/18/2022 13:42	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:10
22011006-009D	MW-14 01182022	01/18/2022 13:42	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 18:10
22011006-010A	MW-18 01182022	01/18/2022 14:51	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 21:31
22011006-010B	MW-18 01182022	01/18/2022 14:51	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 15:05
22011006-010C	MW-18 01182022	01/18/2022 14:51	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:12
22011006-010D	MW-18 01182022	01/18/2022 14:51	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 18:36
22011006-011A	MW-17 01182022	01/18/2022 16:12	01/19/2022 13:53		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 21:46
22011006-011B	MW-17 01182022	01/18/2022 16:12	01/19/2022 13:53		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 15:44
22011006-011C	MW-17 01182022	01/18/2022 16:12	01/19/2022 13:53		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/20/2022 7:30	01/24/2022 20:14
22011006-011D	MW-17 01182022	01/18/2022 16:12	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 19:03
22011006-012A	TB	01/19/2022 13:53	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 11:31
22011006-013A	TB	01/19/2022 13:53	01/19/2022 13:53		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/21/2022 11:57

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 186923 **SampType:** MBLK Units **mg/L**

SampID: MBLK-186923

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/20/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/20/2022
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	01/20/2022
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	01/20/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/20/2022

Batch 186923 **SampType:** LCS Units **mg/L**

SampID: LCS-186923

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		0.0250		**0.466**	0.5000	0	93.2	85	115	01/20/2022
Copper		0.0050		**0.229**	0.2500	0	91.5	85	115	01/20/2022
Lead		0.0150		**0.451**	0.5000	0	90.2	85	115	01/20/2022
Zinc		0.0100		**0.441**	0.5000	0	88.3	85	115	01/20/2022

Batch 186923 **SampType:** MS Units **mg/L**

SampID: 22011006-004DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Arsenic		0.0250		**0.475**	0.5000	0	95.1	75	125	01/20/2022
Copper		0.0050		**0.233**	0.2500	0	93.2	75	125	01/20/2022
Lead		0.0150		**0.446**	0.5000	0	89.3	75	125	01/20/2022
Zinc		0.0100		**0.451**	0.5000	0	90.2	75	125	01/20/2022

Batch 186923 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 22011006-004DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Arsenic		0.0250		**0.489**	0.5000	0	97.8	0.4754	2.86	01/20/2022
Copper		0.0050		**0.236**	0.2500	0	94.4	0.2330	1.32	01/20/2022
Lead		0.0150		**0.456**	0.5000	0	91.3	0.4465	2.19	01/20/2022
Zinc		0.0100		**0.458**	0.5000	0	91.5	0.4509	1.50	01/20/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 186949 **SampType:** MBLK Units **mg/L**

SampID: MBLK-186949

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/20/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/20/2022
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	01/20/2022
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	01/20/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/20/2022

Batch 186949 **SampType:** LCS Units **mg/L**

SampID: LCS-186949

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.442**	0.5000	0	88.3	85	115	01/20/2022
Arsenic		0.0250		**0.490**	0.5000	0	97.9	85	115	01/20/2022
Copper		0.0050		**0.243**	0.2500	0	97.3	85	115	01/20/2022
Lead		0.0150		**0.475**	0.5000	0	95.0	85	115	01/20/2022
Zinc		0.0100		**0.465**	0.5000	0	93.1	85	115	01/20/2022

Batch 186949 **SampType:** MS Units **mg/L**

SampID: 22011006-005DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.464**	0.5000	0	92.9	75	125	01/20/2022
Arsenic		0.0250		**0.486**	0.5000	0	97.2	75	125	01/20/2022
Copper		0.0050		**0.238**	0.2500	0	95.0	75	125	01/20/2022
Lead		0.0150		**0.465**	0.5000	0	93.0	75	125	01/20/2022
Zinc		0.0100		**0.463**	0.5000	0	92.7	75	125	01/20/2022

Batch 186949 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 22011006-005DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.478**	0.5000	0	95.7	0.4643	2.97	01/20/2022
Arsenic		0.0250		**0.507**	0.5000	0	101.4	0.4862	4.21	01/20/2022
Copper		0.0050		**0.245**	0.2500	0	97.9	0.2375	2.99	01/20/2022
Lead		0.0150		**0.475**	0.5000	0	95.0	0.4650	2.17	01/20/2022
Zinc		0.0100		**0.479**	0.5000	0	95.8	0.4633	3.37	01/20/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 187070 **SampType:** MBLK Units **mg/L**
SampID: MBLK-187070

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/24/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/24/2022
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	01/24/2022
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	01/24/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/24/2022

Batch 187070 **SampType:** LCS Units **mg/L**
SampID: LCS-187070

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.460**	0.5000	0	92.1	85	115	01/24/2022
Arsenic		0.0250		**0.514**	0.5000	0	102.7	85	115	01/24/2022
Copper		0.0050		**0.241**	0.2500	0	96.4	85	115	01/24/2022
Lead		0.0150		**0.486**	0.5000	0	97.3	85	115	01/24/2022
Zinc		0.0100		**0.481**	0.5000	0	96.3	85	115	01/24/2022

Batch 187070 **SampType:** MS Units **mg/L**
SampID: 22011006-004DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.942**	1.000	0	94.2	75	125	01/24/2022

Batch 187070 **SampType:** MSD Units **mg/L** RPD Limit **20**
SampID: 22011006-004DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.888**	1.000	0	88.8	0.9419	5.87	01/24/2022

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 186940 **SampType:** MBLK Units **mg/L**
SampID: MBLK-186940

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/21/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/21/2022
Copper		0.0050		**< 0.0050**	0.0013	0	100.0	-100	100	01/21/2022
Lead		0.0150		**< 0.0150**	0.0040	0	0	-100	100	01/21/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 186940 **SampType:** LCS Units **mg/L**

SampID: LCS-186940

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.484**	0.5000	0	96.8	85	115	01/21/2022
Arsenic		0.0250		**0.513**	0.5000	0	102.7	85	115	01/21/2022
Copper		0.0050		**0.250**	0.2500	0	100.0	85	115	01/21/2022
Lead		0.0150		**0.481**	0.5000	0	96.3	85	115	01/21/2022
Zinc		0.0100		**0.471**	0.5000	0	94.3	85	115	01/21/2022

Batch 186940 **SampType:** MS Units **mg/L**

SampID: 22011006-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.468**	0.5000	0	93.5	75	125	01/21/2022
Arsenic		0.0250		**0.496**	0.5000	0	99.2	75	125	01/21/2022
Copper		0.0050		**0.235**	0.2500	0.001900	93.4	75	125	01/21/2022
Lead		0.0150		**0.462**	0.5000	0.006200	91.1	75	125	01/21/2022
Zinc		0.0100		**0.457**	0.5000	0	91.4	75	125	01/21/2022

Batch 186940 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 22011006-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.493**	0.5000	0	98.6	0.4676	5.31	01/21/2022
Arsenic		0.0250		**0.518**	0.5000	0	103.6	0.4958	4.38	01/21/2022
Copper		0.0050		**0.251**	0.2500	0.001900	99.6	0.2354	6.37	01/21/2022
Lead		0.0150		**0.477**	0.5000	0.006200	94.1	0.4617	3.20	01/21/2022
Zinc		0.0100		**0.479**	0.5000	0	95.8	0.4568	4.70	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 186966 **SampType:** MBLK Units µg/L

SampID: MBLK-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		**ND**						01/21/2022
Aroclor 1016		1.00		**ND**						01/21/2022
Aroclor 1221		1.00		**ND**						01/21/2022
Aroclor 1221		0.095		**ND**						01/21/2022
Aroclor 1232		0.095		**ND**						01/21/2022
Aroclor 1232		1.00		**ND**						01/21/2022
Aroclor 1242		1.00		**ND**						01/21/2022
Aroclor 1242		0.095		**ND**						01/21/2022
Aroclor 1248		1.00		**ND**						01/21/2022
Aroclor 1248		0.095		**ND**						01/21/2022
Aroclor 1254		1.00		**ND**						01/21/2022
Aroclor 1254		0.095		**ND**						01/21/2022
Aroclor 1260		1.00		**ND**						01/21/2022
Aroclor 1260		0.095		**ND**						01/21/2022
Surr: Decachlorobiphenyl	*			**0.08**	0.1250		62.2	27.5	143	01/21/2022
Surr: Decachlorobiphenyl	*			**0.115**	0.1250		91.9	31.2	141	01/24/2022
Surr: Decachlorobiphenyl	*			**0.078**	0.1250		62.2	31.2	141	01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.12**	0.1250		92.8	35.2	135	01/21/2022

Batch 186966 **SampType:** LCS Units µg/L

SampID: LCSPCB-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		**2.33**	2.500	0	93.2	50	140	01/21/2022
Aroclor 1016		1.00		**2.33**	2.500	0	93.2	56.2	136	01/21/2022
Aroclor 1260		1.00		**2.03**	2.500	0	81.1	42.1	125	01/21/2022
Aroclor 1260		0.095		**2.03**	2.500	0	81.1	8	140	01/21/2022
Surr: Decachlorobiphenyl	*			**0.09**	0.1250		74.9	27.5	143	01/21/2022
Surr: Decachlorobiphenyl	*			**0.094**	0.1250		74.9	31.2	141	01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.11**	0.1250		87.2	35.2	135	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 186966 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSPCBD-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		1.00		**2.39**	2.500	0	95.8	2.330	2.70	01/21/2022
Aroclor 1016		0.095		**2.39**	2.500	0	95.8	2.330	2.70	01/21/2022
Aroclor 1260		1.00		**2.15**	2.500	0	86.1	2.028	5.96	01/21/2022
Aroclor 1260		0.095		**2.15**	2.500	0	86.1	2.028	5.96	01/21/2022
Surr: Decachlorobiphenyl	*			**0.105**	0.1250		84.4			01/21/2022
Surr: Decachlorobiphenyl	*			**0.11**	0.1250		84.4			01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.11**	0.1250		90.7			01/21/2022

Batch 186966 **SampType:** LCS Units %REC

SampID: LCSPST-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.128**	0.1250		102.3	31.2	141	01/24/2022

Batch 186966 **SampType:** LCSD Units %REC RPD Limit 0

SampID: LCSPSTD-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.120**	0.1250		96.4			01/24/2022

Batch 186966 **SampType:** MS Units µg/L

SampID: 22011006-005AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**2.69**	2.500	0	107.5	51	130	01/21/2022
Aroclor 1260		1.00		**2.38**	2.500	0	95.1	38.4	123	01/21/2022
Surr: Decachlorobiphenyl	*			**0.08**	0.1250		67.4	10	152	01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.13**	0.1250		103.0	9.73	128	01/21/2022

Batch 186966 **SampType:** MSD Units µg/L RPD Limit 40

SampID: 22011006-005AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		1.00		**2.21**	2.500	0	88.3	2.688	19.64	01/21/2022
Aroclor 1260		1.00	R	**1.56**	2.500	0	62.3	2.377	41.70	01/21/2022
Surr: Decachlorobiphenyl	*			**0.06**	0.1250		51.0			01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.11**	0.1250		90.1			01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 186944 **SampType:** MBLK Units **mg/L**

SampID: MBLK-186944

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**ND**						01/20/2022
Acenaphthylene		0.00100		**ND**						01/20/2022
Anthracene		0.00100		**ND**						01/20/2022
Benzo(a)anthracene		0.00100		**ND**						01/20/2022
Benzo(a)pyrene		0.00100		**ND**						01/20/2022
Benzo(b)fluoranthene		0.00100		**ND**						01/20/2022
Benzo(g,h,i)perylene		0.00100		**ND**						01/20/2022
Benzo(k)fluoranthene		0.00100		**ND**						01/20/2022
Chrysene		0.00100		**ND**						01/20/2022
Dibenzo(a,h)anthracene		0.00100		**ND**						01/20/2022
Fluoranthene		0.00100		**ND**						01/20/2022
Fluorene		0.00100		**ND**						01/20/2022
Indeno(1,2,3-cd)pyrene		0.00100		**ND**						01/20/2022
Naphthalene		0.00100		**ND**						01/20/2022
Phenanthrene		0.00100		**ND**						01/20/2022
Pyrene		0.00100		**ND**						01/20/2022
Surr: 2-Fluorobiphenyl	*			**0.0100**	0.0125		80.3	1.09	175	01/20/2022
Surr: Nitrobenzene-d5	*			**0.0136**	0.0125		108.7	35.5	156	01/20/2022
Surr: p-Terphenyl-d14	*			**0.0143**	0.0125		114.2	35	222	01/20/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 186944 **SampType:** LCS Units **mg/L**

SampID: LCS-186944

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**0.0102**	0.0100	0	102.2	39.6	145	01/20/2022
Acenaphthylene		0.00100		**0.0100**	0.0100	0	100.3	38.3	147	01/20/2022
Anthracene		0.00100		**0.0110**	0.0100	0	110.1	47.7	153	01/20/2022
Benzo(a)anthracene		0.00100		**0.0113**	0.0100	0	112.6	45	136	01/20/2022
Benzo(a)pyrene		0.00100		**0.00991**	0.0100	0	99.1	49.8	164	01/20/2022
Benzo(b)fluoranthene		0.00100		**0.0120**	0.0100	0	119.7	45.7	167	01/20/2022
Benzo(g,h,i)perylene		0.00100		**0.0112**	0.0100	0	112.2	41	157	01/20/2022
Benzo(k)fluoranthene		0.00100		**0.0112**	0.0100	0	112.4	46.7	166	01/20/2022
Chrysene		0.00100		**0.00897**	0.0100	0	89.7	45.5	162	01/20/2022
Dibenzo(a,h)anthracene		0.00100		**0.0110**	0.0100	0	110.3	40.4	154	01/20/2022
Fluoranthene		0.00100		**0.0118**	0.0100	0	117.6	47.3	168	01/20/2022
Fluorene		0.00100		**0.0106**	0.0100	0	106.4	45.2	153	01/20/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0121**	0.0100	0	120.9	44.6	166	01/20/2022
Naphthalene		0.00100		**0.0101**	0.0100	0	100.6	16.6	137	01/20/2022
Phenanthrene		0.00100		**0.0101**	0.0100	0	101.5	50.8	149	01/20/2022
Pyrene		0.00100		**0.0115**	0.0100	0	115.0	44.9	163	01/20/2022
Surr: 2-Fluorobiphenyl	*			**0.0103**	0.0125		82.1	1.09	175	01/20/2022
Surr: Nitrobenzene-d5	*			**0.0133**	0.0125		106.1	35.5	156	01/20/2022
Surr: p-Terphenyl-d14	*			**0.0143**	0.0125		114.3	35	222	01/20/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 186944 **SampType:** LCSD Units **mg/L** RPD Limit **40**

SampID: LCSD-186944

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		**0.0105**	0.0100	0	105.0	0.01022	2.71	01/20/2022
Acenaphthylene		0.00100		**0.0104**	0.0100	0	103.6	0.01003	3.16	01/20/2022
Anthracene		0.00100		**0.0110**	0.0100	0	110.3	0.01101	0.19	01/20/2022
Benzo(a)anthracene		0.00100		**0.0117**	0.0100	0	117.0	0.01126	3.79	01/20/2022
Benzo(a)pyrene		0.00100		**0.0101**	0.0100	0	100.6	0.009908	1.50	01/20/2022
Benzo(b)fluoranthene		0.00100		**0.0120**	0.0100	0	120.1	0.01197	0.31	01/20/2022
Benzo(g,h,i)perylene		0.00100		**0.0116**	0.0100	0	115.7	0.01122	3.07	01/20/2022
Benzo(k)fluoranthene		0.00100		**0.0111**	0.0100	0	110.7	0.01124	1.51	01/20/2022
Chrysene		0.00100		**0.00911**	0.0100	0	91.1	0.008973	1.49	01/20/2022
Dibenzo(a,h)anthracene		0.00100		**0.0113**	0.0100	0	112.6	0.01103	2.12	01/20/2022
Fluoranthene		0.00100		**0.0123**	0.0100	0	123.2	0.01176	4.59	01/20/2022
Fluorene		0.00100		**0.0111**	0.0100	0	111.4	0.01064	4.61	01/20/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0124**	0.0100	0	123.7	0.01209	2.28	01/20/2022
Naphthalene		0.00100		**0.0104**	0.0100	0	104.2	0.01006	3.48	01/20/2022
Phenanthrene		0.00100		**0.0113**	0.0100	0	113.1	0.01015	10.89	01/20/2022
Pyrene		0.00100		**0.0124**	0.0100	0	123.6	0.01150	7.22	01/20/2022
Surr: 2-Fluorobiphenyl	*			**0.0109**	0.0125		87.6			01/20/2022
Surr: Nitrobenzene-d5	*			**0.0134**	0.0125		107.0			01/20/2022
Surr: p-Terphenyl-d14	*			**0.0137**	0.0125		109.3			01/20/2022

Batch 186944 **SampType:** LCSG Units **%REC**

SampID: LCSG-186944

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0112**	0.0125		89.3	1.09	175	01/20/2022
Surr: Nitrobenzene-d5	*			**0.0139**	0.0125		111.0	35.5	156	01/20/2022
Surr: p-Terphenyl-d14	*			**0.0151**	0.0125		120.9	35	222	01/20/2022

Batch 186944 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-186944

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0117**	0.0125		93.8			01/20/2022
Surr: Nitrobenzene-d5	*			**0.0139**	0.0125		111.2			01/20/2022
Surr: p-Terphenyl-d14	*			**0.0150**	0.0125		120.3			01/20/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 186944 **SampType:** MS Units **%REC**

SampID: 22011006-005BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0107**	0.0125		85.5	1.39	137	01/20/2022
Surr: Nitrobenzene-d5	*			**0.0119**	0.0125		95.1	29.1	125	01/20/2022
Surr: p-Terphenyl-d14	*			**0.00996**	0.0125		79.7	35.2	164	01/20/2022

Batch 186944 **SampType:** MSD Units **%REC** RPD Limit **0**

SampID: 22011006-005BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.00842**	0.0125		67.4			01/20/2022
Surr: Nitrobenzene-d5	*			**0.00868**	0.0125		69.5			01/20/2022
Surr: p-Terphenyl-d14	*			**0.00714**	0.0125		57.1			01/20/2022

Batch 187073 **SampType:** MBLK Units **mg/L**

SampID: MBLK-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**ND**						01/25/2022
Acenaphthylene		0.00100		**ND**						01/25/2022
Anthracene		0.00100		**ND**						01/25/2022
Benzo(a)anthracene		0.00100		**ND**						01/25/2022
Benzo(a)pyrene		0.00100		**ND**						01/25/2022
Benzo(b)fluoranthene		0.00100		**ND**						01/25/2022
Benzo(g,h,i)perylene		0.00100		**ND**						01/25/2022
Benzo(k)fluoranthene		0.00100		**ND**						01/25/2022
Chrysene		0.00100		**ND**						01/25/2022
Dibenzo(a,h)anthracene		0.00100		**ND**						01/25/2022
Fluoranthene		0.00100		**ND**						01/25/2022
Fluorene		0.00100		**ND**						01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**ND**						01/25/2022
Naphthalene		0.00100		**ND**						01/25/2022
Phenanthrene		0.00100		**ND**						01/25/2022
Pyrene		0.00100		**ND**						01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.00991**	0.0125		79.3	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0142**	0.0125		113.4	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0183**	0.0125		146.5	35	222	01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** LCS Units **mg/L**

