U.S. General Services Administration

OCTOBER 2021 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. The 19 groundwater monitoring wells were installed and sampled according to GSA's Remedial Investigation Work Plan that Missouri Department of Natural Resources approved in March 2021.

In October 2021, 18 of the 19 monitoring wells were sampled. Monitoring well MW-11 was dry, so no groundwater samples were able to be collected.

The groundwater samples were tested for several analytical parameters (including metals, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, total petroleum hydrocarbons, volatile organic compounds, and/or explosives), which you can get more information on at 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.

The laboratory results are at Section 5.0 of this report. Zinc, arochlor 1016, and tetrahydrofuran were detected in the groundwater samples, but the amounts were below the action limits. The lab did not detect other compounds.

In addition to this sampling event, GSA is scheduled to complete two more, which will be spaced apart by three months over one year. Once sampling is completed, 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 373-page 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
October 2021

General Services Administration
Kansas City, Missouri

Goodfellow Federal Complex
4300 Goodfellow Boulevard
St. Louis, Missouri

Project No. 128487

January 2022

Goodfellow Federal Complex
Quarterly Groundwater Sampling Report – October 2021
Goodfellow Federal Complex; 4300 Goodfellow Boulevard
St. Louis, Missouri

January 2022

Prepared for

General Services Administration

Prepared by

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Kansas City, Missouri

TABLE OF CONTENTS

Page No.

LIST OF TABLES

LIST OF FIGURES

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
J+	qualified as estimated due to non-conformances discovered during data validation
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 second 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 October 2021:

- *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 October 2021 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. All objectives, with the exception of sampling Monitoring Wells MW-11 was completed as identified above. Monitoring Well MW-11 was dry (consistent with previous first quarterly sampling event); thus, no groundwater samples were able to be collected.

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 six 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 October 2021 quarterly groundwater sampling event.
- Section 4.0, Laboratory Analytical Methods, presents the analytical methods that groundwater samples were analyzed for during the October 2021 quarterly groundwater sampling event.
- Section 5.0, Groundwater Analytical Results, discusses the groundwater analytical results for the October 2021 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 October 2021.

3.2 Monitoring Well Inspections

The 19 installed monitoring wells (MW-01 through MW-19) were inspected on October 25, 2021. 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

The 19 monitoring wells (MW-01 through MW-19) were gauged for water levels and well total depths on October 25, 2021. Monitoring wells were gauged with an electronic interface probe that also detects non-aqueous phase liquid (NAPL) prior to sampling. 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 505.84 feet above mean sea level (MW-19) to 569.69 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 October 25 through 28, 2021. Monitoring Well MW-11 was dry (consistent with the previous first quarterly sampling event); thus, no groundwater sample was able to be collected. The monitoring wells sampled, and their associated analytical analyses are presented in Table 3. Monitoring wells were purged at flow rates of between 100 milliliters per minute (mL/min) and 250 mL/min. Low-flow sampling included the use of polyethylene tubing, a pneumatically operated non-dedicated QED® Sample Pro Portable MicroPurge® bladder pump, and 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 LaMotte® 2020we 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 Liquinox® cleaning solution pumped through the bladder pump assembly, cleaning the outer stainless-steel housing of the bladder pump using a nylon brush, 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 generated from low-flow sampling activities. Approximately 36 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 (arochlors 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 October 2021 quarterly sampling event are provided in Appendix C.

5.1 Total Metals

Total antimony, arsenic, copper, and lead were not detected in any groundwater samples collected from site monitoring wells above their respective laboratory reporting limits. Total zinc was detected in groundwater samples collected from Monitoring Wells MW-12 and MW-19 at trace-level concentrations of 0.0211 milligrams per liter (mg/L) and 0.0105 mg/L, respectively. Both detections of total zinc were reported below the PAL of 4.69 mg/L.