SampID: LCS-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**0.00861**	0.0100	0	86.1	39.6	145	01/25/2022
Acenaphthylene		0.00100		**0.00907**	0.0100	0	90.7	38.3	147	01/25/2022
Anthracene		0.00100		**0.00968**	0.0100	0	96.8	47.7	153	01/25/2022
Benzo(a)anthracene		0.00100		**0.00958**	0.0100	0	95.8	45	136	01/25/2022
Benzo(a)pyrene		0.00100		**0.00860**	0.0100	0	86.0	49.8	164	01/25/2022
Benzo(b)fluoranthene		0.00100		**0.00987**	0.0100	0	98.7	45.7	167	01/25/2022
Benzo(g,h,i)perylene		0.00100		**0.0102**	0.0100	0	102.0	41	157	01/25/2022
Benzo(k)fluoranthene		0.00100		**0.00996**	0.0100	0	99.6	46.7	166	01/25/2022
Chrysene		0.00100		**0.00781**	0.0100	0	78.1	45.5	162	01/25/2022
Dibenzo(a,h)anthracene		0.00100		**0.0102**	0.0100	0	102.4	40.4	154	01/25/2022
Fluoranthene		0.00100		**0.0109**	0.0100	0	108.7	47.3	168	01/25/2022
Fluorene		0.00100		**0.00967**	0.0100	0	96.7	45.2	153	01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0104**	0.0100	0	104.4	44.6	166	01/25/2022
Naphthalene		0.00100		**0.00799**	0.0100	0	79.9	16.6	137	01/25/2022
Phenanthrene		0.00100		**0.0103**	0.0100	0	102.6	50.8	149	01/25/2022
Pyrene		0.00100		**0.0109**	0.0100	0	108.8	44.9	163	01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.0117**	0.0125		93.5	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0142**	0.0125		113.4	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0139**	0.0125		111.0	35	222	01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** LCSD Units **mg/L** RPD Limit **40**

SampID: LCSD-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		**0.00627**	0.0100	0	62.7	0.008606	31.45	01/25/2022
Acenaphthylene		0.00100		**0.00642**	0.0100	0	64.2	0.009070	34.28	01/25/2022
Anthracene		0.00100		**0.00878**	0.0100	0	87.8	0.009677	9.74	01/25/2022
Benzo(a)anthracene		0.00100		**0.00923**	0.0100	0	92.3	0.009576	3.65	01/25/2022
Benzo(a)pyrene		0.00100		**0.00819**	0.0100	0	81.9	0.008600	4.94	01/25/2022
Benzo(b)fluoranthene		0.00100		**0.00939**	0.0100	0	93.9	0.009870	4.97	01/25/2022
Benzo(g,h,i)perylene		0.00100		**0.00948**	0.0100	0	94.8	0.01020	7.29	01/25/2022
Benzo(k)fluoranthene		0.00100		**0.00972**	0.0100	0	97.2	0.009964	2.43	01/25/2022
Chrysene		0.00100		**0.00760**	0.0100	0	76.0	0.007814	2.74	01/25/2022
Dibenzo(a,h)anthracene		0.00100		**0.00995**	0.0100	0	99.5	0.01024	2.91	01/25/2022
Fluoranthene		0.00100		**0.00990**	0.0100	0	99.0	0.01087	9.40	01/25/2022
Fluorene		0.00100		**0.00806**	0.0100	0	80.6	0.009669	18.11	01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0101**	0.0100	0	100.8	0.01044	3.43	01/25/2022
Naphthalene		0.00100	R	**0.00369**	0.0100	0	36.9	0.007994	73.64	01/25/2022
Phenanthrene		0.00100		**0.00915**	0.0100	0	91.5	0.01026	11.51	01/25/2022
Pyrene		0.00100		**0.00991**	0.0100	0	99.1	0.01088	9.39	01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.0108**	0.0125		86.1			01/25/2022
Surr: Nitrobenzene-d5	*			**0.0121**	0.0125		96.7			01/25/2022
Surr: p-Terphenyl-d14	*			**0.0112**	0.0125		89.8			01/25/2022

Batch 187073 **SampType:** LCSG Units **%REC**

SampID: LCSG-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0105**	0.0125		84.2	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0114**	0.0125		91.6	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0131**	0.0125		104.9	35	222	01/25/2022

Batch 187073 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0107**	0.0125		85.5			01/25/2022
Surr: Nitrobenzene-d5	*			**0.0123**	0.0125		98.8			01/25/2022
Surr: p-Terphenyl-d14	*			**0.0137**	0.0125		109.7			01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		ND						01/21/2022
1,1,1-Trichloroethane	*	2.0		ND						01/21/2022
1,1,2,2-Tetrachloroethane	*	2.0		ND						01/21/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						01/21/2022
1,1,2-Trichloroethane	*	0.5		ND						01/21/2022
1,1-Dichloro-2-propanone	*	30.0		ND						01/21/2022
1,1-Dichloroethane	*	2.0		ND						01/21/2022
1,1-Dichloroethene	*	2.0		ND						01/21/2022
1,1-Dichloropropene	*	2.0		ND						01/21/2022
1,2,3-Trichlorobenzene	*	2.0		ND						01/21/2022
1,2,3-Trichloropropane	*	2.0		ND						01/21/2022
1,2,3-Trimethylbenzene	*	2.0		ND						01/21/2022
1,2,4-Trichlorobenzene	*	2.0		ND						01/21/2022
1,2,4-Trimethylbenzene	*	2.0		ND						01/21/2022
1,2-Dibromo-3-chloropropane	*	5.0		ND						01/21/2022
1,2-Dibromoethane	*	2.0		ND						01/21/2022
1,2-Dichlorobenzene	*	2.0		ND						01/21/2022
1,2-Dichloroethane	*	2.0		ND						01/21/2022
1,2-Dichloropropane	*	2.0		ND						01/21/2022
1,3,5-Trimethylbenzene	*	2.0		ND						01/21/2022
1,3-Dichlorobenzene	*	2.0		ND						01/21/2022
1,3-Dichloropropane	*	2.0		ND						01/21/2022
1,4-Dichlorobenzene	*	2.0		ND						01/21/2022
1-Chlorobutane	*	5.0		ND						01/21/2022
2,2-Dichloropropane	*	2.0		ND						01/21/2022
2-Butanone	*	10.0		ND						01/21/2022
2-Chloroethyl vinyl ether	*	5.0		ND						01/21/2022
2-Chlorotoluene	*	2.0		ND						01/21/2022
2-Hexanone	*	10.0		ND						01/21/2022
2-Nitropropane	*	10.0		ND						01/21/2022
4-Chlorotoluene	*	2.0		ND						01/21/2022
4-Methyl-2-pentanone	*	10.0		ND						01/21/2022
Acetone	*	10.0		ND						01/21/2022
Acetonitrile	*	10.0		ND						01/21/2022
Acrolein	*	20.0		ND						01/21/2022
Acrylonitrile	*	5.0		ND						01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						01/21/2022
Benzene	*	0.5		ND						01/21/2022
Bromobenzene	*	2.0		ND						01/21/2022
Bromochloromethane	*	2.0		ND						01/21/2022
Bromodichloromethane	*	2.0		ND						01/21/2022
Bromoform	*	2.0		ND						01/21/2022
Bromomethane	*	5.0		ND						01/21/2022
Carbon disulfide	*	2.0		ND						01/21/2022
Carbon tetrachloride	*	2.0		ND						01/21/2022
Chlorobenzene	*	2.0		ND						01/21/2022
Chloroethane	*	2.0		ND						01/21/2022
Chloroform	*	2.0		ND						01/21/2022
Chloromethane	*	5.0		ND						01/21/2022
Chloroprene	*	5.0		ND						01/21/2022
cis-1,2-Dichloroethene	*	2.0		ND						01/21/2022
cis-1,3-Dichloropropene	*	2.0		ND						01/21/2022
cis-1,4-Dichloro-2-butene	*	2.0		ND						01/21/2022
Cyclohexanone	*	20.0		ND						01/21/2022
Dibromochloromethane	*	2.0		ND						01/21/2022
Dibromomethane	*	2.0		ND						01/21/2022
Dichlorodifluoromethane	*	2.0		ND						01/21/2022
Diisopropyl ether	*	2.0		ND						01/21/2022
Ethyl acetate	*	10.0		ND						01/21/2022
Ethyl ether	*	5.0		ND						01/21/2022
Ethyl methacrylate	*	5.0		ND						01/21/2022
Ethylbenzene	*	2.0		ND						01/21/2022
Ethyl-tert-butyl ether	*	2.0		ND						01/21/2022
Hexachlorobutadiene	*	5.0		ND						01/21/2022
Hexachloroethane	*	5.0		ND						01/21/2022
Iodomethane	*	5.0		ND						01/21/2022
Isopropylbenzene	*	2.0		ND						01/21/2022
m,p-Xylenes	*	2.0		ND						01/21/2022
Methacrylonitrile	*	5.0		ND						01/21/2022
Methyl Methacrylate	*	5.0		ND						01/21/2022
Methyl tert-butyl ether	*	2.0		ND						01/21/2022
Methylacrylate	*	5.0		ND						01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**ND**						01/21/2022
Naphthalene	*	5.0		**ND**						01/21/2022
n-Butyl acetate	*	2.0		**ND**						01/21/2022
n-Butylbenzene	*	2.0		**ND**						01/21/2022
n-Heptane	*	5.0		**ND**						01/21/2022
n-Hexane	*	5.0		**ND**						01/21/2022
Nitrobenzene	*	50.0		**ND**						01/21/2022
n-Propylbenzene	*	2.0		**ND**						01/21/2022
o-Xylene	*	2.0		**ND**						01/21/2022
Pentachloroethane	*	5.0		**ND**						01/21/2022
p-Isopropyltoluene	*	2.0		**ND**						01/21/2022
Propionitrile	*	10.0		**ND**						01/21/2022
sec-Butylbenzene	*	2.0		**ND**						01/21/2022
Styrene	*	2.0		**ND**						01/21/2022
tert-Amyl methyl ether	*	2.0		**ND**						01/21/2022
tert-Butyl alcohol	*	10.0		**ND**						01/21/2022
tert-Butylbenzene	*	2.0		**ND**						01/21/2022
Tetrachloroethene	*	0.5		**ND**						01/21/2022
Tetrahydrofuran	*	5.0		**ND**						01/21/2022
Toluene	*	2.0		**ND**						01/21/2022
trans-1,2-Dichloroethene	*	2.0		**ND**						01/21/2022
trans-1,3-Dichloropropene	*	2.0		**ND**						01/21/2022
trans-1,4-Dichloro-2-butene	*	2.0		**ND**						01/21/2022
Trichloroethene	*	2.0		**ND**						01/21/2022
Trichlorofluoromethane	*	5.0		**ND**						01/21/2022
Vinyl acetate	*	5.0		**ND**						01/21/2022
Vinyl chloride	*	2.0		**ND**						01/21/2022
Xylenes, Total	*	4.0		**ND**						01/21/2022
1,2-Dichloroethene, Total	*	4.0		**ND**						01/21/2022
1,3-Dichloropropene, Total	*	4.0		**ND**						01/21/2022
1,4-Dichloro-2-butene, Total	*	4.0		**ND**						01/21/2022
Surr: 1,2-Dichloroethane-d4	*			**46.3**	50.00		92.6	80	120	01/21/2022
Surr: 4-Bromofluorobenzene	*			**48.6**	50.00		97.3	80	120	01/21/2022
Surr: Toluene-d8	*			**46.6**	50.00		93.2	80	120	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCS Units µg/L

SampID: LCS-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**45.8**	50.00	0	91.5	82	113	01/21/2022
1,1,1-Trichloroethane	*	2.0		**52.5**	50.00	0	105.0	76.9	128	01/21/2022
1,1,2,2-Tetrachloroethane	*	2.0		**42.9**	50.00	0	85.7	76.7	113	01/21/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**56.4**	50.00	0	112.9	69.5	127	01/21/2022
1,1,2-Trichloroethane	*	0.5		**46.0**	50.00	0	92.1	83.8	111	01/21/2022
1,1-Dichloro-2-propanone	*	30.0		**109**	125.0	0	87.3	74.9	117	01/21/2022
1,1-Dichloroethane	*	2.0		**51.4**	50.00	0	102.9	77	129	01/21/2022
1,1-Dichloroethene	*	2.0		**52.3**	50.00	0	104.6	69.4	127	01/21/2022
1,1-Dichloropropene	*	2.0		**52.9**	50.00	0	105.8	75.1	123	01/21/2022
1,2,3-Trichlorobenzene	*	2.0		**44.3**	50.00	0	88.6	77.3	121	01/21/2022
1,2,3-Trichloropropane	*	2.0		**41.4**	50.00	0	82.7	75.3	109	01/21/2022
1,2,3-Trimethylbenzene	*	2.0		**42.7**	50.00	0	85.5	77	115	01/21/2022
1,2,4-Trichlorobenzene	*	2.0		**46.9**	50.00	0	93.8	76.8	124	01/21/2022
1,2,4-Trimethylbenzene	*	2.0		**44.5**	50.00	0	89.0	75	115	01/21/2022
1,2-Dibromo-3-chloropropane	*	5.0		**42.2**	50.00	0	84.5	71.9	119	01/21/2022
1,2-Dibromoethane	*	2.0		**45.7**	50.00	0	91.3	83.6	110	01/21/2022
1,2-Dichlorobenzene	*	2.0		**43.1**	50.00	0	86.2	72.1	113	01/21/2022
1,2-Dichloroethane	*	2.0		**48.9**	50.00	0	97.7	72.3	117	01/21/2022
1,2-Dichloropropane	*	2.0		**51.2**	50.00	0	102.3	76.5	119	01/21/2022
1,3,5-Trimethylbenzene	*	2.0		**44.6**	50.00	0	89.2	75.2	117	01/21/2022
1,3-Dichlorobenzene	*	2.0		**44.2**	50.00	0	88.4	75.2	115	01/21/2022
1,3-Dichloropropane	*	2.0		**45.1**	50.00	0	90.1	80.9	110	01/21/2022
1,4-Dichlorobenzene	*	2.0		**42.6**	50.00	0	85.3	73.9	112	01/21/2022
1-Chlorobutane	*	5.0		**52.6**	50.00	0	105.3	74.9	130	01/21/2022
2,2-Dichloropropane	*	2.0		**55.4**	50.00	0	110.8	66.5	138	01/21/2022
2-Butanone	*	10.0		**116**	125.0	0	92.5	68.8	134	01/21/2022
2-Chloroethyl vinyl ether	*	5.0		**53.3**	50.00	0	106.7	17.8	163	01/21/2022
2-Chlorotoluene	*	2.0		**42.8**	50.00	0	85.7	74.9	115	01/21/2022
2-Hexanone	*	10.0		**108**	125.0	0	86.6	73.2	117	01/21/2022
2-Nitropropane	*	10.0		**548**	500.0	0	109.7	67.1	140	01/21/2022
4-Chlorotoluene	*	2.0		**43.3**	50.00	0	86.6	75.7	113	01/21/2022
4-Methyl-2-pentanone	*	10.0		**110**	125.0	0	88.1	77	113	01/21/2022
Acetone	*	10.0		**112**	125.0	0	89.7	61.4	130	01/21/2022
Acetonitrile	*	10.0		**508**	500.0	0	101.7	68.8	136	01/21/2022
Acrolein	*	20.0		**410**	500.0	0	82.1	28.4	168	01/21/2022
Acrylonitrile	*	5.0		**53.0**	50.00	0	106.1	77.9	124	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCS Units µg/L

SampID: LCS-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**52.4**	50.00	0	104.7	75.8	130	01/21/2022
Benzene	*	0.5		**50.9**	50.00	0	101.9	78.5	119	01/21/2022
Bromobenzene	*	2.0		**44.0**	50.00	0	88.0	77.5	113	01/21/2022
Bromochloromethane	*	2.0		**50.2**	50.00	0	100.3	71.5	123	01/21/2022
Bromodichloromethane	*	2.0		**53.3**	50.00	0	106.6	75.7	123	01/21/2022
Bromoform	*	2.0		**47.4**	50.00	0	94.7	78.9	121	01/21/2022
Bromomethane	*	5.0		**47.1**	50.00	0	94.3	30.5	192	01/21/2022
Carbon disulfide	*	2.0		**53.4**	50.00	0	106.7	66.7	121	01/21/2022
Carbon tetrachloride	*	2.0		**53.6**	50.00	0	107.1	70.9	127	01/21/2022
Chlorobenzene	*	2.0		**45.0**	50.00	0	90.1	80	111	01/21/2022
Chloroethane	*	2.0		**46.7**	50.00	0	93.5	69.6	135	01/21/2022
Chloroform	*	2.0		**51.4**	50.00	0	102.7	76.2	120	01/21/2022
Chloromethane	*	5.0		**39.1**	50.00	0	78.2	50.9	138	01/21/2022
Chloroprene	*	5.0		**54.5**	50.00	0	109.1	68.4	127	01/21/2022
cis-1,2-Dichloroethene	*	2.0		**51.9**	50.00	0	103.8	79.5	121	01/21/2022
cis-1,3-Dichloropropene	*	2.0		**54.0**	50.00	0	108.1	79.8	123	01/21/2022
cis-1,4-Dichloro-2-butene	*	2.0		**46.2**	50.00	0	92.3	64.6	130	01/21/2022
Cyclohexanone	*	20.0		**431**	500.0	0	86.2	70.5	114	01/21/2022
Dibromochloromethane	*	2.0		**48.6**	50.00	0	97.3	84.5	114	01/21/2022
Dibromomethane	*	2.0		**53.2**	50.00	0	106.4	76	119	01/21/2022
Dichlorodifluoromethane	*	2.0		**50.7**	50.00	0	101.5	46.6	142	01/21/2022
Diisopropyl ether	*	2.0		**49.8**	50.00	0	99.6	72	128	01/21/2022
Ethyl acetate	*	10.0		**48.2**	50.00	0	96.4	70.3	115	01/21/2022
Ethyl ether	*	5.0		**51.8**	50.00	0	103.6	74.6	120	01/21/2022
Ethyl methacrylate	*	5.0		**46.6**	50.00	0	93.1	81.4	116	01/21/2022
Ethylbenzene	*	2.0		**44.9**	50.00	0	89.8	78.2	114	01/21/2022
Ethyl-tert-butyl ether	*	2.0		**50.9**	50.00	0	101.7	74.6	124	01/21/2022
Hexachlorobutadiene	*	5.0		**48.4**	50.00	0	96.8	73.9	129	01/21/2022
Hexachloroethane	*	5.0		**45.2**	50.00	0	90.3	78.3	123	01/21/2022
Iodomethane	*	5.0		**63.0**	50.00	0	126.1	50	151	01/21/2022
Isopropylbenzene	*	2.0		**46.6**	50.00	0	93.3	79.3	115	01/21/2022
m,p-Xylenes	*	2.0		**90.9**	100.0	0	90.9	77.2	116	01/21/2022
Methacrylonitrile	*	5.0		**51.2**	50.00	0	102.5	73.9	127	01/21/2022
Methyl Methacrylate	*	5.0		**50.5**	50.00	0	101.0	70.7	129	01/21/2022
Methyl tert-butyl ether	*	2.0		**51.3**	50.00	0	102.7	80.3	122	01/21/2022
Methylacrylate	*	5.0		**51.8**	50.00	0	103.6	75.2	124	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCS Units µg/L

SampID: LCS-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**49.3**	50.00	0	98.5	71.8	115	01/21/2022
Naphthalene	*	5.0		**42.6**	50.00	0	85.1	75.6	121	01/21/2022
n-Butyl acetate	*	2.0		**43.9**	50.00	0	87.9	72.4	118	01/21/2022
n-Butylbenzene	*	2.0		**44.1**	50.00	0	88.1	70.8	118	01/21/2022
n-Heptane	*	5.0		**64.8**	50.00	0	129.7	50.4	143	01/21/2022
n-Hexane	*	5.0		**55.3**	50.00	0	110.6	60.6	139	01/21/2022
Nitrobenzene	*	50.0		**321**	500.0	0	64.3	49.4	129	01/21/2022
n-Propylbenzene	*	2.0		**44.0**	50.00	0	88.0	74	119	01/21/2022
o-Xylene	*	2.0		**44.1**	50.00	0	88.2	79.2	112	01/21/2022
Pentachloroethane	*	5.0		**43.8**	50.00	0	87.6	71.8	124	01/21/2022
p-Isopropyltoluene	*	2.0		**42.6**	50.00	0	85.3	74.4	119	01/21/2022
Propionitrile	*	10.0		**519**	500.0	0	103.8	76.2	127	01/21/2022
sec-Butylbenzene	*	2.0		**45.5**	50.00	0	90.9	74.4	119	01/21/2022
Styrene	*	2.0		**46.7**	50.00	0	93.4	80.4	117	01/21/2022
tert-Amyl methyl ether	*	2.0		**51.1**	50.00	0	102.2	80.8	125	01/21/2022
tert-Butyl alcohol	*	10.0		**219**	250.0	0	87.7	64.9	118	01/21/2022
tert-Butylbenzene	*	2.0		**43.9**	50.00	0	87.8	74	115	01/21/2022
Tetrachloroethene	*	0.5		**47.3**	50.00	0	94.6	70.1	120	01/21/2022
Tetrahydrofuran	*	5.0		**45.3**	50.00	0	90.7	63.5	122	01/21/2022
Toluene	*	2.0		**45.0**	50.00	0	90.0	78.6	112	01/21/2022
trans-1,2-Dichloroethene	*	2.0		**53.2**	50.00	0	106.4	75.7	130	01/21/2022
trans-1,3-Dichloropropene	*	2.0		**47.3**	50.00	0	94.6	80.3	116	01/21/2022
trans-1,4-Dichloro-2-butene	*	2.0		**43.4**	50.00	0	86.9	65.5	124	01/21/2022
Trichloroethene	*	2.0		**53.1**	50.00	0	106.2	76.2	121	01/21/2022
Trichlorofluoromethane	*	5.0		**49.9**	50.00	0	99.8	71.1	131	01/21/2022
Vinyl acetate	*	5.0		**54.2**	50.00	0	108.3	79.8	129	01/21/2022
Vinyl chloride	*	2.0		**43.7**	50.00	0	87.3	58.6	141	01/21/2022
Xylenes, Total	*	4.0		**135**	150.0	0	90.0	78.3	114	01/21/2022
1,2-Dichloroethene, Total	*	4.0		**105**	100.0	0	105.1	78.5	125	01/21/2022
1,3-Dichloropropene, Total	*	4.0		**101**	100.0	0	101.4	82.3	117	01/21/2022
1,4-Dichloro-2-butene, Total	*	4.0		**89.6**	100.0	0	89.6	65.9	126	01/21/2022
Surr: 1,2-Dichloroethane-d4	*			**48.4**	50.00		96.7	80	120	01/21/2022
Surr: 4-Bromofluorobenzene	*			**49.0**	50.00		97.9	80	120	01/21/2022
Surr: Toluene-d8	*			**46.5**	50.00		93.1	80	120	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**45.8**	50.00	0	91.7	45.75	0.17	01/21/2022
1,1,1-Trichloroethane	*	2.0		**50.2**	50.00	0	100.4	52.48	4.40	01/21/2022
1,1,2,2-Tetrachloroethane	*	2.0		**43.3**	50.00	0	86.6	42.87	0.95	01/21/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**54.3**	50.00	0	108.5	56.44	3.92	01/21/2022
1,1,2-Trichloroethane	*	0.5		**46.2**	50.00	0	92.5	46.04	0.41	01/21/2022
1,1-Dichloro-2-propanone	*	30.0		**116**	125.0	0	93.1	109.1	6.51	01/21/2022
1,1-Dichloroethane	*	2.0		**50.5**	50.00	0	100.9	51.44	1.92	01/21/2022
1,1-Dichloroethene	*	2.0		**51.6**	50.00	0	103.2	52.29	1.31	01/21/2022
1,1-Dichloropropene	*	2.0		**51.2**	50.00	0	102.4	52.88	3.21	01/21/2022
1,2,3-Trichlorobenzene	*	2.0		**44.2**	50.00	0	88.4	44.31	0.29	01/21/2022
1,2,3-Trichloropropane	*	2.0		**42.3**	50.00	0	84.6	41.37	2.22	01/21/2022
1,2,3-Trimethylbenzene	*	2.0		**42.5**	50.00	0	84.9	42.73	0.61	01/21/2022
1,2,4-Trichlorobenzene	*	2.0		**46.3**	50.00	0	92.5	46.88	1.33	01/21/2022
1,2,4-Trimethylbenzene	*	2.0		**44.0**	50.00	0	88.0	44.48	1.13	01/21/2022
1,2-Dibromo-3-chloropropane	*	5.0		**44.7**	50.00	0	89.4	42.24	5.68	01/21/2022
1,2-Dibromoethane	*	2.0		**46.5**	50.00	0	93.0	45.67	1.80	01/21/2022
1,2-Dichlorobenzene	*	2.0		**43.0**	50.00	0	86.1	43.12	0.19	01/21/2022
1,2-Dichloroethane	*	2.0		**48.5**	50.00	0	97.0	48.86	0.78	01/21/2022
1,2-Dichloropropane	*	2.0		**50.3**	50.00	0	100.6	51.17	1.69	01/21/2022
1,3,5-Trimethylbenzene	*	2.0		**43.6**	50.00	0	87.2	44.60	2.22	01/21/2022
1,3-Dichlorobenzene	*	2.0		**43.9**	50.00	0	87.9	44.20	0.61	01/21/2022
1,3-Dichloropropane	*	2.0		**45.1**	50.00	0	90.1	45.06	0.02	01/21/2022
1,4-Dichlorobenzene	*	2.0		**42.2**	50.00	0	84.3	42.65	1.13	01/21/2022
1-Chlorobutane	*	5.0		**51.0**	50.00	0	102.0	52.64	3.18	01/21/2022
2,2-Dichloropropane	*	2.0		**53.9**	50.00	0	107.9	55.41	2.69	01/21/2022
2-Butanone	*	10.0		**124**	125.0	0	99.0	115.6	6.78	01/21/2022
2-Chloroethyl vinyl ether	*	5.0		**53.9**	50.00	0	107.8	53.34	1.06	01/21/2022
2-Chlorotoluene	*	2.0		**41.8**	50.00	0	83.7	42.84	2.39	01/21/2022
2-Hexanone	*	10.0		**115**	125.0	0	92.2	108.2	6.32	01/21/2022
2-Nitropropane	*	10.0		**576**	500.0	0	115.2	548.3	4.94	01/21/2022
4-Chlorotoluene	*	2.0		**42.7**	50.00	0	85.3	43.32	1.51	01/21/2022
4-Methyl-2-pentanone	*	10.0		**115**	125.0	0	92.3	110.1	4.64	01/21/2022
Acetone	*	10.0		**121**	125.0	0	96.8	112.1	7.70	01/21/2022
Acetonitrile	*	10.0		**535**	500.0	0	107.0	508.3	5.14	01/21/2022
Acrolein	*	20.0		**432**	500.0	0	86.4	410.3	5.15	01/21/2022
Acrylonitrile	*	5.0		**56.4**	50.00	0	112.8	53.03	6.19	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		**51.4**	50.00	0	102.9	52.36	1.79	01/21/2022
Benzene	*	0.5		**49.3**	50.00	0	98.5	50.94	3.33	01/21/2022
Bromobenzene	*	2.0		**43.4**	50.00	0	86.7	44.00	1.44	01/21/2022
Bromochloromethane	*	2.0		**50.6**	50.00	0	101.2	50.15	0.91	01/21/2022
Bromodichloromethane	*	2.0		**52.9**	50.00	0	105.7	53.29	0.79	01/21/2022
Bromoform	*	2.0		**48.1**	50.00	0	96.3	47.37	1.61	01/21/2022
Bromomethane	*	5.0		**50.3**	50.00	0	100.7	47.13	6.59	01/21/2022
Carbon disulfide	*	2.0		**51.9**	50.00	0	103.8	53.35	2.76	01/21/2022
Carbon tetrachloride	*	2.0		**51.3**	50.00	0	102.5	53.56	4.39	01/21/2022
Chlorobenzene	*	2.0		**45.1**	50.00	0	90.2	45.03	0.16	01/21/2022
Chloroethane	*	2.0		**46.1**	50.00	0	92.2	46.74	1.36	01/21/2022
Chloroform	*	2.0		**51.0**	50.00	0	102.0	51.35	0.64	01/21/2022
Chloromethane	*	5.0		**39.0**	50.00	0	78.0	39.08	0.26	01/21/2022
Chloroprene	*	5.0		**52.8**	50.00	0	105.6	54.54	3.26	01/21/2022
cis-1,2-Dichloroethene	*	2.0		**51.0**	50.00	0	102.0	51.89	1.73	01/21/2022
cis-1,3-Dichloropropene	*	2.0		**52.9**	50.00	0	105.8	54.03	2.08	01/21/2022
cis-1,4-Dichloro-2-butene	*	2.0		**48.5**	50.00	0	97.0	46.15	4.97	01/21/2022
Cyclohexanone	*	20.0		**457**	500.0	0	91.4	430.9	5.92	01/21/2022
Dibromochloromethane	*	2.0		**49.4**	50.00	0	98.8	48.63	1.59	01/21/2022
Dibromomethane	*	2.0		**52.9**	50.00	0	105.8	53.21	0.62	01/21/2022
Dichlorodifluoromethane	*	2.0		**48.8**	50.00	0	97.6	50.73	3.88	01/21/2022
Diisopropyl ether	*	2.0		**49.6**	50.00	0	99.3	49.79	0.32	01/21/2022
Ethyl acetate	*	10.0		**50.3**	50.00	0	100.6	48.19	4.30	01/21/2022
Ethyl ether	*	5.0		**52.1**	50.00	0	104.3	51.78	0.69	01/21/2022
Ethyl methacrylate	*	5.0		**47.0**	50.00	0	94.1	46.55	1.07	01/21/2022
Ethylbenzene	*	2.0		**44.4**	50.00	0	88.9	44.90	1.05	01/21/2022
Ethyl-tert-butyl ether	*	2.0		**51.0**	50.00	0	102.1	50.87	0.31	01/21/2022
Hexachlorobutadiene	*	5.0		**47.1**	50.00	0	94.1	48.41	2.83	01/21/2022
Hexachloroethane	*	5.0		**44.2**	50.00	0	88.3	45.15	2.19	01/21/2022
Iodomethane	*	5.0		**61.5**	50.00	0	123.0	63.05	2.47	01/21/2022
Isopropylbenzene	*	2.0		**46.5**	50.00	0	93.0	46.64	0.34	01/21/2022
m,p-Xylenes	*	2.0		**90.6**	100.0	0	90.6	90.89	0.37	01/21/2022
Methacrylonitrile	*	5.0		**53.5**	50.00	0	107.0	51.23	4.32	01/21/2022
Methyl Methacrylate	*	5.0		**51.9**	50.00	0	103.8	50.51	2.73	01/21/2022
Methyl tert-butyl ether	*	2.0		**51.8**	50.00	0	103.6	51.34	0.93	01/21/2022
Methylacrylate	*	5.0		**53.7**	50.00	0	107.3	51.82	3.49	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		**48.9**	50.00	0	97.8	49.26	0.73	01/21/2022
Naphthalene	*	5.0		**43.8**	50.00	0	87.5	42.56	2.80	01/21/2022
n-Butyl acetate	*	2.0		**45.7**	50.00	0	91.3	43.93	3.86	01/21/2022
n-Butylbenzene	*	2.0		**42.9**	50.00	0	85.8	44.07	2.69	01/21/2022
n-Heptane	*	5.0		**61.0**	50.00	0	121.9	64.84	6.18	01/21/2022
n-Hexane	*	5.0		**53.3**	50.00	0	106.5	55.29	3.74	01/21/2022
Nitrobenzene	*	50.0		**346**	500.0	0	69.3	321.3	7.48	01/21/2022
n-Propylbenzene	*	2.0		**43.2**	50.00	0	86.3	44.02	2.00	01/21/2022
o-Xylene	*	2.0		**43.8**	50.00	0	87.6	44.12	0.73	01/21/2022
Pentachloroethane	*	5.0		**44.4**	50.00	0	88.9	43.80	1.47	01/21/2022
p-Isopropyltoluene	*	2.0		**41.8**	50.00	0	83.6	42.65	1.97	01/21/2022
Propionitrile	*	10.0		**548**	500.0	0	109.7	518.8	5.53	01/21/2022
sec-Butylbenzene	*	2.0		**43.9**	50.00	0	87.8	45.47	3.54	01/21/2022
Styrene	*	2.0		**46.9**	50.00	0	93.8	46.72	0.34	01/21/2022
tert-Amyl methyl ether	*	2.0		**51.3**	50.00	0	102.6	51.11	0.37	01/21/2022
tert-Butyl alcohol	*	10.0		**236**	250.0	0	94.3	219.2	7.24	01/21/2022
tert-Butylbenzene	*	2.0		**42.9**	50.00	0	85.8	43.92	2.33	01/21/2022
Tetrachloroethene	*	0.5		**45.4**	50.00	0	90.7	47.29	4.17	01/21/2022
Tetrahydrofuran	*	5.0		**49.4**	50.00	0	98.8	45.33	8.63	01/21/2022
Toluene	*	2.0		**44.7**	50.00	0	89.4	44.99	0.60	01/21/2022
trans-1,2-Dichloroethene	*	2.0		**51.1**	50.00	0	102.2	53.21	4.07	01/21/2022
trans-1,3-Dichloropropene	*	2.0		**47.7**	50.00	0	95.4	47.32	0.76	01/21/2022
trans-1,4-Dichloro-2-butene	*	2.0		**44.9**	50.00	0	89.9	43.43	3.40	01/21/2022
Trichloroethene	*	2.0		**51.0**	50.00	0	101.9	53.08	4.08	01/21/2022
Trichlorofluoromethane	*	5.0		**48.2**	50.00	0	96.3	49.90	3.55	01/21/2022
Vinyl acetate	*	5.0		**55.5**	50.00	0	111.0	54.16	2.41	01/21/2022
Vinyl chloride	*	2.0		**42.3**	50.00	0	84.6	43.66	3.19	01/21/2022
Xylenes, Total	*	4.0		**134**	150.0	0	89.6	135.0	0.49	01/21/2022
1,2-Dichloroethene, Total	*	4.0		**102**	100.0	0	102.1	105.1	2.91	01/21/2022
1,3-Dichloropropene, Total	*	4.0		**101**	100.0	0	100.6	101.4	0.74	01/21/2022
1,4-Dichloro-2-butene, Total	*	4.0		**93.4**	100.0	0	93.4	89.58	4.21	01/21/2022
Surr: 1,2-Dichloroethane-d4	*			**49.3**	50.00		98.6			01/21/2022
Surr: 4-Bromofluorobenzene	*			**49.5**	50.00		98.9			01/21/2022
Surr: Toluene-d8	*			**46.8**	50.00		93.6			01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** LCSG Units **%REC**

SampID: LCSG-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**48.5**	50.00		97.1	80	120	01/21/2022
Surr: 4-Bromofluorobenzene	*			**48.4**	50.00		96.8	80	120	01/21/2022
Surr: Toluene-d8	*			**46.5**	50.00		92.9	80	120	01/21/2022

Batch 187024 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-AE220121A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**48.0**	50.00		96.0			01/21/2022
Surr: 4-Bromofluorobenzene	*			**48.0**	50.00		96.0			01/21/2022
Surr: Toluene-d8	*			**46.9**	50.00		93.8			01/21/2022

Batch 187024 **SampType:** MS Units **µg/L**

SampID: 22011006-005EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene		2.0		**59.7**	50.00	0	119.5	67.5	123	01/21/2022
Benzene		0.5		**55.5**	50.00	0	111.0	72	120	01/21/2022
Chlorobenzene		2.0		**47.3**	50.00	0	94.6	73.9	108	01/21/2022
Ethylbenzene		2.0		**46.2**	50.00	0	92.4	74.8	115	01/21/2022
m,p-Xylenes		2.0		**48.3**	50.00	0	96.6	69.7	115	01/21/2022
o-Xylene		2.0		**45.0**	50.00	0	89.9	72.9	111	01/21/2022
Toluene		2.0		**48.4**	50.00	0	96.8	70.6	109	01/21/2022
Trichloroethene		2.0		**57.2**	50.00	0	114.5	77.7	119	01/21/2022
Xylenes, Total		4.0		**93.2**	100.0	0	93.2	72.1	113	01/21/2022
Surr: 1,2-Dichloroethane-d4	*			**47.4**	50.00		94.8	80	120	01/21/2022
Surr: 4-Bromofluorobenzene	*			**48.0**	50.00		96.0	80	120	01/21/2022
Surr: Toluene-d8	*			**46.3**	50.00		92.5	80	120	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011006

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187024 **SampType:** MSD Units µg/L RPD Limit 40

SampID: 22011006-005EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene		2.0	S	**63.5**	50.00	0	127.0	59.74	6.13	01/21/2022
Benzene		0.5		**57.6**	50.00	0	115.1	55.51	3.61	01/21/2022
Chlorobenzene		2.0		**49.7**	50.00	0	99.4	47.32	4.93	01/21/2022
Ethylbenzene		2.0		**48.7**	50.00	0	97.4	46.21	5.21	01/21/2022
m,p-Xylenes		2.0		**50.6**	50.00	0	101.1	48.29	4.59	01/21/2022
o-Xylene		2.0		**47.2**	50.00	0	94.4	44.95	4.86	01/21/2022
Toluene		2.0		**50.0**	50.00	0	100.0	48.38	3.25	01/21/2022
Trichloroethene		2.0	S	**60.3**	50.00	0	120.6	57.25	5.16	01/21/2022
Xylenes, Total		4.0		**97.8**	100.0	0	97.8	93.24	4.72	01/21/2022
Surr: 1,2-Dichloroethane-d4	*			**48.5**	50.00		97.1			01/21/2022
Surr: 4-Bromofluorobenzene	*			**47.8**	50.00		95.7			01/21/2022
Surr: Toluene-d8	*			**46.4**	50.00		92.7			01/21/2022

Receiving Check List

http://www.teklabinc.com/

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011006
Report Date: 27-Jan-22

Carrier: Justin Colp

Received By: MEK

Completed by: (b) (6)
Mary E. Kemp
On: 19-Jan-22

Reviewed by: (b) (6)
Emily E. Hayer
On: 19-Jan-22

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 1.8
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

pH strip #77700. - PRY/MKemp - 1/19/2022 3:46:07 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MKemp - 1/19/2022 3:46:11 PM

BURNS & McDONNELL

021618 Form WCD-KC1-STL

Request for Chemical Analysis and Chain of Custody Record

22011006

Burns & McDonnell Engineering
425 South Woods Mill Road
Chesterfield, Missouri 63017
Phone: (314) 682-1500 Fax: (314) 682-1600
Attention: Justin Carter
jcarter@burnsmcd.com

Laboratory: Teklab Inc
Address: 5445 Horseshoe Lake Rd
City/State/Zip: Collinsville, IL 62234
Telephone:

Document Control No: 128487-01192022-01
Lab. Reference No. or Episode No.:

Project Number: 128487

Client Name: GSA

Lab No.	Group or SWMU Name	Sample Point	Sample Designator	Round	Year	Depth From	Depth To	Date	Time	Liquid	Solid	Gas	Number of Containers	VOCs	PAHs	PCBs	Total Metals	Dissolved Metals		Remarks
22011006 001	MW-01	01172022			2022			1/17	1050	X			5	X	X	X	X			
002	MW-02	01172022			2022			1/17	1402	X			5	X	X	X	X			
003	MW-03	01172022			2022			1/17	1207	X			5	X	X	X	X			
004	MW-05	01172022			2022			1/17	1527	X			6	X	X	X	X	X		Field Filtered (FF)
005	MW-04	01182022			2022			1/18	822	X			6	X	X	X	X	X		FF
006 (005)	MW-04	01182022/MS			2022			1/18	822	X			6	X	X	X	X	X		FF
007 (005)	MW-04	01182022/MSD			2022			1/18	822	X			6	X	X	X	X	X		FF
008 (006)	MW-06	01182022			2022			1/18	948	X			5	X	X	X	X			
009 (007)	MW-19	01182022			2022			1/18	1122	X			6	X	X	X	X	X		FF
010 (008)	MW-11	01182022			2022			1/18	1240	X			6	X	X	X	X	X		FF
011 (009)	MW-14	01182022			2022			1/18	1342	X			5	X	X	X	X			
012 (010)	MW-18	01182022			2022			1/18	1451	X			5	X	X	X	X			
013 (011)	MW-17	01182022			2022			1/18	1612	X			5	X	X	X	X			
TC (012)	TB									X			2	X	~~X~~					Lab Prepared
MEK/IIPA (013)	TB									X			2	X						