5.2 Dissolved Metals

Dissolved antimony, arsenic, copper, lead, and zinc were not detected in any groundwater samples collected from select site monitoring wells above their respective laboratory reporting limits.

5.3 Polychlorinated Biphenyls

Arochlors 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. Arochlor 1016 was detected in the groundwater sample collected from Monitoring Well MW-18 at a trace-level concentrations of 0.00102 mg/L, which was below the PAL of 0.0172 mg/L.

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

Tetrahydrofuran was detected in the groundwater sample collected from Monitoring Well MW-13 at a trace-level concentration of 0.0059 mg/L qualified as estimated (J+) due to non-conformances discovered during data validation, which was below the PAL of 109 mg/L. Other than the single trace detection of tetrahydrofuran, no other 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 two 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-15 and was analyzed for total metals, PCBs, PAHs, and VOCs. Trace-level detections of total copper (0.0205 mg/L) and acetone (0.0260 mg/L) were detected in the equipment rinsate blank sample (Rinse) below the PALs of 1,300 mg/L and 3,370 mg/L. Other than copper and acetone, no other analytes were detected above laboratory reporting limits in the equipment rinsate blank sample (Rinse). The detections of copper and acetone in the equipment rinsate sample are discussed in the data validation memorandum (Appendix D).

Trace-levels of acetone was detected in both trip blank samples (TB-01 and TB-02) with concentrations of 0.0104 mg/L and 0.0310 mg/L, respectively. Acetone detections were below the PAL of 3,370 mg/L. Tetrahydrofuran was detected in TB-01 at a trace-level concentration of 0.0057 mg/L, which was below the PAL of 109 mg/L. Other than the trace-level detections of acetone and tetrahydrofuran, no other VOCs constituents were detected in the trip blank samples above their respective laboratory reporting

limits. The effects of the detections of acetone and tetrahydrofuran in the trip blank samples 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, as qualified, for reporting the results of this sampling event (Ayuda, 2021). A copy of the data validation memorandum is provided in Appendix D.

7.0 REFERENCES

Ayuda, 2021. *Review of Analytical Data; Quarterly Groundwater Sampling Event – October 2021; Remedial Investigation for Goodfellow Federal Complex; St. Louis, Missouri.* December.

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)
	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
MW-02	1039740.05	886772.67	544.91	544.92	40.15	40.15	14.12	530.80	40.14	13.14	531.78
MW-03	1039766.08	887286.65	539.97	539.95	35.54	35.54	11.95	528.00	35.55	13.75	526.20
MW-04	1039867.83	886169.82	559.24	559.27	38.48	38.48	16.99	542.28	38.48	16.86	542.41
MW-05	1040193.91	886714.16	550.50	550.51	33.34	33.34	10.78	539.73	33.39	3.20	547.31
MW-06	1040587.21	886232.49	577.68	577.72	31.11	31.11	22.02	555.70	31.36	8.03	569.69
MW-07	1040354.90	887604.51	540.31	540.49	30.45	30.45	16.40	524.09	30.46	16.45	524.04
MW-08	1040246.30	887212.28	545.27	545.28	30.61	30.61	12.51	532.77	30.62	11.19	534.09
MW-09	1040523.22	886983.47	550.71	550.73	35.78	35.78	13.62	537.11	35.79	12.59	538.14
MW-10	1040781.41	886693.21	557.58	557.40	32.39	32.39	9.56	547.84	32.40	8.66	548.74
MW-11	1041164.57	886430.24	581.03	581.06	33.02	33.02	DRY	NM	33.03	DRY	NM
MW-12	1040836.73	887502.43	545.58	545.57	45.80	45.80	15.67	529.90	45.80	12.23	533.34
MW-13	1041047.78	887235.78	551.17	551.20	21.16	21.16	3.20	548.00	21.19	5.99	545.21
MW-14	1041487.39	886782.39	563.77	563.86	21.16	21.16	DRY	NM	21.19	14.74	549.12
MW-15	1041098.45	887886.42	541.18	541.18	38.65	38.65	21.83	519.35	38.80	21.02	520.16
MW-16	1041247.61	887513.16	548.80	548.76	38.58	38.58	17.18	531.58	38.53	17.02	531.74
MW-17	1041488.73	887088.65	557.77	557.84	24.63	24.63	19.12	538.72	24.65	11.07	546.77
MW-18	1041681.76	886623.58	564.77	564.89	28.68	28.68	14.40	550.49	28.71	14.39	550.50
MW-19	1041423.95	888125.73	524.51	524.51	40.62	40.62	19.63	504.88	40.60	18.67	505.84