Sampler (signature): Benjamin Lockwood (b) (6) [redacted]

Sampler (signature):

Special Instructions: See work order (site specific)

Relinquished By (signature): 1. (b) (6) [redacted] Date/Time: 1/19

Received By (signature): (b) (6) [redacted] Date/Time: 1-19-22 1300

Ice Present in Container: Yes ☑ No ☐

Temperature Upon Receipt: 1.4°C IR 61

Relinquished By (signature): 2. (b) (6) [redacted] Date/Time: 1-19 1353

Received By (signature): (b) (6) [redacted] Date/Time: 1/19/22 1353

Laboratory Comments: OHS: PH TT700. RN 1/19/22 Courier

DAT 1/19/22

January 27, 2022

Justin Carter
Burns & McDonnell Waste Consultants
9400 Ward Parkway
P.O. Box 419173
Kansas City, MO 64114
TEL: (816) 333-9400
FAX: (816) 822-3494

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: BMCD KC GSA Goodfellow Groundwater **WorkOrder:** 22011097

Dear Justin Carter:

TEKLAB, INC received 12 samples on 1/20/2022 2:15:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

(b) (6) [redacted]

Emily E. Hayer
Project Manager
(618)344-1004 ex 44
ehayer@teklabinc.com

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011097
Report Date: 27-Jan-22

This reporting package includes the following:

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Case Narrative

http://www.teklabinc.com/

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011097
Report Date: 27-Jan-22

Cooler Receipt Temp: 2.0 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-001 **Client Sample ID:** MW-10 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 9:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:01	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:01	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:01	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:01	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:01	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:18	186966
Surr: Decachlorobiphenyl	*	10-152		**71.3**	%REC	1	01/21/2022 23:18	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**101.9**	%REC	1	01/21/2022 23:18	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Acenaphthylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Benzo(a)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Benzo(a)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Benzo(b)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Benzo(g,h,i)perylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Benzo(k)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Chrysene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Dibenzo(a,h)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Fluorene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Naphthalene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Phenanthrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 16:25	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**68.6**	%REC	1	01/25/2022 16:25	187073
Surr: Nitrobenzene-d5	*	29.1-125		**81.0**	%REC	1	01/25/2022 16:25	187073
Surr: p-Terphenyl-d14	*	35.2-164		**82.1**	%REC	1	01/25/2022 16:25	187073
Elevated reporting limit due to sample composition.								
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-001 **Client Sample ID:** MW-10 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 9:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 15:49	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 15:49	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 15:49	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 15:49	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 15:49	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 15:49	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 15:49	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 15:49	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 15:49	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-001
Client Sample ID: MW-10 01192022
Matrix: AQUEOUS
Collection Date: 01/19/2022 9:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 15:49	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 15:49	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 15:49	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 15:49	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 15:49	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.6**	%REC	1	01/22/2022 15:49	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-001
Client Sample ID: MW-10 01192022
Matrix: AQUEOUS
Collection Date: 01/19/2022 9:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/22/2022 15:49	187046
Surr: Toluene-d8	*	80-120		**92.0**	%REC	1	01/22/2022 15:49	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-002 **Client Sample ID:** MW-13 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 15:54	187008
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 15:54	187008
Copper	NELAP	0.0050		**0.0475**	mg/L	1	01/24/2022 15:54	187008
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 15:54	187008
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 15:54	187008
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:03	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:03	186993
Copper	NELAP	0.0050		**0.0715**	mg/L	1	01/24/2022 17:03	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:03	186993
Zinc	NELAP	0.0100		**0.0227**	mg/L	1	01/24/2022 17:03	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:33	186966
Surr: Decachlorobiphenyl	*	10-152		**65.9**	%REC	1	01/21/2022 23:33	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**108.5**	%REC	1	01/21/2022 23:33	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Acenaphthylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Benzo(a)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Benzo(a)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Benzo(b)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Benzo(g,h,i)perylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Benzo(k)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Chrysene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Dibenzo(a,h)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Fluorene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Naphthalene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Phenanthrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 18:24	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**55.1**	%REC	1	01/25/2022 18:24	187073
Surr: Nitrobenzene-d5	*	29.1-125		**79.4**	%REC	1	01/25/2022 18:24	187073
Surr: p-Terphenyl-d14	*	35.2-164		**93.1**	%REC	1	01/25/2022 18:24	187073

Elevated reporting limit due to sample composition.

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:15	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:15	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:15	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 16:15	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-002 **Client Sample ID:** MW-13 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	01/22/2022 16:15	187046
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/22/2022 16:15	187046
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:15	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:15	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:15	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 16:15	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 16:15	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-002 **Client Sample ID:** MW-13 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 16:15	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Diisopropyl ether	*	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Iodomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Naphthalene	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
n-Butyl acetate	*	2.0		ND	µg/L	1	01/22/2022 16:15	187046
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
n-Heptane	*	5.0		ND	µg/L	1	01/22/2022 16:15	187046
n-Hexane	*	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/22/2022 16:15	187046
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
o-Xylene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Propionitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Styrene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/22/2022 16:15	187046
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/22/2022 16:15	187046
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/22/2022 16:15	187046
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/22/2022 16:15	187046
Toluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:15	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-002 **Client Sample ID:** MW-13 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:15	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:15	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:15	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:15	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 16:15	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.2**	%REC	1	01/22/2022 16:15	187046
Surr: 4-Bromofluorobenzene	*	80-120		**96.3**	%REC	1	01/22/2022 16:15	187046
Surr: Toluene-d8	*	80-120		**91.7**	%REC	1	01/22/2022 16:15	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-003 **Client Sample ID:** MW-12 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 12:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:05	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:05	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:05	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:05	186993
Zinc	NELAP	0.0100		**0.0167**	mg/L	1	01/24/2022 17:05	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/21/2022 23:48	186966
Surr: Decachlorobiphenyl	*	10-152		**54.7**	%REC	1	01/21/2022 23:48	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**98.8**	%REC	1	01/21/2022 23:48	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Acenaphthylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Benzo(a)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Benzo(a)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Benzo(b)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Benzo(g,h,i)perylene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Benzo(k)fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Chrysene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Dibenzo(a,h)anthracene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Fluoranthene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Fluorene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Naphthalene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Phenanthrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Pyrene	NELAP	0.00400		**ND**	mg/L	1	01/25/2022 19:04	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**67.5**	%REC	1	01/25/2022 19:04	187073
Surr: Nitrobenzene-d5	*	29.1-125		**81.3**	%REC	1	01/25/2022 19:04	187073
Surr: p-Terphenyl-d14	*	35.2-164		**78.3**	%REC	1	01/25/2022 19:04	187073
Elevated reporting limit due to sample composition.								
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-003 **Client Sample ID:** MW-12 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 12:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:42	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:42	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 16:42	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 16:42	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 16:42	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 16:42	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 16:42	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 16:42	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 16:42	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-003 **Client Sample ID:** MW-12 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 12:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 16:42	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 16:42	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 16:42	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 16:42	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 16:42	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.5**	%REC	1	01/22/2022 16:42	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-003
Client Sample ID: MW-12 01192022
Matrix: AQUEOUS
Collection Date: 01/19/2022 12:25

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: 4-Bromofluorobenzene	*	80-120		**96.7**	%REC	1	01/22/2022 16:42	187046
Surr: Toluene-d8	*	80-120		**92.0**	%REC	1	01/22/2022 16:42	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-004 **Client Sample ID:** MW-16 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 14:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:06	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:06	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:06	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:06	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:06	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:04	186966
Surr: Decachlorobiphenyl	*	10-152		**59.3**	%REC	1	01/22/2022 0:04	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**75.0**	%REC	1	01/22/2022 0:04	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 19:44	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**57.7**	%REC	1	01/25/2022 19:44	187073
Surr: Nitrobenzene-d5	*	29.1-125		**91.8**	%REC	1	01/25/2022 19:44	187073
Surr: p-Terphenyl-d14	*	35.2-164		**78.6**	%REC	1	01/25/2022 19:44	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-004 **Client Sample ID:** MW-16 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 14:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:09	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:09	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:09	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 17:09	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 17:09	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 17:09	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 17:09	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 17:09	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:09	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-004 **Client Sample ID:** MW-16 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 14:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 17:09	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:09	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:09	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 17:09	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 17:09	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**96.0**	%REC	1	01/22/2022 17:09	187046
Surr: 4-Bromofluorobenzene	*	80-120		**98.0**	%REC	1	01/22/2022 17:09	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-004
Client Sample ID: MW-16 01192022
Matrix: AQUEOUS
Collection Date: 01/19/2022 14:13

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.8**	%REC	1	01/22/2022 17:09	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-005 **Client Sample ID:** MW-15 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 15:55	187008
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 15:55	187008
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 15:55	187008
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 15:55	187008
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 15:55	187008
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:08	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:08	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:08	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:08	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:08	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/22/2022 0:19	186966
Surr: Decachlorobiphenyl	*	10-152		**49.2**	%REC	1	01/22/2022 0:19	186966
Surr: Tetrachloro-meta-xylene	*	9.73-128		**63.1**	%REC	1	01/22/2022 0:19	186966
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 20:25	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**65.4**	%REC	1	01/25/2022 20:25	187073
Surr: Nitrobenzene-d5	*	29.1-125		**89.9**	%REC	1	01/25/2022 20:25	187073
Surr: p-Terphenyl-d14	*	35.2-164		**89.2**	%REC	1	01/25/2022 20:25	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 17:36	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-005 **Client Sample ID:** MW-15 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/22/2022 17:36	187046
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:36	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:36	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 17:36	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 17:36	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 17:36	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 17:36	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 17:36	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 17:36	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-005 **Client Sample ID:** MW-15 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloroprene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Cyclohexanone	*	20.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 17:36	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:36	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 17:36	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 17:36	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-005 **Client Sample ID:** MW-15 01192022

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 17:36	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.2**	%REC	1	01/22/2022 17:36	187046
Surr: 4-Bromofluorobenzene	*	80-120		**96.6**	%REC	1	01/22/2022 17:36	187046
Surr: Toluene-d8	*	80-120		**92.1**	%REC	1	01/22/2022 17:36	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-006 **Client Sample ID:** MW-15 01192022DUP

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 15:57	187008
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 15:57	187008
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 15:57	187008
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 15:57	187008
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 15:57	187008
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:45	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:45	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:45	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:45	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:45	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:36	187055
Surr: Decachlorobiphenyl	*	10-152		**64.8**	%REC	1	01/24/2022 16:36	187055
Surr: Tetrachloro-meta-xylene	*	9.73-128		**98.9**	%REC	1	01/24/2022 16:36	187055
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/25/2022 23:46	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**60.9**	%REC	1	01/25/2022 23:46	187073
Surr: Nitrobenzene-d5	*	29.1-125		**92.6**	%REC	1	01/25/2022 23:46	187073
Surr: p-Terphenyl-d14	*	35.2-164		**92.2**	%REC	1	01/25/2022 23:46	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:02	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:02	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:02	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 18:02	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 18:02	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-006 **Client Sample ID:** MW-15 01192022DUP

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/22/2022 18:02	187046
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:02	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:02	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:02	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 18:02	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 18:02	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-006 **Client Sample ID:** MW-15 01192022DUP

Matrix: AQUEOUS **Collection Date:** 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 18:02	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Diisopropyl ether	*	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Iodomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Naphthalene	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
n-Butyl acetate	*	2.0		ND	µg/L	1	01/22/2022 18:02	187046
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
n-Heptane	*	5.0		ND	µg/L	1	01/22/2022 18:02	187046
n-Hexane	*	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/22/2022 18:02	187046
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
o-Xylene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Propionitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Styrene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/22/2022 18:02	187046
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/22/2022 18:02	187046
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/22/2022 18:02	187046
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/22/2022 18:02	187046
Toluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046
Trichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:02	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-006
Client Sample ID: MW-15 01192022DUP
Matrix: AQUEOUS
Collection Date: 01/19/2022 15:22

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:02	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:02	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:02	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 18:02	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.0**	%REC	1	01/22/2022 18:02	187046
Surr: 4-Bromofluorobenzene	*	80-120		**97.1**	%REC	1	01/22/2022 18:02	187046
Surr: Toluene-d8	*	80-120		**91.9**	%REC	1	01/22/2022 18:02	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-007 **Client Sample ID:** MW-09 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 9:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:47	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:47	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:47	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:47	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:47	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/24/2022 16:52	187055
Surr: Decachlorobiphenyl	*	10-152		**63.0**	%REC	1	01/24/2022 16:52	187055
Surr: Tetrachloro-meta-xylene	*	9.73-128		**96.6**	%REC	1	01/24/2022 16:52	187055
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 0:27	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**50.9**	%REC	1	01/26/2022 0:27	187073
Surr: Nitrobenzene-d5	*	29.1-125		**89.4**	%REC	1	01/26/2022 0:27	187073
Surr: p-Terphenyl-d14	*	35.2-164		**71.4**	%REC	1	01/26/2022 0:27	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-007 **Client Sample ID:** MW-09 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 9:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:29	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:29	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:29	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 18:29	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 18:29	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 18:29	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 18:29	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 18:29	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:29	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-007
Client Sample ID: MW-09 01202022
Matrix: AQUEOUS
Collection Date: 01/20/2022 9:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 18:29	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:29	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:29	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 18:29	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 18:29	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**95.8**	%REC	1	01/22/2022 18:29	187046
Surr: 4-Bromofluorobenzene	*	80-120		**97.1**	%REC	1	01/22/2022 18:29	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-007
Client Sample ID: MW-09 01202022
Matrix: AQUEOUS
Collection Date: 01/20/2022 9:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.1**	%REC	1	01/22/2022 18:29	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-008 **Client Sample ID:** MW-08 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 10:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:49	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:49	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:49	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:49	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:49	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:07	187055
Surr: Decachlorobiphenyl	*	10-152		**59.1**	%REC	1	01/24/2022 17:07	187055
Surr: Tetrachloro-meta-xylene	*	9.73-128		**91.9**	%REC	1	01/24/2022 17:07	187055
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:07	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**64.6**	%REC	1	01/26/2022 1:07	187073
Surr: Nitrobenzene-d5	*	29.1-125		**85.2**	%REC	1	01/26/2022 1:07	187073
Surr: p-Terphenyl-d14	*	35.2-164		**108.1**	%REC	1	01/26/2022 1:07	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-008 **Client Sample ID:** MW-08 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 10:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:56	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:56	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 18:56	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 18:56	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 18:56	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 18:56	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 18:56	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 18:56	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 18:56	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-008 **Client Sample ID:** MW-08 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 10:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 18:56	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:56	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 18:56	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 18:56	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 18:56	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**93.4**	%REC	1	01/22/2022 18:56	187046
Surr: 4-Bromofluorobenzene	*	80-120		**97.0**	%REC	1	01/22/2022 18:56	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-008
Client Sample ID: MW-08 01202022
Matrix: AQUEOUS
Collection Date: 01/20/2022 10:42

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.0**	%REC	1	01/22/2022 18:56	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-009 **Client Sample ID:** MW-07 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:50	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:50	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:50	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:50	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:50	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:22	187055
Surr: Decachlorobiphenyl	*	10-152		**44.5**	%REC	1	01/24/2022 17:22	187055
Surr: Tetrachloro-meta-xylene	*	9.73-128		**74.0**	%REC	1	01/24/2022 17:22	187055
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 1:48	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**78.0**	%REC	1	01/26/2022 1:48	187073
Surr: Nitrobenzene-d5	*	29.1-125		**90.0**	%REC	1	01/26/2022 1:48	187073
Surr: p-Terphenyl-d14	*	35.2-164		**105.3**	%REC	1	01/26/2022 1:48	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-009 **Client Sample ID:** MW-07 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:22	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:22	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:22	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 19:22	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 19:22	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 19:22	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 19:22	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 19:22	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:22	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-009 **Client Sample ID:** MW-07 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 19:22	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 19:22	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 19:22	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 19:22	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 19:22	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.3**	%REC	1	01/22/2022 19:22	187046
Surr: 4-Bromofluorobenzene	*	80-120		**95.9**	%REC	1	01/22/2022 19:22	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-009
Client Sample ID: MW-07 01202022
Matrix: AQUEOUS
Collection Date: 01/20/2022 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**91.1**	%REC	1	01/22/2022 19:22	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-010 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	01/22/2022 19:49	187046
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:49	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:49	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 19:49	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 19:49	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 19:49	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-010 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 19:49	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Diisopropyl ether	*	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Iodomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Naphthalene	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
n-Butyl acetate	*	2.0		ND	µg/L	1	01/22/2022 19:49	187046
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
n-Heptane	*	5.0		ND	µg/L	1	01/22/2022 19:49	187046
n-Hexane	*	5.0		ND	µg/L	1	01/22/2022 19:49	187046
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/22/2022 19:49	187046
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
o-Xylene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Propionitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Styrene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/22/2022 19:49	187046
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/22/2022 19:49	187046
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 19:49	187046
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/22/2022 19:49	187046
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/22/2022 19:49	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-010 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 19:49	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.6**	%REC	1	01/22/2022 19:49	187046
Surr: 4-Bromofluorobenzene	*	80-120		**96.0**	%REC	1	01/22/2022 19:49	187046
Surr: Toluene-d8	*	80-120		**93.9**	%REC	1	01/22/2022 19:49	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-011 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2-Butanone	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:16	187046
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:16	187046
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Acetone	NELAP	10.0		**19.5**	µg/L	1	01/22/2022 20:16	187046
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Acrolein	NELAP	20.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Benzene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 20:16	187046
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Bromoform	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Bromomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-011 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 20:16	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Dibromomethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Diisopropyl ether	*	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Ethyl acetate	NELAP	10.0		ND	µg/L	1	01/22/2022 20:16	187046
Ethyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Ethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Hexachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Iodomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Methylacrylate	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Methylene chloride	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Naphthalene	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
n-Butyl acetate	*	2.0		ND	µg/L	1	01/22/2022 20:16	187046
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
n-Heptane	*	5.0		ND	µg/L	1	01/22/2022 20:16	187046
n-Hexane	*	5.0		ND	µg/L	1	01/22/2022 20:16	187046
Nitrobenzene	NELAP	50.0		ND	µg/L	1	01/22/2022 20:16	187046
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
o-Xylene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Pentachloroethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Propionitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 20:16	187046
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Styrene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	01/22/2022 20:16	187046
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	01/22/2022 20:16	187046
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:16	187046
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	01/22/2022 20:16	187046
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	01/22/2022 20:16	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-011 **Client Sample ID:** TB

Matrix: AQUEOUS **Collection Date:** 01/20/2022 14:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 20:16	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**94.8**	%REC	1	01/22/2022 20:16	187046
Surr: 4-Bromofluorobenzene	*	80-120		**97.7**	%REC	1	01/22/2022 20:16	187046
Surr: Toluene-d8	*	80-120		**91.1**	%REC	1	01/22/2022 20:16	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-012 **Client Sample ID:** Rinse 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 11:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	01/24/2022 17:52	186993
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	01/24/2022 17:52	186993
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	01/24/2022 17:52	186993
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	01/24/2022 17:52	186993
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	01/24/2022 17:52	186993
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	01/24/2022 17:38	187055
Surr: Decachlorobiphenyl	*	10-152		**54.0**	%REC	1	01/24/2022 17:38	187055
Surr: Tetrachloro-meta-xylene	*	9.73-128		**102.9**	%REC	1	01/24/2022 17:38	187055
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Chrysene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Fluorene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Pyrene	NELAP	0.00100		**ND**	mg/L	1	01/26/2022 2:28	187073
Surr: 2-Fluorobiphenyl	*	1.39-137		**73.5**	%REC	1	01/26/2022 2:28	187073
Surr: Nitrobenzene-d5	*	29.1-125		**90.4**	%REC	1	01/26/2022 2:28	187073
Surr: p-Terphenyl-d14	*	35.2-164		**101.3**	%REC	1	01/26/2022 2:28	187073
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-012 **Client Sample ID:** Rinse 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 11:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	01/22/2022 20:42	187046
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	01/22/2022 20:42	187046
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	01/22/2022 20:42	187046
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
2-Butanone	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
2-Hexanone	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
2-Nitropropane	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
Acetone	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
Acetonitrile	NELAP	10.0		ND	µg/L	1	01/22/2022 20:42	187046
Acrolein	NELAP	20.0		ND	µg/L	1	01/22/2022 20:42	187046
Acrylonitrile	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
Allyl chloride	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
Benzene	NELAP	0.5		ND	µg/L	1	01/22/2022 20:42	187046
Bromobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Bromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Bromoform	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Bromomethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
Carbon disulfide	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Chlorobenzene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Chloroethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Chloroform	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Chloromethane	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
Chloroprene	NELAP	5.0		ND	µg/L	1	01/22/2022 20:42	187046
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046
Cyclohexanone	*	20.0		ND	µg/L	1	01/22/2022 20:42	187046
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	01/22/2022 20:42	187046

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Lab ID: 22011097-012 **Client Sample ID:** Rinse 01202022

Matrix: AQUEOUS **Collection Date:** 01/20/2022 11:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Diisopropyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Iodomethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Naphthalene	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
n-Butyl acetate	*	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
n-Heptane	*	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
n-Hexane	*	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	01/22/2022 20:42	187046
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
o-Xylene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Propionitrile	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:42	187046
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Styrene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	01/22/2022 20:42	187046
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	01/22/2022 20:42	187046
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Toluene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	01/22/2022 20:42	187046
Surr: 1,2-Dichloroethane-d4	*	80-120		**93.8**	%REC	1	01/22/2022 20:42	187046
Surr: 4-Bromofluorobenzene	*	80-120		**97.4**	%REC	1	01/22/2022 20:42	187046

Client: Burns & McDonnell Waste Consultants
Work Order: 22011097
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 27-Jan-22
Lab ID: 22011097-012
Client Sample ID: Rinse 01202022
Matrix: AQUEOUS
Collection Date: 01/20/2022 11:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Surr: Toluene-d8	*	80-120		**92.8**	%REC	1	01/22/2022 20:42	187046

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011097
Report Date: 27-Jan-22

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
22011097-001	MW-10 01192022	Aqueous	4	01/19/2022 9:00
22011097-002	MW-13 01192022	Aqueous	5	01/19/2022 11:00
22011097-003	MW-12 01192022	Aqueous	4	01/19/2022 12:25
22011097-004	MW-16 01192022	Aqueous	4	01/19/2022 14:13
22011097-005	MW-15 01192022	Aqueous	5	01/19/2022 15:22
22011097-006	MW-15 01192022DUP	Aqueous	5	01/19/2022 15:22
22011097-007	MW-09 01202022	Aqueous	4	01/20/2022 9:38
22011097-008	MW-08 01202022	Aqueous	4	01/20/2022 10:42
22011097-009	MW-07 01202022	Aqueous	4	01/20/2022 12:45
22011097-010	TB	Aqueous	1	01/20/2022 14:15
22011097-011	TB	Aqueous	1	01/20/2022 14:15
22011097-012	Rinse 01202022	Aqueous	4	01/20/2022 11:35

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
22011097-001A	MW-10 01192022	01/19/2022 9:00	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 23:18
22011097-001B	MW-10 01192022	01/19/2022 9:00	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 16:25
22011097-001C	MW-10 01192022	01/19/2022 9:00	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:01
22011097-001D	MW-10 01192022	01/19/2022 9:00	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 15:49
22011097-002A	MW-13 01192022	01/19/2022 11:00	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 23:33
22011097-002B	MW-13 01192022	01/19/2022 11:00	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 18:24
22011097-002C	MW-13 01192022	01/19/2022 11:00	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:03
22011097-002D	MW-13 01192022	01/19/2022 11:00	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/21/2022 10:09	01/24/2022 15:54
22011097-002E	MW-13 01192022	01/19/2022 11:00	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 16:15
22011097-003A	MW-12 01192022	01/19/2022 12:25	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/21/2022 23:48
22011097-003B	MW-12 01192022	01/19/2022 12:25	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 19:04
22011097-003C	MW-12 01192022	01/19/2022 12:25	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:05
22011097-003D	MW-12 01192022	01/19/2022 12:25	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 16:42
22011097-004A	MW-16 01192022	01/19/2022 14:13	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/22/2022 0:04
22011097-004B	MW-16 01192022	01/19/2022 14:13	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 19:44
22011097-004C	MW-16 01192022	01/19/2022 14:13	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:06
22011097-004D	MW-16 01192022	01/19/2022 14:13	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 17:09
22011097-005A	MW-15 01192022	01/19/2022 15:22	01/20/2022 14:15		

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/21/2022 11:45	01/22/2022 0:19
22011097-005B	MW-15 01192022	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 20:25
22011097-005C	MW-15 01192022	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:08
22011097-005D	MW-15 01192022	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/21/2022 10:09	01/24/2022 15:55
22011097-005E	MW-15 01192022	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 17:36
22011097-006A	MW-15 01192022DUP	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/24/2022 9:43	01/24/2022 16:36
22011097-006B	MW-15 01192022DUP	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/25/2022 23:46
22011097-006C	MW-15 01192022DUP	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:45
22011097-006D	MW-15 01192022DUP	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			01/21/2022 10:11	01/24/2022 15:57
22011097-006E	MW-15 01192022DUP	01/19/2022 15:22	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 18:02
22011097-007A	MW-09 01202022	01/20/2022 9:38	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/24/2022 9:43	01/24/2022 16:52
22011097-007B	MW-09 01202022	01/20/2022 9:38	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/26/2022 0:27
22011097-007C	MW-09 01202022	01/20/2022 9:38	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:47
22011097-007D	MW-09 01202022	01/20/2022 9:38	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 18:29
22011097-008A	MW-08 01202022	01/20/2022 10:42	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/24/2022 9:43	01/24/2022 17:07
22011097-008B	MW-08 01202022	01/20/2022 10:42	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/26/2022 1:07
22011097-008C	MW-08 01202022	01/20/2022 10:42	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:49
22011097-008D	MW-08 01202022	01/20/2022 10:42	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 18:56

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
22011097-009A	MW-07 01202022	01/20/2022 12:45	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/24/2022 9:43	01/24/2022 17:22
22011097-009B	MW-07 01202022	01/20/2022 12:45	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/26/2022 1:48
22011097-009C	MW-07 01202022	01/20/2022 12:45	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:50
22011097-009D	MW-07 01202022	01/20/2022 12:45	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 19:22
22011097-010A	TB	01/20/2022 14:15	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 19:49
22011097-011A	TB	01/20/2022 14:15	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 20:16
22011097-012A	Rinse 01202022	01/20/2022 11:35	01/20/2022 14:15		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			01/24/2022 9:43	01/24/2022 17:38
22011097-012B	Rinse 01202022	01/20/2022 11:35	01/20/2022 14:15		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			01/24/2022 15:03	01/26/2022 2:28
22011097-012C	Rinse 01202022	01/20/2022 11:35	01/20/2022 14:15		
	SW-846 3005A, 6010B, Metals by ICP (Total)			01/21/2022 7:31	01/24/2022 17:52
22011097-012D	Rinse 01202022	01/20/2022 11:35	01/20/2022 14:15		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				01/22/2022 20:42

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 187008 **SampType:** MBLK Units **mg/L**
SampID: MBLK-187008

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/24/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/24/2022
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	01/24/2022
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	01/24/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/24/2022

Batch 187008 **SampType:** LCS Units **mg/L**
SampID: LCS-187008

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.456**	0.5000	0	91.2	85	115	01/24/2022
Arsenic		0.0250		**0.507**	0.5000	0	101.4	85	115	01/24/2022
Copper		0.0050		**0.244**	0.2500	0	97.7	85	115	01/24/2022
Lead		0.0150		**0.492**	0.5000	0	98.4	85	115	01/24/2022
Zinc		0.0100		**0.484**	0.5000	0	96.7	85	115	01/24/2022

Batch 187008 **SampType:** MS Units **mg/L**
SampID: 22011097-006DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.478**	0.5000	0	95.7	75	125	01/24/2022
Arsenic		0.0250		**0.496**	0.5000	0	99.3	75	125	01/24/2022
Copper		0.0050		**0.238**	0.2500	0	95.2	75	125	01/24/2022
Lead		0.0150		**0.475**	0.5000	0.01100	92.8	75	125	01/24/2022
Zinc		0.0100		**0.471**	0.5000	0	94.2	75	125	01/24/2022

Batch 187008 **SampType:** MSD Units **mg/L** RPD Limit **20**
SampID: 22011097-006DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.478**	0.5000	0	95.7	0.4783	0.04	01/24/2022
Arsenic		0.0250		**0.505**	0.5000	0	101.1	0.4964	1.78	01/24/2022
Copper		0.0050		**0.244**	0.2500	0	97.5	0.2381	2.37	01/24/2022
Lead		0.0150		**0.483**	0.5000	0.01100	94.4	0.4749	1.69	01/24/2022
Zinc		0.0100		**0.479**	0.5000	0	95.7	0.4712	1.56	01/24/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 186993 **SampType:** MBLK Units **mg/L**

SampID: MBLK-186993

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**< 0.0500**	0.0068	0	0	-100	100	01/24/2022
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	01/24/2022
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	01/24/2022
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	01/24/2022
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	01/24/2022

Batch 186993 **SampType:** LCS Units **mg/L**

SampID: LCS-186993

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.522**	0.5000	0	104.5	85	115	01/24/2022
Arsenic		0.0250		**0.546**	0.5000	0	109.2	85	115	01/24/2022
Copper		0.0050		**0.257**	0.2500	0	103.0	85	115	01/24/2022
Lead		0.0150		**0.528**	0.5000	0	105.6	85	115	01/24/2022
Zinc		0.0100		**0.516**	0.5000	0	103.2	85	115	01/24/2022

Batch 186993 **SampType:** MS Units **mg/L**

SampID: 22011097-005CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.530**	0.5000	0	106.1	75	125	01/24/2022
Arsenic		0.0250		**0.558**	0.5000	0	111.6	75	125	01/24/2022
Copper		0.0050		**0.267**	0.2500	0	106.7	75	125	01/24/2022
Lead		0.0150		**0.525**	0.5000	0.01110	102.8	75	125	01/24/2022
Zinc		0.0100		**0.526**	0.5000	0	105.2	75	125	01/24/2022

Batch 186993 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 22011097-005CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.531**	0.5000	0	106.1	0.5303	0.08	01/24/2022
Arsenic		0.0250		**0.560**	0.5000	0	112.0	0.5581	0.32	01/24/2022
Copper		0.0050		**0.265**	0.2500	0	106.1	0.2667	0.56	01/24/2022
Lead		0.0150		**0.515**	0.5000	0.01110	100.7	0.5250	1.96	01/24/2022
Zinc		0.0100		**0.521**	0.5000	0	104.2	0.5259	0.92	01/24/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 186966 **SampType:** MBLK Units µg/L

SampID: MBLK-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		**ND**						01/21/2022
Aroclor 1016		1.00		**ND**						01/21/2022
Aroclor 1221		0.095		**ND**						01/21/2022
Aroclor 1221		1.00		**ND**						01/21/2022
Aroclor 1232		1.00		**ND**						01/21/2022
Aroclor 1232		0.095		**ND**						01/21/2022
Aroclor 1242		0.095		**ND**						01/21/2022
Aroclor 1242		1.00		**ND**						01/21/2022
Aroclor 1248		1.00		**ND**						01/21/2022
Aroclor 1248		0.095		**ND**						01/21/2022
Aroclor 1254		1.00		**ND**						01/21/2022
Aroclor 1254		0.095		**ND**						01/21/2022
Aroclor 1260		0.095		**ND**						01/21/2022
Aroclor 1260		1.00		**ND**						01/21/2022
Surr: Decachlorobiphenyl	*			**0.115**	0.1250		91.9	31.2	141	01/24/2022
Surr: Decachlorobiphenyl	*			**0.078**	0.1250		62.2	31.2	141	01/21/2022
Surr: Decachlorobiphenyl	*			**0.08**	0.1250		62.2	27.5	143	01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.12**	0.1250		92.8	35.2	135	01/21/2022

Batch 186966 **SampType:** LCS Units µg/L

SampID: LCSPCB-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		**2.33**	2.500	0	93.2	50	140	01/21/2022
Aroclor 1016		1.00		**2.33**	2.500	0	93.2	56.2	136	01/21/2022
Aroclor 1260		1.00		**2.03**	2.500	0	81.1	42.1	125	01/21/2022
Aroclor 1260		0.095		**2.03**	2.500	0	81.1	8	140	01/21/2022
Surr: Decachlorobiphenyl	*			**0.094**	0.1250		74.9	31.2	141	01/21/2022
Surr: Decachlorobiphenyl	*			**0.09**	0.1250		74.9	27.5	143	01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.11**	0.1250		87.2	35.2	135	01/21/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 186966 **SampType:** LCSD Units µg/L RPD Limit 36

SampID: LCSPCBD-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		0.095		**2.39**	2.500	0	95.8	2.330	2.70	01/21/2022
Aroclor 1016		1.00		**2.39**	2.500	0	95.8	2.330	2.70	01/21/2022
Aroclor 1260		1.00		**2.15**	2.500	0	86.1	2.028	5.96	01/21/2022
Aroclor 1260		0.095		**2.15**	2.500	0	86.1	2.028	5.96	01/21/2022
Surr: Decachlorobiphenyl	*			**0.105**	0.1250		84.4			01/21/2022
Surr: Decachlorobiphenyl	*			**0.11**	0.1250		84.4			01/21/2022
Surr: Tetrachloro-meta-xylene	*			**0.11**	0.1250		90.7			01/21/2022

Batch 186966 **SampType:** LCS Units %REC

SampID: LCSPST-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.128**	0.1250		102.3	31.2	141	01/24/2022

Batch 186966 **SampType:** LCSD Units %REC RPD Limit 0

SampID: LCSPSTD-186966

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.120**	0.1250		96.4			01/24/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 187055 **SampType:** MBLK Units µg/L

SampID: MBLK-187055

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**ND**						01/24/2022
Aroclor 1016		0.095		**ND**						01/24/2022
Aroclor 1221		1.00		**ND**						01/24/2022
Aroclor 1221		0.095		**ND**						01/24/2022
Aroclor 1232		1.00		**ND**						01/24/2022
Aroclor 1232		0.095		**ND**						01/24/2022
Aroclor 1242		0.095		**ND**						01/24/2022
Aroclor 1242		1.00		**ND**						01/24/2022
Aroclor 1248		0.095		**ND**						01/24/2022
Aroclor 1248		1.00		**ND**						01/24/2022
Aroclor 1254		1.00		**ND**						01/24/2022
Aroclor 1254		0.095		**ND**						01/24/2022
Aroclor 1260		0.095		**ND**						01/24/2022
Aroclor 1260		1.00		**ND**						01/24/2022
Surr: Decachlorobiphenyl	*			**0.09**	0.1250		72.9	27.5	143	01/24/2022
Surr: Decachlorobiphenyl	*			**0.091**	0.1250		72.9	31.2	141	01/24/2022
Surr: Tetrachloro-meta-xylene	*			**0.12**	0.1250		99.3	35.2	135	01/24/2022

Batch 187055 **SampType:** LCS Units µg/L

SampID: LCSPCB-187055

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**2.79**	2.500	0	111.5	56.2	136	01/24/2022
Aroclor 1016		0.095		**2.79**	2.500	0	111.5	50	140	01/24/2022
Aroclor 1260		0.095		**2.50**	2.500	0	99.9	8	140	01/24/2022
Aroclor 1260		1.00		**2.50**	2.500	0	99.9	42.1	125	01/24/2022
Surr: Decachlorobiphenyl	*			**0.118**	0.1250		94.2	31.2	141	01/24/2022
Surr: Decachlorobiphenyl	*			**0.12**	0.1250		94.2	27.5	143	01/24/2022
Surr: Tetrachloro-meta-xylene	*			**0.14**	0.1250		114.3	35.2	135	01/24/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 187055 **SampType:** LCSD Units µg/L RPD Limit 36

SampID: LCSPCBD-187055

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		0.095		**2.93**	2.500	0	117.3	2.787	5.05	01/24/2022
Aroclor 1016		1.00		**2.93**	2.500	0	117.3	2.787	5.05	01/24/2022
Aroclor 1260		0.095		**2.41**	2.500	0	96.3	2.499	3.68	01/24/2022
Aroclor 1260		1.00		**2.41**	2.500	0	96.3	2.499	3.68	01/24/2022
Surr: Decachlorobiphenyl	*			**0.12**	0.1250		97.0			01/24/2022
Surr: Decachlorobiphenyl	*			**0.121**	0.1250		97.0			01/24/2022
Surr: Tetrachloro-meta-xylene	*			**0.14**	0.1250		111.9			01/24/2022

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** MBLK Units mg/L

SampID: MBLK-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**ND**						01/25/2022
Acenaphthylene		0.00100		**ND**						01/25/2022
Anthracene		0.00100		**ND**						01/25/2022
Benzo(a)anthracene		0.00100		**ND**						01/25/2022
Benzo(a)pyrene		0.00100		**ND**						01/25/2022
Benzo(b)fluoranthene		0.00100		**ND**						01/25/2022
Benzo(g,h,i)perylene		0.00100		**ND**						01/25/2022
Benzo(k)fluoranthene		0.00100		**ND**						01/25/2022
Chrysene		0.00100		**ND**						01/25/2022
Dibenzo(a,h)anthracene		0.00100		**ND**						01/25/2022
Fluoranthene		0.00100		**ND**						01/25/2022
Fluorene		0.00100		**ND**						01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**ND**						01/25/2022
Naphthalene		0.00100		**ND**						01/25/2022
Phenanthrene		0.00100		**ND**						01/25/2022
Pyrene		0.00100		**ND**						01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.00991**	0.0125		79.3	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0142**	0.0125		113.4	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0183**	0.0125		146.5	35	222	01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** LCS Units **mg/L**

SampID: LCS-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**0.00861**	0.0100	0	86.1	39.6	145	01/25/2022
Acenaphthylene		0.00100		**0.00907**	0.0100	0	90.7	38.3	147	01/25/2022
Anthracene		0.00100		**0.00968**	0.0100	0	96.8	47.7	153	01/25/2022
Benzo(a)anthracene		0.00100		**0.00958**	0.0100	0	95.8	45	136	01/25/2022
Benzo(a)pyrene		0.00100		**0.00860**	0.0100	0	86.0	49.8	164	01/25/2022
Benzo(b)fluoranthene		0.00100		**0.00987**	0.0100	0	98.7	45.7	167	01/25/2022
Benzo(g,h,i)perylene		0.00100		**0.0102**	0.0100	0	102.0	41	157	01/25/2022
Benzo(k)fluoranthene		0.00100		**0.00996**	0.0100	0	99.6	46.7	166	01/25/2022
Chrysene		0.00100		**0.00781**	0.0100	0	78.1	45.5	162	01/25/2022
Dibenzo(a,h)anthracene		0.00100		**0.0102**	0.0100	0	102.4	40.4	154	01/25/2022
Fluoranthene		0.00100		**0.0109**	0.0100	0	108.7	47.3	168	01/25/2022
Fluorene		0.00100		**0.00967**	0.0100	0	96.7	45.2	153	01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0104**	0.0100	0	104.4	44.6	166	01/25/2022
Naphthalene		0.00100		**0.00799**	0.0100	0	79.9	16.6	137	01/25/2022
Phenanthrene		0.00100		**0.0103**	0.0100	0	102.6	50.8	149	01/25/2022
Pyrene		0.00100		**0.0109**	0.0100	0	108.8	44.9	163	01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.0117**	0.0125		93.5	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0142**	0.0125		113.4	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0139**	0.0125		111.0	35	222	01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** LCSD Units **mg/L** RPD Limit **40**