Notes:

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

[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	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		
	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	X		
	MW-10	10262021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X		
	MW-11	--	Overburden/ Weathered Bedrock	X	DRY	--	No sample was collected. Monitoring well was dry.													
	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		
	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		

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.

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:	10252021	10252021	10252021	10262021
			Sample Date:	10/25/2021	10/25/2021	10/25/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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		0.0500 U	NA	NA	0.0500 U
Arsenic	mg/L	10		0.0250 U	NA	NA	0.0250 U
Copper	mg/L	1,300		0.0050 U	NA	NA	0.0050 U
Lead	mg/L	15		0.0150 U	NA	NA	0.0150 U
Zinc	mg/L	4.69		0.0100 U	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:	10252021	10252021	10252021	10262021
			Sample Date:	10/25/2021	10/25/2021	10/25/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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		0.0182 U	0.0135 U	0.01 U	0.0180 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:	10252021	10252021	10252021	10262021
			Sample Date:	10/25/2021	10/25/2021	10/25/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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:	10252021	10252021	10252021	10262021
			Sample Date:	10/25/2021	10/25/2021	10/25/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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:	**10252021**	**10252021**	**10252021**	**10262021**
		Sample Date:	**10/25/2021**	**10/25/2021**	**10/25/2021**	**10/26/2021**
		Quarterly Event:	**2nd Quarter**	**2nd Quarter**	**2nd Quarter**	**2nd 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-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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 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:	10252021	10262021	10282021
			Sample Date:	10/25/201	10/26/2021	10/28/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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