SampID: LCSD-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		**0.00627**	0.0100	0	62.7	0.008606	31.45	01/25/2022
Acenaphthylene		0.00100		**0.00642**	0.0100	0	64.2	0.009070	34.28	01/25/2022
Anthracene		0.00100		**0.00878**	0.0100	0	87.8	0.009677	9.74	01/25/2022
Benzo(a)anthracene		0.00100		**0.00923**	0.0100	0	92.3	0.009576	3.65	01/25/2022
Benzo(a)pyrene		0.00100		**0.00819**	0.0100	0	81.9	0.008600	4.94	01/25/2022
Benzo(b)fluoranthene		0.00100		**0.00939**	0.0100	0	93.9	0.009870	4.97	01/25/2022
Benzo(g,h,i)perylene		0.00100		**0.00948**	0.0100	0	94.8	0.01020	7.29	01/25/2022
Benzo(k)fluoranthene		0.00100		**0.00972**	0.0100	0	97.2	0.009964	2.43	01/25/2022
Chrysene		0.00100		**0.00760**	0.0100	0	76.0	0.007814	2.74	01/25/2022
Dibenzo(a,h)anthracene		0.00100		**0.00995**	0.0100	0	99.5	0.01024	2.91	01/25/2022
Fluoranthene		0.00100		**0.00990**	0.0100	0	99.0	0.01087	9.40	01/25/2022
Fluorene		0.00100		**0.00806**	0.0100	0	80.6	0.009669	18.11	01/25/2022
Indeno(1,2,3-cd)pyrene		0.00100		**0.0101**	0.0100	0	100.8	0.01044	3.43	01/25/2022
Naphthalene		0.00100	R	**0.00369**	0.0100	0	36.9	0.007994	73.64	01/25/2022
Phenanthrene		0.00100		**0.00915**	0.0100	0	91.5	0.01026	11.51	01/25/2022
Pyrene		0.00100		**0.00991**	0.0100	0	99.1	0.01088	9.39	01/25/2022
Surr: 2-Fluorobiphenyl	*			**0.0108**	0.0125		86.1			01/25/2022
Surr: Nitrobenzene-d5	*			**0.0121**	0.0125		96.7			01/25/2022
Surr: p-Terphenyl-d14	*			**0.0112**	0.0125		89.8			01/25/2022

Batch 187073 **SampType:** LCSG Units **%REC**

SampID: LCSG-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0105**	0.0125		84.2	1.09	175	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0114**	0.0125		91.6	35.5	156	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0131**	0.0125		104.9	35	222	01/25/2022

Batch 187073 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-187073

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0107**	0.0125		85.5			01/25/2022
Surr: Nitrobenzene-d5	*			**0.0123**	0.0125		98.8			01/25/2022
Surr: p-Terphenyl-d14	*			**0.0137**	0.0125		109.7			01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187073 **SampType:** MS Units **%REC**

SampID: 22011097-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0386**	0.0500		77.1	1.39	137	01/25/2022
Surr: Nitrobenzene-d5	*			**0.0418**	0.0500		83.5	29.1	125	01/25/2022
Surr: p-Terphenyl-d14	*			**0.0455**	0.0500		90.9	35.2	164	01/25/2022

Batch 187073 **SampType:** MSD Units **%REC** RPD Limit **0**

SampID: 22011097-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0387**	0.0500		77.3			01/25/2022
Surr: Nitrobenzene-d5	*			**0.0416**	0.0500		83.1			01/25/2022
Surr: p-Terphenyl-d14	*			**0.0379**	0.0500		75.8			01/25/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		ND						01/22/2022
1,1,1-Trichloroethane	*	2.0		ND						01/22/2022
1,1,2,2-Tetrachloroethane	*	2.0		ND						01/22/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						01/22/2022
1,1,2-Trichloroethane	*	0.5		ND						01/22/2022
1,1-Dichloro-2-propanone	*	30.0		ND						01/22/2022
1,1-Dichloroethane	*	2.0		ND						01/22/2022
1,1-Dichloroethene	*	2.0		ND						01/22/2022
1,1-Dichloropropene	*	2.0		ND						01/22/2022
1,2,3-Trichlorobenzene	*	2.0		ND						01/22/2022
1,2,3-Trichloropropane	*	2.0		ND						01/22/2022
1,2,3-Trimethylbenzene	*	2.0		ND						01/22/2022
1,2,4-Trichlorobenzene	*	2.0		ND						01/22/2022
1,2,4-Trimethylbenzene	*	2.0		ND						01/22/2022
1,2-Dibromo-3-chloropropane	*	5.0		ND						01/22/2022
1,2-Dibromoethane	*	2.0		ND						01/22/2022
1,2-Dichlorobenzene	*	2.0		ND						01/22/2022
1,2-Dichloroethane	*	2.0		ND						01/22/2022
1,2-Dichloropropane	*	2.0		ND						01/22/2022
1,3,5-Trimethylbenzene	*	2.0		ND						01/22/2022
1,3-Dichlorobenzene	*	2.0		ND						01/22/2022
1,3-Dichloropropane	*	2.0		ND						01/22/2022
1,4-Dichlorobenzene	*	2.0		ND						01/22/2022
1-Chlorobutane	*	5.0		ND						01/22/2022
2,2-Dichloropropane	*	2.0		ND						01/22/2022
2-Butanone	*	10.0		ND						01/22/2022
2-Chloroethyl vinyl ether	*	5.0		ND						01/22/2022
2-Chlorotoluene	*	2.0		ND						01/22/2022
2-Hexanone	*	10.0		ND						01/22/2022
2-Nitropropane	*	10.0		ND						01/22/2022
4-Chlorotoluene	*	2.0		ND						01/22/2022
4-Methyl-2-pentanone	*	10.0		ND						01/22/2022
Acetone	*	10.0		ND						01/22/2022
Acetonitrile	*	10.0		ND						01/22/2022
Acrolein	*	20.0		ND						01/22/2022
Acrylonitrile	*	5.0		ND						01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						01/22/2022
Benzene	*	0.5		ND						01/22/2022
Bromobenzene	*	2.0		ND						01/22/2022
Bromochloromethane	*	2.0		ND						01/22/2022
Bromodichloromethane	*	2.0		ND						01/22/2022
Bromoform	*	2.0		ND						01/22/2022
Bromomethane	*	5.0		ND						01/22/2022
Carbon disulfide	*	2.0		ND						01/22/2022
Carbon tetrachloride	*	2.0		ND						01/22/2022
Chlorobenzene	*	2.0		ND						01/22/2022
Chloroethane	*	2.0		ND						01/22/2022
Chloroform	*	2.0		ND						01/22/2022
Chloromethane	*	5.0		ND						01/22/2022
Chloroprene	*	5.0		ND						01/22/2022
cis-1,2-Dichloroethene	*	2.0		ND						01/22/2022
cis-1,3-Dichloropropene	*	2.0		ND						01/22/2022
cis-1,4-Dichloro-2-butene	*	2.0		ND						01/22/2022
Cyclohexanone	*	20.0		ND						01/22/2022
Dibromochloromethane	*	2.0		ND						01/22/2022
Dibromomethane	*	2.0		ND						01/22/2022
Dichlorodifluoromethane	*	2.0		ND						01/22/2022
Diisopropyl ether	*	2.0		ND						01/22/2022
Ethyl acetate	*	10.0		ND						01/22/2022
Ethyl ether	*	5.0		ND						01/22/2022
Ethyl methacrylate	*	5.0		ND						01/22/2022
Ethylbenzene	*	2.0		ND						01/22/2022
Ethyl-tert-butyl ether	*	2.0		ND						01/22/2022
Hexachlorobutadiene	*	5.0		ND						01/22/2022
Hexachloroethane	*	5.0		ND						01/22/2022
Iodomethane	*	5.0		ND						01/22/2022
Isopropylbenzene	*	2.0		ND						01/22/2022
m,p-Xylenes	*	2.0		ND						01/22/2022
Methacrylonitrile	*	5.0		ND						01/22/2022
Methyl Methacrylate	*	5.0		ND						01/22/2022
Methyl tert-butyl ether	*	2.0		ND						01/22/2022
Methylacrylate	*	5.0		ND						01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** MBLK Units µg/L

SampID: MBLK-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**ND**						01/22/2022
Naphthalene	*	5.0		**ND**						01/22/2022
n-Butyl acetate	*	2.0		**ND**						01/22/2022
n-Butylbenzene	*	2.0		**ND**						01/22/2022
n-Heptane	*	5.0		**ND**						01/22/2022
n-Hexane	*	5.0		**ND**						01/22/2022
Nitrobenzene	*	50.0		**ND**						01/22/2022
n-Propylbenzene	*	2.0		**ND**						01/22/2022
o-Xylene	*	2.0		**ND**						01/22/2022
Pentachloroethane	*	5.0		**ND**						01/22/2022
p-Isopropyltoluene	*	2.0		**ND**						01/22/2022
Propionitrile	*	10.0		**ND**						01/22/2022
sec-Butylbenzene	*	2.0		**ND**						01/22/2022
Styrene	*	2.0		**ND**						01/22/2022
tert-Amyl methyl ether	*	2.0		**ND**						01/22/2022
tert-Butyl alcohol	*	10.0		**ND**						01/22/2022
tert-Butylbenzene	*	2.0		**ND**						01/22/2022
Tetrachloroethene	*	0.5		**ND**						01/22/2022
Tetrahydrofuran	*	5.0		**ND**						01/22/2022
Toluene	*	2.0		**ND**						01/22/2022
trans-1,2-Dichloroethene	*	2.0		**ND**						01/22/2022
trans-1,3-Dichloropropene	*	2.0		**ND**						01/22/2022
trans-1,4-Dichloro-2-butene	*	2.0		**ND**						01/22/2022
Trichloroethene	*	2.0		**ND**						01/22/2022
Trichlorofluoromethane	*	5.0		**ND**						01/22/2022
Vinyl acetate	*	5.0		**ND**						01/22/2022
Vinyl chloride	*	2.0		**ND**						01/22/2022
Xylenes, Total	*	4.0		**ND**						01/22/2022
1,2-Dichloroethene, Total	*	4.0		**ND**						01/22/2022
1,3-Dichloropropene, Total	*	4.0		**ND**						01/22/2022
1,4-Dichloro-2-butene, Total	*	4.0		**ND**						01/22/2022
Surr: 1,2-Dichloroethane-d4	*			**47.8**	50.00		95.6	80	120	01/22/2022
Surr: 4-Bromofluorobenzene	*			**49.3**	50.00		98.5	80	120	01/22/2022
Surr: Toluene-d8	*			**45.8**	50.00		91.5	80	120	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCS Units µg/L

SampID: LCS-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**47.5**	50.00	0	94.9	82	113	01/22/2022
1,1,1-Trichloroethane	*	2.0		**52.7**	50.00	0	105.3	76.9	128	01/22/2022
1,1,2,2-Tetrachloroethane	*	2.0		**44.3**	50.00	0	88.6	76.7	113	01/22/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**56.0**	50.00	0	112.1	69.5	127	01/22/2022
1,1,2-Trichloroethane	*	0.5		**47.2**	50.00	0	94.4	83.8	111	01/22/2022
1,1-Dichloro-2-propanone	*	30.0		**123**	125.0	0	98.2	74.9	117	01/22/2022
1,1-Dichloroethane	*	2.0		**52.2**	50.00	0	104.5	77	129	01/22/2022
1,1-Dichloroethene	*	2.0		**53.2**	50.00	0	106.4	69.4	127	01/22/2022
1,1-Dichloropropene	*	2.0		**53.1**	50.00	0	106.1	75.1	123	01/22/2022
1,2,3-Trichlorobenzene	*	2.0		**46.1**	50.00	0	92.3	77.3	121	01/22/2022
1,2,3-Trichloropropane	*	2.0		**43.1**	50.00	0	86.2	75.3	109	01/22/2022
1,2,3-Trimethylbenzene	*	2.0		**43.4**	50.00	0	86.8	77	115	01/22/2022
1,2,4-Trichlorobenzene	*	2.0		**45.9**	50.00	0	91.8	76.8	124	01/22/2022
1,2,4-Trimethylbenzene	*	2.0		**44.0**	50.00	0	88.0	75	115	01/22/2022
1,2-Dibromo-3-chloropropane	*	5.0		**46.6**	50.00	0	93.3	71.9	119	01/22/2022
1,2-Dibromoethane	*	2.0		**47.7**	50.00	0	95.4	83.6	110	01/22/2022
1,2-Dichlorobenzene	*	2.0		**43.8**	50.00	0	87.5	72.1	113	01/22/2022
1,2-Dichloroethane	*	2.0		**51.2**	50.00	0	102.4	72.3	117	01/22/2022
1,2-Dichloropropane	*	2.0		**52.4**	50.00	0	104.7	76.5	119	01/22/2022
1,3,5-Trimethylbenzene	*	2.0		**43.6**	50.00	0	87.3	75.2	117	01/22/2022
1,3-Dichlorobenzene	*	2.0		**44.2**	50.00	0	88.4	75.2	115	01/22/2022
1,3-Dichloropropane	*	2.0		**46.7**	50.00	0	93.3	80.9	110	01/22/2022
1,4-Dichlorobenzene	*	2.0		**42.7**	50.00	0	85.5	73.9	112	01/22/2022
1-Chlorobutane	*	5.0		**53.1**	50.00	0	106.3	74.9	130	01/22/2022
2,2-Dichloropropane	*	2.0		**54.3**	50.00	0	108.6	66.5	138	01/22/2022
2-Butanone	*	10.0		**133**	125.0	0	106.1	68.8	134	01/22/2022
2-Chloroethyl vinyl ether	*	5.0		**57.6**	50.00	0	115.3	17.8	163	01/22/2022
2-Chlorotoluene	*	2.0		**42.4**	50.00	0	84.8	74.9	115	01/22/2022
2-Hexanone	*	10.0		**121**	125.0	0	97.2	73.2	117	01/22/2022
2-Nitropropane	*	10.0		**614**	500.0	0	122.8	67.1	140	01/22/2022
4-Chlorotoluene	*	2.0		**42.6**	50.00	0	85.2	75.7	113	01/22/2022
4-Methyl-2-pentanone	*	10.0		**120**	125.0	0	95.7	77	113	01/22/2022
Acetone	*	10.0		**131**	125.0	0	104.4	61.4	130	01/22/2022
Acetonitrile	*	10.0		**573**	500.0	0	114.6	68.8	136	01/22/2022
Acrolein	*	20.0		**484**	500.0	0	96.8	28.4	168	01/22/2022
Acrylonitrile	*	5.0		**57.9**	50.00	0	115.9	77.9	124	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCS Units µg/L

SampID: LCS-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**54.3**	50.00	0	108.6	75.8	130	01/22/2022
Benzene	*	0.5		**51.4**	50.00	0	102.9	78.5	119	01/22/2022
Bromobenzene	*	2.0		**44.5**	50.00	0	89.0	77.5	113	01/22/2022
Bromochloromethane	*	2.0		**52.6**	50.00	0	105.2	71.5	123	01/22/2022
Bromodichloromethane	*	2.0		**55.1**	50.00	0	110.3	75.7	123	01/22/2022
Bromoform	*	2.0		**51.0**	50.00	0	102.1	78.9	121	01/22/2022
Bromomethane	*	5.0		**49.1**	50.00	0	98.2	30.5	192	01/22/2022
Carbon disulfide	*	2.0		**53.3**	50.00	0	106.7	66.7	121	01/22/2022
Carbon tetrachloride	*	2.0		**53.6**	50.00	0	107.2	70.9	127	01/22/2022
Chlorobenzene	*	2.0		**45.9**	50.00	0	91.8	80	111	01/22/2022
Chloroethane	*	2.0		**46.5**	50.00	0	93.0	69.6	135	01/22/2022
Chloroform	*	2.0		**53.1**	50.00	0	106.1	76.2	120	01/22/2022
Chloromethane	*	5.0		**42.2**	50.00	0	84.3	50.9	138	01/22/2022
Chloroprene	*	5.0		**54.8**	50.00	0	109.6	68.4	127	01/22/2022
cis-1,2-Dichloroethene	*	2.0		**53.0**	50.00	0	106.0	79.5	121	01/22/2022
cis-1,3-Dichloropropene	*	2.0		**55.6**	50.00	0	111.1	79.8	123	01/22/2022
cis-1,4-Dichloro-2-butene	*	2.0		**51.8**	50.00	0	103.5	64.6	130	01/22/2022
Cyclohexanone	*	20.0		**487**	500.0	0	97.5	70.5	114	01/22/2022
Dibromochloromethane	*	2.0		**50.5**	50.00	0	101.1	84.5	114	01/22/2022
Dibromomethane	*	2.0		**55.5**	50.00	0	111.1	76	119	01/22/2022
Dichlorodifluoromethane	*	2.0		**51.3**	50.00	0	102.7	46.6	142	01/22/2022
Diisopropyl ether	*	2.0		**51.0**	50.00	0	102.1	72	128	01/22/2022
Ethyl acetate	*	10.0		**52.4**	50.00	0	104.8	70.3	115	01/22/2022
Ethyl ether	*	5.0		**54.8**	50.00	0	109.6	74.6	120	01/22/2022
Ethyl methacrylate	*	5.0		**49.0**	50.00	0	98.1	81.4	116	01/22/2022
Ethylbenzene	*	2.0		**45.2**	50.00	0	90.4	78.2	114	01/22/2022
Ethyl-tert-butyl ether	*	2.0		**53.4**	50.00	0	106.7	74.6	124	01/22/2022
Hexachlorobutadiene	*	5.0		**46.9**	50.00	0	93.8	73.9	129	01/22/2022
Hexachloroethane	*	5.0		**45.6**	50.00	0	91.1	78.3	123	01/22/2022
Iodomethane	*	5.0		**53.8**	50.00	0	107.5	50	151	01/22/2022
Isopropylbenzene	*	2.0		**47.3**	50.00	0	94.6	79.3	115	01/22/2022
m,p-Xylenes	*	2.0		**92.1**	100.0	0	92.1	77.2	116	01/22/2022
Methacrylonitrile	*	5.0		**57.0**	50.00	0	114.0	73.9	127	01/22/2022
Methyl Methacrylate	*	5.0		**54.5**	50.00	0	109.0	70.7	129	01/22/2022
Methyl tert-butyl ether	*	2.0		**54.3**	50.00	0	108.5	80.3	122	01/22/2022
Methylacrylate	*	5.0		**57.0**	50.00	0	114.1	75.2	124	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCS Units µg/L

SampID: LCS-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**50.6**	50.00	0	101.1	71.8	115	01/22/2022
Naphthalene	*	5.0		**44.9**	50.00	0	89.9	75.6	121	01/22/2022
n-Butyl acetate	*	2.0		**48.1**	50.00	0	96.2	72.4	118	01/22/2022
n-Butylbenzene	*	2.0		**42.3**	50.00	0	84.6	70.8	118	01/22/2022
n-Heptane	*	5.0		**54.0**	50.00	0	108.1	50.4	143	01/22/2022
n-Hexane	*	5.0		**49.8**	50.00	0	99.5	60.6	139	01/22/2022
Nitrobenzene	*	50.0		**376**	500.0	0	75.2	49.4	129	01/22/2022
n-Propylbenzene	*	2.0		**42.9**	50.00	0	85.7	74	119	01/22/2022
o-Xylene	*	2.0		**45.0**	50.00	0	90.0	79.2	112	01/22/2022
Pentachloroethane	*	5.0		**45.9**	50.00	0	91.7	71.8	124	01/22/2022
p-Isopropyltoluene	*	2.0		**44.2**	50.00	0	88.5	74.4	119	01/22/2022
Propionitrile	*	10.0		**582**	500.0	0	116.4	76.2	127	01/22/2022
sec-Butylbenzene	*	2.0		**43.7**	50.00	0	87.5	74.4	119	01/22/2022
Styrene	*	2.0		**48.3**	50.00	0	96.6	80.4	117	01/22/2022
tert-Amyl methyl ether	*	2.0		**53.8**	50.00	0	107.6	80.8	125	01/22/2022
tert-Butyl alcohol	*	10.0		**256**	250.0	0	102.5	64.9	118	01/22/2022
tert-Butylbenzene	*	2.0		**43.0**	50.00	0	86.1	74	115	01/22/2022
Tetrachloroethene	*	0.5		**46.7**	50.00	0	93.4	70.1	120	01/22/2022
Tetrahydrofuran	*	5.0		**53.5**	50.00	0	106.9	63.5	122	01/22/2022
Toluene	*	2.0		**45.2**	50.00	0	90.4	78.6	112	01/22/2022
trans-1,2-Dichloroethene	*	2.0		**53.1**	50.00	0	106.2	75.7	130	01/22/2022
trans-1,3-Dichloropropene	*	2.0		**49.4**	50.00	0	98.8	80.3	116	01/22/2022
trans-1,4-Dichloro-2-butene	*	2.0		**47.2**	50.00	0	94.4	65.5	124	01/22/2022
Trichloroethene	*	2.0		**53.4**	50.00	0	106.8	76.2	121	01/22/2022
Trichlorofluoromethane	*	5.0		**51.1**	50.00	0	102.3	71.1	131	01/22/2022
Vinyl acetate	*	5.0		**56.4**	50.00	0	112.9	79.8	129	01/22/2022
Vinyl chloride	*	2.0		**45.1**	50.00	0	90.3	58.6	141	01/22/2022
Xylenes, Total	*	4.0		**137**	150.0	0	91.4	78.3	114	01/22/2022
1,2-Dichloroethene, Total	*	4.0		**106**	100.0	0	106.1	78.5	125	01/22/2022
1,3-Dichloropropene, Total	*	4.0		**105**	100.0	0	105.0	82.3	117	01/22/2022
1,4-Dichloro-2-butene, Total	*	4.0		**99.0**	100.0	0	99.0	65.9	126	01/22/2022
Surr: 1,2-Dichloroethane-d4	*			**49.5**	50.00		99.0	80	120	01/22/2022
Surr: 4-Bromofluorobenzene	*			**48.3**	50.00		96.6	80	120	01/22/2022
Surr: Toluene-d8	*			**46.5**	50.00		93.1	80	120	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**46.1**	50.00	0	92.2	47.47	2.97	01/22/2022
1,1,1-Trichloroethane	*	2.0		**51.2**	50.00	0	102.5	52.67	2.73	01/22/2022
1,1,2,2-Tetrachloroethane	*	2.0		**44.3**	50.00	0	88.6	44.31	0.02	01/22/2022
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**54.6**	50.00	0	109.2	56.05	2.60	01/22/2022
1,1,2-Trichloroethane	*	0.5		**46.9**	50.00	0	93.8	47.22	0.66	01/22/2022
1,1-Dichloro-2-propanone	*	30.0		**124**	125.0	0	99.0	122.7	0.79	01/22/2022
1,1-Dichloroethane	*	2.0		**51.2**	50.00	0	102.5	52.24	1.91	01/22/2022
1,1-Dichloroethene	*	2.0		**52.1**	50.00	0	104.2	53.21	2.09	01/22/2022
1,1-Dichloropropene	*	2.0		**52.0**	50.00	0	103.9	53.07	2.13	01/22/2022
1,2,3-Trichlorobenzene	*	2.0		**45.1**	50.00	0	90.1	46.13	2.35	01/22/2022
1,2,3-Trichloropropane	*	2.0		**43.4**	50.00	0	86.9	43.08	0.86	01/22/2022
1,2,3-Trimethylbenzene	*	2.0		**42.4**	50.00	0	84.9	43.41	2.24	01/22/2022
1,2,4-Trichlorobenzene	*	2.0		**45.7**	50.00	0	91.3	45.91	0.55	01/22/2022
1,2,4-Trimethylbenzene	*	2.0		**43.2**	50.00	0	86.3	43.98	1.91	01/22/2022
1,2-Dibromo-3-chloropropane	*	5.0		**45.8**	50.00	0	91.6	46.64	1.82	01/22/2022
1,2-Dibromoethane	*	2.0		**47.3**	50.00	0	94.6	47.71	0.88	01/22/2022
1,2-Dichlorobenzene	*	2.0		**43.1**	50.00	0	86.1	43.76	1.61	01/22/2022
1,2-Dichloroethane	*	2.0		**50.7**	50.00	0	101.5	51.18	0.88	01/22/2022
1,2-Dichloropropane	*	2.0		**51.9**	50.00	0	103.7	52.37	0.96	01/22/2022
1,3,5-Trimethylbenzene	*	2.0		**43.0**	50.00	0	86.0	43.63	1.43	01/22/2022
1,3-Dichlorobenzene	*	2.0		**43.4**	50.00	0	86.7	44.19	1.92	01/22/2022
1,3-Dichloropropane	*	2.0		**46.2**	50.00	0	92.4	46.67	1.01	01/22/2022
1,4-Dichlorobenzene	*	2.0		**41.7**	50.00	0	83.4	42.73	2.49	01/22/2022
1-Chlorobutane	*	5.0		**52.1**	50.00	0	104.2	53.13	1.98	01/22/2022
2,2-Dichloropropane	*	2.0		**54.7**	50.00	0	109.3	54.28	0.72	01/22/2022
2-Butanone	*	10.0		**131**	125.0	0	104.6	132.7	1.43	01/22/2022
2-Chloroethyl vinyl ether	*	5.0		**58.2**	50.00	0	116.4	57.65	0.97	01/22/2022
2-Chlorotoluene	*	2.0		**42.0**	50.00	0	84.0	42.42	0.95	01/22/2022
2-Hexanone	*	10.0		**120**	125.0	0	96.3	121.4	0.89	01/22/2022
2-Nitropropane	*	10.0		**609**	500.0	0	121.8	614.0	0.84	01/22/2022
4-Chlorotoluene	*	2.0		**42.0**	50.00	0	84.0	42.59	1.44	01/22/2022
4-Methyl-2-pentanone	*	10.0		**119**	125.0	0	95.4	119.6	0.32	01/22/2022
Acetone	*	10.0		**129**	125.0	0	103.5	130.5	0.87	01/22/2022
Acetonitrile	*	10.0		**570**	500.0	0	114.1	573.2	0.49	01/22/2022
Acrolein	*	20.0		**477**	500.0	0	95.4	483.8	1.37	01/22/2022
Acrylonitrile	*	5.0		**57.4**	50.00	0	114.8	57.94	0.90	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		**53.7**	50.00	0	107.4	54.31	1.13	01/22/2022
Benzene	*	0.5		**50.8**	50.00	0	101.7	51.43	1.17	01/22/2022
Bromobenzene	*	2.0		**43.6**	50.00	0	87.3	44.50	1.93	01/22/2022
Bromochloromethane	*	2.0		**51.7**	50.00	0	103.5	52.61	1.67	01/22/2022
Bromodichloromethane	*	2.0		**54.6**	50.00	0	109.3	55.14	0.89	01/22/2022
Bromoform	*	2.0		**50.5**	50.00	0	100.9	51.03	1.12	01/22/2022
Bromomethane	*	5.0		**48.2**	50.00	0	96.5	49.08	1.71	01/22/2022
Carbon disulfide	*	2.0		**52.1**	50.00	0	104.1	53.33	2.39	01/22/2022
Carbon tetrachloride	*	2.0		**52.2**	50.00	0	104.5	53.62	2.59	01/22/2022
Chlorobenzene	*	2.0		**45.1**	50.00	0	90.2	45.90	1.78	01/22/2022
Chloroethane	*	2.0		**46.2**	50.00	0	92.3	46.49	0.69	01/22/2022
Chloroform	*	2.0		**52.8**	50.00	0	105.7	53.07	0.42	01/22/2022
Chloromethane	*	5.0		**41.7**	50.00	0	83.3	42.17	1.19	01/22/2022
Chloroprene	*	5.0		**53.7**	50.00	0	107.4	54.79	1.99	01/22/2022
cis-1,2-Dichloroethene	*	2.0		**52.1**	50.00	0	104.2	52.99	1.71	01/22/2022
cis-1,3-Dichloropropene	*	2.0		**55.1**	50.00	0	110.2	55.57	0.89	01/22/2022
cis-1,4-Dichloro-2-butene	*	2.0		**51.4**	50.00	0	102.8	51.75	0.68	01/22/2022
Cyclohexanone	*	20.0		**478**	500.0	0	95.7	487.4	1.87	01/22/2022
Dibromochloromethane	*	2.0		**49.8**	50.00	0	99.6	50.53	1.50	01/22/2022
Dibromomethane	*	2.0		**54.8**	50.00	0	109.5	55.53	1.41	01/22/2022
Dichlorodifluoromethane	*	2.0		**49.1**	50.00	0	98.1	51.34	4.52	01/22/2022
Diisopropyl ether	*	2.0		**51.2**	50.00	0	102.3	51.03	0.25	01/22/2022
Ethyl acetate	*	10.0		**53.2**	50.00	0	106.3	52.38	1.46	01/22/2022
Ethyl ether	*	5.0		**54.4**	50.00	0	108.8	54.78	0.68	01/22/2022
Ethyl methacrylate	*	5.0		**48.8**	50.00	0	97.6	49.04	0.45	01/22/2022
Ethylbenzene	*	2.0		**44.5**	50.00	0	89.0	45.21	1.56	01/22/2022
Ethyl-tert-butyl ether	*	2.0		**53.3**	50.00	0	106.5	53.35	0.15	01/22/2022
Hexachlorobutadiene	*	5.0		**47.0**	50.00	0	93.9	46.89	0.13	01/22/2022
Hexachloroethane	*	5.0		**44.3**	50.00	0	88.6	45.57	2.83	01/22/2022
Iodomethane	*	5.0		**53.0**	50.00	0	106.0	53.77	1.48	01/22/2022
Isopropylbenzene	*	2.0		**46.2**	50.00	0	92.4	47.30	2.40	01/22/2022
m,p-Xylenes	*	2.0		**90.1**	100.0	0	90.1	92.10	2.16	01/22/2022
Methacrylonitrile	*	5.0		**55.7**	50.00	0	111.4	56.99	2.27	01/22/2022
Methyl Methacrylate	*	5.0		**54.6**	50.00	0	109.1	54.49	0.13	01/22/2022
Methyl tert-butyl ether	*	2.0		**53.8**	50.00	0	107.5	54.27	0.94	01/22/2022
Methylacrylate	*	5.0		**55.7**	50.00	0	111.4	57.05	2.41	01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		**50.2**	50.00	0	100.4	50.56	0.71	01/22/2022
Naphthalene	*	5.0		**44.4**	50.00	0	88.8	44.94	1.23	01/22/2022
n-Butyl acetate	*	2.0		**47.4**	50.00	0	94.7	48.12	1.57	01/22/2022
n-Butylbenzene	*	2.0		**41.5**	50.00	0	83.0	42.30	1.96	01/22/2022
n-Heptane	*	5.0		**53.0**	50.00	0	106.1	54.04	1.85	01/22/2022
n-Hexane	*	5.0		**48.0**	50.00	0	96.0	49.76	3.58	01/22/2022
Nitrobenzene	*	50.0		**375**	500.0	0	75.0	375.8	0.19	01/22/2022
n-Propylbenzene	*	2.0		**41.9**	50.00	0	83.8	42.86	2.29	01/22/2022
o-Xylene	*	2.0		**44.4**	50.00	0	88.9	45.02	1.32	01/22/2022
Pentachloroethane	*	5.0		**44.7**	50.00	0	89.4	45.87	2.56	01/22/2022
p-Isopropyltoluene	*	2.0		**43.5**	50.00	0	87.0	44.25	1.76	01/22/2022
Propionitrile	*	10.0		**573**	500.0	0	114.5	582.0	1.61	01/22/2022
sec-Butylbenzene	*	2.0		**43.2**	50.00	0	86.4	43.74	1.22	01/22/2022
Styrene	*	2.0		**47.0**	50.00	0	93.9	48.30	2.79	01/22/2022
tert-Amyl methyl ether	*	2.0		**53.2**	50.00	0	106.3	53.80	1.18	01/22/2022
tert-Butyl alcohol	*	10.0		**257**	250.0	0	102.8	256.3	0.26	01/22/2022
tert-Butylbenzene	*	2.0		**42.7**	50.00	0	85.4	43.03	0.82	01/22/2022
Tetrachloroethene	*	0.5		**45.5**	50.00	0	90.9	46.70	2.67	01/22/2022
Tetrahydrofuran	*	5.0		**51.7**	50.00	0	103.4	53.47	3.33	01/22/2022
Toluene	*	2.0		**44.3**	50.00	0	88.5	45.20	2.08	01/22/2022
trans-1,2-Dichloroethene	*	2.0		**52.8**	50.00	0	105.6	53.09	0.51	01/22/2022
trans-1,3-Dichloropropene	*	2.0		**48.3**	50.00	0	96.5	49.38	2.29	01/22/2022
trans-1,4-Dichloro-2-butene	*	2.0		**47.4**	50.00	0	94.9	47.22	0.44	01/22/2022
Trichloroethene	*	2.0		**51.8**	50.00	0	103.6	53.39	3.00	01/22/2022
Trichlorofluoromethane	*	5.0		**50.0**	50.00	0	100.0	51.14	2.27	01/22/2022
Vinyl acetate	*	5.0		**56.6**	50.00	0	113.3	56.45	0.35	01/22/2022
Vinyl chloride	*	2.0		**44.8**	50.00	0	89.6	45.13	0.78	01/22/2022
Xylenes, Total	*	4.0		**135**	150.0	0	89.7	137.1	1.88	01/22/2022
1,2-Dichloroethene, Total	*	4.0		**105**	100.0	0	104.9	106.1	1.11	01/22/2022
1,3-Dichloropropene, Total	*	4.0		**103**	100.0	0	103.3	105.0	1.55	01/22/2022
1,4-Dichloro-2-butene, Total	*	4.0		**98.8**	100.0	0	98.8	98.97	0.14	01/22/2022
Surr: 1,2-Dichloroethane-d4	*			**50.2**	50.00		100.4			01/22/2022
Surr: 4-Bromofluorobenzene	*			**48.8**	50.00		97.7			01/22/2022
Surr: Toluene-d8	*			**46.4**	50.00		92.9			01/22/2022

Client: Burns & McDonnell Waste Consultants **Work Order:** 22011097

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 27-Jan-22

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 187046 **SampType:** LCSG Units **%REC**

SampID: LCSG-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**48.9**	50.00		97.9	80	120	01/22/2022
Surr: 4-Bromofluorobenzene	*			**48.1**	50.00		96.1	80	120	01/22/2022
Surr: Toluene-d8	*			**46.7**	50.00		93.4	80	120	01/22/2022

Batch 187046 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-AE220122A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**48.8**	50.00		97.6			01/22/2022
Surr: 4-Bromofluorobenzene	*			**48.6**	50.00		97.2			01/22/2022
Surr: Toluene-d8	*			**46.7**	50.00		93.5			01/22/2022

Receiving Check List

http://www.teklabinc.com/

Client: Burns & McDonnell Waste Consultants
Client Project: BMCD KC GSA Goodfellow Groundwater

Work Order: 22011097
Report Date: 27-Jan-22

Carrier: Employee

Received By: PWR

Completed by: (b) (6)
On: 20-Jan-22
Patrick Riley

Reviewed by: (b) (6)
On: 20-Jan-22
Emily E. Hayer

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 2.0
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

pH strip #77700. - patrickriley - 1/20/2022 3:35:16 PM

BURNS McDONNELL

021618 Form WCD-KC1-STL

Request for Chemical Analysis and Chain of Custody Record

22011097

Burns & McDonnell Engineering
425 South Woods Mill Road
Chesterfield, Missouri 63017
Phone: (314) 682-1500 Fax: (314) 682-1600
Attention: Justin Carter
JCarter@BurnsMcD.com

Laboratory: Teklab, Inc
Address: 5445 Horseshoe Lake RD
City/State/Zip: Collinsville, IL 62234
Telephone:

Document Control No: 128487 - 002 2022 -01
Lab. Reference No. or Episode No.:

Project Number: 128487

Client Name: GSA

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Sample Type / Matrix			Number of Containers	Analysis						Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas		VOCs	PAHs	PCBs	Metals Total	Metals Dissolved		
mw-10	01192022			2022			1/19	900	X			5	X	X	X	X			22011097-001
mw-13	01192022			2022			1/19	1100	X			6	X	X	X	X	X		-002
mw-12	01192022			2022			1/19	1225	X			5	X	X	X	X			-003
mw-16	01192022			2022			1/19	1413	X			5	X	X	X	X			-004
mw-15	01192022			2022			1/19	1522	X			6	X	X	X	X	X		-005
mw-15	01192022			2022			1/19	1522	X			6	X	X	X	X	X		-006
mw-09	01202022			2022			1/20	938	X			5	X	X	X	X			-007
mw-08	01202022			2022			1/20	1042	X			5	X	X	X	X			-008
mw-07	01202022			2022			1/20	1245	X			5	X	X	X	X			-009
TB									X			2	X						LAB PREPARED -010
TB									X			2	X						-011
Rinse	01202022			2022			1/20	1135	X			5	X	X	X	X			Added per exp -012
																			containers PVL 1/20/22

Sampler (signature): Benjamin Lockwood (b) (6)

Sampler (signature):

Special Instructions: See SMP Specific work around

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
1. (b) (6)	0920	(b) (6)	1/20/22 1415
Relinquished By (signature) 2.	Date/Time	Received By (signature)	Date/Time

Ice Present in Container: Yes [X] No [ ]

Temperature Upon Receipt: 2.0°C

Laboratory Comments: 77700 Ø HS PVL 1/20/22 LT01

PVL 1/20

ANALYTICAL REPORT

January 28, 2022

Burns & McDonnell - KS

Sample Delivery Group:	L1453612
Samples Received:	01/21/2022
Project Number:	MW/128487-1ENS-KCM20
Description:	GSA Goodfellow - St. Louis, MO

Report To: Justin Carter
9400 Ward Parkway
Kansas City, MO 64114

Entire Report Reviewed By: (b) (6)

Jeff Carr
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

MW-08 01202022 L1453612-01 GW

Collected by: Benjamin Lockwood
Collected date/time: 01/20/22 10:42
Received date/time: 01/21/22 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1807202	1	01/24/22 15:43	01/25/22 11:07	GKM	Mt. Juliet, TN

MW-08 01202022 DUP L1453612-02 GW

Collected by: Benjamin Lockwood
Collected date/time: 01/20/22 10:42
Received date/time: 01/21/22 14:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1807202	1	01/24/22 15:43	01/25/22 11:34	GKM	Mt. Juliet, TN

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)