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:	10252021	10262021	10282021
			Sample Date:	10/25/201	10/26/2021	10/28/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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	0.0144 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:	10252021	10262021	10282021
			Sample Date:	10/25/201	10/26/2021	10/28/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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 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:	10252021	10262021	10282021
		Sample Date:	10/25/201	10/26/2021	10/28/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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:	**10252021**	**10262021**	**10282021**
		Sample Date:	**10/25/201**	**10/26/2021**	**10/28/2021**
		Quarterly Event:	**2nd Quarter**	**2nd Quarter**	**2nd 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-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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 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:	10272021	10272021	10272021	10262021
			Sample Date:	10/27/2021	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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	0.0500 U	NA
Arsenic	mg/L	10		NA	NA	0.0250 U	NA
Copper	mg/L	1,300		NA	NA	0.0050 U	NA
Lead	mg/L	15		NA	NA	0.0150 U	NA
Zinc	mg/L	4.69		NA	NA	0.0100 U	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	0.00100 U
Acenaphthylene	mg/L	2,060		0.00100 U	NA	0.00100 U	0.00100 U
Anthracene	mg/L	2,290		0.00100 U	NA	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133		0.00100 U	NA	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2		0.00100 U	NA	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65		0.00100 U	NA	0.00100 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000		0.00100 U	NA	0.00100 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937		0.00100 U	NA	0.00100 U	0.00100 U
Chrysene	mg/L	81.7		0.00100 U	NA	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985		0.00100 U	NA	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200		0.00100 U	NA	0.00100 U	0.00100 U
Fluorene	mg/L	3,010		0.00100 U	NA	0.00100 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596		0.00100 U	NA	0.00100 U	0.00100 U
Naphthalene	mg/L	0.1		0.00100 U	NA	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190		0.00100 U	NA	0.00100 U	0.00100 U
Pyrene	mg/L	17,300		0.00100 U	NA	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-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	10272021	10272021	10272021	10262021
			Sample Date:	10/27/2021	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd 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	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		0.0103 U	NA	0.01 U	0.0207 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:	10272021	10272021	10272021	10262021
			Sample Date:	10/27/2021	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd Quarter
			Notes:	-	Duplicate	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
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:	10272021	10272021	10272021	10262021
			Sample Date:	10/27/2021	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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:	**10272021**	**10272021**	**10272021**	**10262021**
		Sample Date:	**10/27/2021**	**10/27/2021**	**10/27/2021**	**10/26/2021**
		Quarterly Event:	**2nd Quarter**	**2nd 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] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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 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:	NS	10272021	10272021	10262021
		Sample Date:	NS	10/27/2021	10/27/2021	10/26/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd Quarter
		Notes:	Dry	-	-	-
Parameter	**Units**	**PAL[1]**				
Metals, Total						
Antimony	mg/L	6	NS	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	NS	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	NS	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	NS	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NS	**0.0211**	0.0100 U	0.0100 U
Metals, Dissolved						
Antimony	mg/L	6	NS	NA	NA	NA
Arsenic	mg/L	10	NS	NA	NA	NA
Copper	mg/L	1,300	NS	NA	NA	NA
Lead	mg/L	15	NS	NA	NA	NA
Zinc	mg/L	4.69	NS	NA	NA	NA
Polychlorinated Biphenyls						
Aroclor 1016	mg/L	0.0172	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1221	mg/L	0.002	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1232	mg/L	0.002	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1242	mg/L	0.00101	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1248	mg/L	0.002	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1254	mg/L	0.00125	NS	0.00100 U	0.00100 U	0.0010 U
Aroclor 1260	mg/L	0.002	NS	0.00100 U	0.00100 U	0.0010 U
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/L	1,610	NS	0.00100 U	0.00100 U	0.0010 U
Acenaphthylene	mg/L	2,060	NS	0.00100 U	0.00100 U	0.0010 U
Anthracene	mg/L	2,290	NS	0.00100 U	0.00100 U	0.0010 U
Benzo(a)anthracene	mg/L	0.133	NS	0.00100 U	0.00100 U	0.0010 U
Benzo(a)pyrene	mg/L	0.2	NS	0.00100 U	0.00100 U	0.0010 U
Benzo(b)fluoranthene	mg/L	7.65	NS	0.00100 U	0.00100 U	0.001 U
Benzo(g,h,i)perylene	mg/L	218,000	NS	0.00100 U	0.00100 U	0.0010 U
Benzo(k)fluoranthene	mg/L	937	NS	0.00100 U	0.00100 U	0.0010 U
Chrysene	mg/L	81.7	NS	0.00100 U	0.00100 U	0.0010 U
Dibenzo(a,h)anthracene	mg/L	985	NS	0.00100 U	0.00100 U	0.001 U
Fluoranthene	mg/L	14,200	NS	0.00100 U	0.00100 U	0.0010 U
Fluorene	mg/L	3,010	NS	0.00100 U	0.00100 U	0.0010 U
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	0.00100 U	0.00100 U	0.001 U
Naphthalene	mg/L	0.1	NS	0.00100 U	0.00100 U	0.0010 U
Phenanthrene	mg/L	1,190	NS	0.00100 U	0.00100 U	0.0010 U
Pyrene	mg/L	17,300	NS	0.00100 U	0.00100 U	0.0010 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:	NS	10272021	10272021	10262021
			Sample Date:	NS	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd 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	0.002 U
1,1,1-Trichloroethane	mg/L	1.13		NS	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582		NS	0.002 U	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	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105		NS	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE		NS	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114		NS	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276		NS	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411		NS	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794		NS	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752		NS	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475		NS	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5		NS	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355		NS	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70		NS	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577		NS	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333		NS	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6		NS	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431		NS	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192		NS	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488		NS	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE		NS	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354		NS	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE		NS	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1		NS	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46		NS	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02		NS	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666		NS	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9		NS	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370		NS	0.01 U	0.0332 U	0.0180 U