Jeff Carr
Project Manager

Semi-Volatile Organic Compounds (HPLC) by Method 8330

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Tetryl	ND		0.000500	1	01/25/2022 11:07	WG1807202
2,4-Dinitrotoluene	ND		0.00200	1	01/25/2022 11:07	WG1807202
4-Nitrotoluene (4-NT)	ND		0.00200	1	01/25/2022 11:07	WG1807202
RDX	ND		0.00200	1	01/25/2022 11:07	WG1807202
Nitrobenzene	ND		0.000500	1	01/25/2022 11:07	WG1807202
2,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
2-Nitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
3-Nitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
1,3,5-Trinitrobenzene	ND		0.000500	1	01/25/2022 11:07	WG1807202
1,3-Dinitrobenzene	ND		0.000500	1	01/25/2022 11:07	WG1807202
2,4,6-Trinitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:07	WG1807202
HMX	ND		0.00200	1	01/25/2022 11:07	WG1807202
PETN	ND		0.000500	1	01/25/2022 11:07	WG1807202
Nitroglycerine	ND		0.000500	1	01/25/2022 11:07	WG1807202
(S) 1,3-Dimethyl-2-NB	*90.3*		*57.0-120*		*01/25/2022 11:07*	WG1807202

Semi-Volatile Organic Compounds (HPLC) by Method 8330

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Tetryl	ND		0.000500	1	01/25/2022 11:34	WG1807202
2,4-Dinitrotoluene	ND		0.00200	1	01/25/2022 11:34	WG1807202
4-Nitrotoluene (4-NT)	ND		0.00200	1	01/25/2022 11:34	WG1807202
RDX	ND		0.00200	1	01/25/2022 11:34	WG1807202
Nitrobenzene	ND		0.000500	1	01/25/2022 11:34	WG1807202
2,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
2-Nitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
3-Nitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
1,3,5-Trinitrobenzene	ND		0.000500	1	01/25/2022 11:34	WG1807202
1,3-Dinitrobenzene	ND		0.000500	1	01/25/2022 11:34	WG1807202
2,4,6-Trinitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	01/25/2022 11:34	WG1807202
HMX	ND		0.00200	1	01/25/2022 11:34	WG1807202
PETN	ND		0.000500	1	01/25/2022 11:34	WG1807202
Nitroglycerine	ND		0.000500	1	01/25/2022 11:34	WG1807202
(S) 1,3-Dimethyl-2-NB	*91.1*		*57.0-120*		*01/25/2022 11:34*	WG1807202

Method Blank (MB)

(MB) R3753567-1 01/25/22 09:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Tetryl	U		0.000137	0.000500
2,4-Dinitrotoluene	U		0.000142	0.00200
4-Nitrotoluene (4-NT)	U		0.000125	0.00200
RDX	U		0.000165	0.00200
Nitrobenzene	U		0.000170	0.000500
2,6-Dinitrotoluene	U		0.000155	0.000500
2-Nitrotoluene	U		0.000140	0.000500
3-Nitrotoluene	U		0.000147	0.000500
1,3,5-Trinitrobenzene	U		0.0000979	0.000500
1,3-Dinitrobenzene	U		0.000177	0.000500
2,4,6-Trinitrotoluene	U		0.000195	0.000500
4-Amino-2,6-Dinitrotoluene	U		0.000140	0.000500
2-Amino-4,6-Dinitrotoluene	U		0.000129	0.000500
HMX	U		0.0000766	0.00200
PETN	U		0.000153	0.000500
Nitroglycerine	U		0.000153	0.000500
(S) 1,3-Dimethyl-2-NB	*92.6*			*57.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3753567-2 01/25/22 10:13 • (LCSD) R3753567-3 01/25/22 10:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Tetryl	0.0200	0.0198	0.0195	99.0	97.5	80.0-120			1.53	20
2,4-Dinitrotoluene	0.0200	0.0209	0.0200	105	100	80.0-120			4.40	20
4-Nitrotoluene (4-NT)	0.0200	0.0190	0.0187	95.0	93.5	80.0-120			1.59	20
RDX	0.0200	0.0185	0.0182	92.5	91.0	79.0-120			1.63	20
Nitrobenzene	0.0200	0.0192	0.0189	96.0	94.5	80.0-120			1.57	20
2,6-Dinitrotoluene	0.0200	0.0200	0.0197	100	98.5	78.0-120			1.51	20
2-Nitrotoluene	0.0200	0.0186	0.0184	93.0	92.0	80.0-120			1.08	20
3-Nitrotoluene	0.0200	0.0185	0.0185	92.5	92.5	80.0-120			0.000	20
1,3,5-Trinitrobenzene	0.0200	0.0202	0.0198	101	99.0	80.0-120			2.00	20
1,3-Dinitrobenzene	0.0200	0.0189	0.0187	94.5	93.5	80.0-120			1.06	20
2,4,6-Trinitrotoluene	0.0200	0.0188	0.0185	94.0	92.5	80.0-120			1.61	20
4-Amino-2,6-Dinitrotoluene	0.0200	0.0195	0.0192	97.5	96.0	79.0-120			1.55	20
2-Amino-4,6-Dinitrotoluene	0.0200	0.0185	0.0183	92.5	91.5	80.0-122			1.09	20
HMX	0.0200	0.0184	0.0182	92.0	91.0	73.0-120			1.09	20
PETN	0.0200	0.0191	0.0188	95.5	94.0	80.0-120			1.58	20
Nitroglycerine	0.0200	0.0195	0.0190	97.5	95.0	70.0-120			2.60	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3753567-2 01/25/22 10:13 • (LCSD) R3753567-3 01/25/22 10:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) 1,3-Dimethyl-2-NB				*93.6*	*92.3*	*57.0-120*				

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

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
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.
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 [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	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 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] 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.

Company Name/Address:
Burns & McDonnell - KS

9400 Ward Parkway
Kansas City, MO 64114

Billing Information:
Accounts Payable
9400 Ward Parkway
Kansas City, MO 64114

Pres Chk

Report to:
Justin Carter

Email To: **jcarter@burnsmcd.com**

Project Description:
GSA Goodfellow - St. Louis, MO

City/State Collected: St. Louis, MO

Please Circle: PT MT CT ET

Phone: **816-333-9400**

Client Project #
MW/128487-1ENS-KCM20

Lab Project #
BURNMCKC-GSA

Collected by (print): Benjamin Lockwood

Collected by (signature): (b) (6)

Immediately Packed on Ice N X Y ___

Site/Facility ID #

P.O. #
183149

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: STDT+1

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8330 1L-Amb NoPres										Remarks	Sample # (lab only)
MW-08 01202022	GRAB	GW		1/20	1042	3	X											-01
MW-08 01202022	GRAB	GW		1/20	1042	3	X											-02
~~GW~~						2	X											

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1453612
C223

Acctnum: **BURNMCKC**
Template: **T190414**
Prelogin: **P899331**
PM: **206 - Jeff Carr**
PB:

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 138079913704

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
(b) (6)	1/20		(b) (6)		
Relinquished by: (Signature) (b) (6)	Date:	Time:	Received by: (Signature)	Temp: 3.7+0.3 °C Bottles Received: 10	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) (b) (6)	Date: 1/21/22 Time: 1430	Hold: Condition: NCF / OK

APPENDIX D – DATA VALIDATION MEMORANDUM

March 4, 2022

Review of Analytical Data

Quarterly Groundwater Sampling Event - January 2022
Remedial Investigation for
Goodfellow Federal Complex
St. Louis, Missouri

Sample Delivery Groups (SDG[s)]: 22011006, 22011097, and L1453612

Groundwater samples were collected at the Goodfellow Federal Complex in St. Louis, Missouri during January 2022 as part of the quarterly groundwater monitoring program. The samples were analyzed by Teklab, Inc. in Collinsville, Illinois and Pace Analytical Services in Mt. Juliet, Tennessee.

This data validation report presents the data quality review for the methods and samples listed below. The analytical data were reviewed in accordance with the *Final Quality Assurance Project Plan, Goodfellow Federal Complex (QAPP)*, the *U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review*, and *Test Methods for Evaluating Solid Waste-Physical Chemical Methods* (*SW846*) which details the specifics of quality assurance (QA) and quality control (QC) with respect to data evaluation.

Level of Review: Level II – 100% of the data

Methods Reviewed:

- Volatile Organic Compounds (VOCs) by SW8260B
- Polycyclic Aromatic Hydrocarbons (PAHs) by SW8270C
- Polychlorinated Biphenyls (PCBs) by SW8082
- Total ICP Metals by SW6010B
- Dissolved ICP Metals by SW6010B
- Explosives by SW8330

Sample List:

SDG	Sample Identification (ID)	Lab ID	Sample Date	6010B Total	6010B Diss	8082	8260B	8270C	8330
22011006	MW-01 01172022	22011006-001	1/17/22	X		X	X	X	
22011006	MW-02 01172022	22011006-002	1/17/22	X		X	X	X	
22011006	MW-03 01172022	22011006-003	1/17/22	X		X	X	X	
22011006	MW-05 01172022	22011006-004	1/17/22	X	X	X	X	X	
22011006	MW-04 01182022	22011006-005	1/18/22	X	X	X	X	X	
22011006	MW-06 01182022	22011006-006	1/18/22	X		X	X	X	
22011006	MW-19 01182022	22011006-007	1/18/22	X	X	X	X	X	
22011006	MW-11 01182022	22011006-008	1/18/22	X	X	X	X	X	
22011006	MW-14 01182022	22011006-009	1/18/22	X		X	X	X	
22011006	MW-18 01182022	22011006-010	1/18/22	X		X	X	X	
22011006	MW-17 01182022	22011006-011	1/18/22	X		X	X	X	
22011006	TB	22011006-012	1/19/22				X		

SDG	Sample Identification (ID)	Lab ID	Sample Date	6010B Total	6010B Diss	8082	8260B	8270C	8330
22011006	TB	22011006-013	1/19/22				X		
22011097	MW-10 01192022	22011097-001	1/19/22	X		X	X	X	
22011097	MW-13 01192022	22011097-002	1/19/22	X	X	X	X	X	
22011097	MW-12 01192022	22011097-003	1/19/22	X		X	X	X	
22011097	MW-16 01192022	22011097-004	1/19/22	X		X	X	X	
22011097	MW-15 01192022	22011097-005	1/19/22	X	X	X	X	X	
22011097	MW-15 01192022DUP	22011097-006	1/19/22	X	X	X	X	X	
22011097	MW-09 01202022	22011097-007	1/20/22	X		X	X	X	
22011097	MW-08 01202022	22011097-008	1/20/22	X		X	X	X	
22011097	MW-07 01202022	22011097-009	1/20/22	X		X	X	X	
22011097	TB	22011097-010	1/20/22				X		
22011097	TB	22011097-011	1/20/22				X		
22011097	Rinse 01202022	22011097-012	1/20/22	X		X	X	X	
L1453612	MW-08 01202022	L1453612-01	1/20/22						X
L1453612	MW-08 01202022 DUP	L1453612-02	1/20/22						X

To evaluate the data quality, the results were compared to the *QAPP* and methods. The completeness of the hard copy data packages, i.e., hard copy data deliverables (HDDs), were checked to verify that the following items were included: Case Narrative, chain of custody (COC) documentation, field sample ID and laboratory ID cross reference, data summary sheets for the samples and field QC (matrix spike/matrix spike duplicate [MS/MSD] and field blanks), and data summary sheets for laboratory QC (e.g., method blanks, laboratory control sample/laboratory control sample duplicate [LCS/LCSD], etc.).

The results of the data review are discussed below. No data qualifiers were required as a result of this data review.

1. **Initial Sample Inspection and Chain-of-Custody (COC) Documentation** – The laboratory verified that COC forms were filled out properly, sample containers were not broken, custody seals were intact, the pH met method-specific criteria, and cooler temperatures were received at ≤ 6 degrees Celsius. The completed sample receipt forms and COCs are included in the laboratory analytical packages and were reviewed during the data review process. The samples were received in good condition.
2. **Requested Analyses Completed** – All analyses were completed as requested.
3. **Holding Times** – The samples were extracted and/or analyzed within the *QAPP* and method-required holding times.
4. **Laboratory Method Blanks** – Method blanks are prepared and analyzed by the laboratory to assess the level of background interferences and possible contamination in the analytical system. No target analytes were detected at or above the reporting limits (RLs) in the method blanks.
5. **Rinsate Blanks** – Rinsate blanks (also referred to as equipment blanks) are collected by pouring distilled water into, over, or pumped through a sampling device or decontaminated drilling equipment to assess the potential introduction of contaminants during field procedures.

One rinsate blank was collected during the groundwater sampling event and analyzed for the same methods as the investigative groundwater samples in SDG 22011097. No target analytes were detected at or above the RL in the rinsate blank (Rinse 01202022).

See Item 12 (Deviations from the QAPP) below regarding the QAPP-specified criteria for rinsate blanks.

6. **Trip Blanks** – Trip blanks are supplied by the laboratory to assess the potential introduction of contaminants from sample containers or during the sampling, transportation, and storage procedures. Four trip blanks were analyzed for this sampling event. No target analytes were detected at or above the RL in the trip blanks, with the following exceptions:

   - SDG 22011006: TB (Lab ID 22011006-013): Acetone = 15 micrograms per liter (ug/L).
   - SDG 22011097: TB (Lab ID 22011097-011): Acetone = 19.5 ug/L.

   There were two trip blanks placed in each cooler containing investigative VOC samples, therefore, both trip blanks were associated with the investigative samples shipped in the same cooler. Because acetone was not detected in the investigative samples, no qualifiers were required based on the detections in the trip blanks.

   Please note the sample ID for all four of the trip blanks were shown as "TB" in the COCs and laboratory data packages. In addition, no dates or times were noted on COCs for the trip blanks. As noted on the laboratory Receiving Check List, the trip blanks collection dates and times were reported by the laboratory as the received date and time.

   See Item 12 (Deviations from the QAPP) below regarding the QAPP-specified criteria for trip blanks.

7. **Surrogates** – Surrogate spike compounds were added to investigative samples during organic analyses to assess the individual matrix effect of investigative samples and to monitor overall analytical system performance. The surrogate percent recoveries (%Rs) were compared to laboratory control limits. The surrogate %Rs met criteria, with the following exception:

   - For sample MW-01 01172022 (Lab ID 22011006-001): The %R for PCB surrogate tetrachloro-meta-xylene (135.4%) was above the 9.73%-128% laboratory control limits. Because PCBs were not detected in sample MW-01 01172022, and therefore, not affected by the high bias indicated by the surrogate, no data qualifiers were required.

8. **Laboratory Control Samples (LCS)/ Laboratory Control Sample Duplicates (LCSD)** – The Laboratory analyzed a LCS or LCS/LCSD pairs with each analytical batch of field samples to assess internal precision and accuracy. LCS/LCSDs consisted of analyte-free water spiked with selected target constituents of known concentration. For this sampling event, a LCS was analyzed for Method 6010B, and LCS/LCSD pairs were analyzed for Methods 8082, 8270C, 8260B, and 8330. The LCS/LCSD %Rs were compared to laboratory control limits. The LCS/LCSD relative percent differences (RPDs) were compared to the project *QAPP*-specified criteria of ±25%. The LCS/LCSD %Rs and RPDs met criteria, with the following exceptions:

   - For the PAH LCS/LCSD in Batch 187073 associated with the samples in SDGs 22011006 and 22011097, the LCS/LCSD RPD for naphthalene (73.64%) exceeded both the 40% laboratory criteria and the 25% criteria specified in the *QAPP*. Because naphthalene was not detected in the associated samples, no data qualifiers were required.
   - For the PAH LCS/LCSD in Batch 187073 associated with the samples in SDGs 22011006 and 22011097, the LCS/LCSD RPDs for acenaphthene (31.45%) and acenaphthylene (34.28%) were

below the 40% laboratory criteria, but above the 25% criteria specified in the *QAPP*. However, because naphthalene was not detected in the associated samples, no data qualifiers were required.

9. **Matrix Spike/Matrix Spike Duplicates (MS/MSDs)** – MS and MSD samples are investigative samples spiked by the laboratory with known concentrations of target analytes. MS and MSD sample results are used to evaluate possible matrix interferences. Accuracy was assessed by calculating the MS and MSD %Rs of the concentrations of the target analytes added to the investigative sample. Precision was assessed by calculating the RPDs for the MS/MSD sample pairs.

   Additional sample volume was collected for sample MW-04 01182022 (Lab ID 22011006-005) to be used for the MS/MSD for total and dissolved metals, PCBs, PAHs, and VOCs. However, no MS/MSD analysis was performed for the PAH target analytes and the VOCs MS/MSDs were analyzed for only nine of the 103 target analytes.

   The following samples were used for batch MS/MSDs, selected by the laboratory:
   - Dissolved metals: MW-05 01172022 (Lab ID 22011006-004) and MW-15 01192022DUP (Lab ID 22011097-006).
   - Total metals: MW-15 01192022 (Lab ID 22011097-005).

   The MS/MSD %Rs and RPDs were compared to laboratory control limits. The MS/MSD analyses met criteria, with the following exceptions:

   - For sample MW-04 01182022 (Lab ID 22011006-005), the MSD %Rs for 1,1-dichloroethene (127%) and trichloroethene (120.6%) were above the 123% and 119% upper laboratory control limits, respectively. However, because these analytes were not detected in sample MW-04 01182022 (Lab ID 22011006-005), and therefore, not affected by the high bias indicated by the MSD %Rs, no data qualifiers were applied.

   - For sample MW-04 01182022 (Lab ID 22011006-005), the MS/MSD RPD for Aroclor-1260 (41.7%) was above the laboratory control limit of 40%. Because the MS/MSD recoveries for Aroclor-1260 met criteria, no qualifiers were applied.

10. **Field Duplicates (FDs)** – FD samples are independent samples collected simultaneously or in immediate succession with the original investigative samples such that they are expected to be equally representative of the medium at the time of sampling. These samples provide precision information for the entire measurement system, including sample collection, handling, shipping, storage, preparation, and analysis. The FD RPD criterion for waters for this project is ±30% for values ≥ the LOQ in both samples, in accordance with the *QAPP*.

    Sample MW-08 01202022 DUP (Lab ID L1453612-02) is the FD for parent sample MW-08 01202022 (Lab ID L1453612-01) for explosives. No target analytes were detected at or above the RL in the parent sample and associated field duplicate sample.

    The COC showed two samples with the same sample ID “MW-15 01192022”, both collected on 1/19/22 at 1522 for VOCs, PAHs, PCBs, total metals and dissolved metals. The laboratory assigned Lab IDs 22011097-005 and 22011097-006 to the first and second listed samples, respectively. The laboratory also identified the sample assigned Lab ID 22011097-006 as “MW-15 01192022DUP” in the laboratory report, however there was no explanation given in the Case Narrative or cover report that verified that “MW-15 01192022DUP” was the correct sample ID for the second “MW-15 01192022” sample listed in the COC. No target analytes were detected at or above the RL in both samples, Lab IDs 22011097-005 and 22011097-006.

11. **Detection and Quantitation Limits** – The method detection limit (MDL) is defined as the smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration with 99% confidence. The RL is defined as the smallest concentration that produces a quantitative result with known and recorded precision and bias. The laboratory reported data at the RLs. No dilutions were required during the analyses, therefore, no adjustments to the reporting limits were necessary based on dilutions. However, as noted by the laboratory on the Laboratory Results pages for samples MW-10 01192022 (22011097-001), MW-11 01182022 (22011006-008), MW-12 01192022 (22011097-003), MW-13 01192022 (22011097-002), the reporting limits for PAHs were elevated due to "sample composition".

12. **Deviations from the QAPP** – The following nonconformances were noted during the data review.

    - As noted in Item 11 above, results were reported at the RL. Because detections between the MDL and RL were not reported, and therefore, could not be assessed, the reviewer could not determine if the trip blank and rinsate blank concentrations met the QAPP-specified criteria of ≤ ½ LOQ. However, because the RLs were at or below the project screening levels, data quality is not considered to be affected.

    - No MS/MSD analyses was performed for PAH target analytes and a reduced list of target analytes were reported for VOCs.

13. **Conclusion** – Based on this review, the analytical data generated for this sampling event are acceptable and adequate to fulfill program objectives and may be used for the purpose for which it was intended.

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