Acetonitrile	mg/L	6.82		NS	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04		NS	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117		NS	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246		NS	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125		NS	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106		NS	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:	NS	10272021	10272021	10262021
			Sample Date:	NS	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd Quarter
			Notes:	Dry	-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Bromodichloromethane	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214		NS	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177		NS	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702		NS	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13		NS	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331		NS	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70		NS	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596		NS	0.002 U	0.002 U	0.002 U
cis-1,4-Dichloro-2-butene	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Cyclohexanone	mg/L	404		NS	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80		NS	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199		NS	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697		NS	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13		NS	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE		NS	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76		NS	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609		NS	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144		NS	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE		NS	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790		NS	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495		NS	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1		NS	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664		NS	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417		NS	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685		NS	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE		NS	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76		NS	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01		NS	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151		NS	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452		NS	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873		NS	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE		NS	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5		NS	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:	NS	10272021	10272021	10262021
			Sample Date:	NS	10/27/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd Quarter	2nd Quarter	2nd Quarter
			Notes:	Dry	-	-	-
Parameter	**Units**	**PAL[1]**					
Volatile Organic Compounds (continued)							
Propionitrile	mg/L	NE		NS	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23		NS	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65		NS	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828		NS	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286		NS	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43		NS	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972		NS	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109		NS	0.005 U	**0.0059 J+**	0.005 U
Toluene	mg/L	3.16		NS	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100		NS	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596		NS	0.002 U	0.002 U	0.002 U
trans-1,4-Dichloro-2-butene	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Trichloroethene	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36		NS	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61		NS	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004		NS	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10		NS	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:	**NS**	**10272021**	**10272021**	**10262021**
		Sample Date:	**NS**	**10/27/2021**	**10/27/2021**	**10/26/2021**
		Quarterly Event:	**2nd Quarter**	**2nd Quarter**	**2nd Quarter**	**2nd 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] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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 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:	10282021	10282021	10272021	10262021
			Sample Date:	10/28/2021	10/28/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd 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	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:	10282021	10282021	10272021	10262021
			Sample Date:	10/28/2021	10/28/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd 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	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	0.0103 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:	10282021	10282021	10272021	10262021
			Sample Date:	10/28/2021	10/28/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd 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	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:	10282021	10282021	10272021	10262021
			Sample Date:	10/28/2021	10/28/2021	10/27/2021	10/26/2021
			Quarterly Event:	2nd Quarter	2nd 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	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:	**10282021**	**10282021**	**10272021**	**10262021**
		Sample Date:	**10/28/2021**	**10/28/2021**	**10/27/2021**	**10/26/2021**
		Quarterly Event:	**2nd Quarter**	**2nd 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] Rinse was collected following decontamination of sampling equipment used for Monitoring Well MW-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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 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:	10262021	10282021	10282021
		Sample Date:	10/26/2021	10/28/2021	10/28/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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	**0.0205**
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	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	**0.00102**	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:	10262021	10282021	10282021
		Sample Date:	10/26/2021	10/28/2021	10/28/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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	0.0219 U	0.01 U	**0.0260**
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:	10262021	10282021	10282021
		Sample Date:	10/26/2021	10/28/2021	10/28/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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:	10262021	10282021	10282021
		Sample Date:	10/26/2021	10/28/2021	10/28/2021
		Quarterly Event:	2nd Quarter	2nd Quarter	2nd 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:	**10262021**	**10282021**	**10282021**
		Sample Date:	**10/26/2021**	**10/28/2021**	**10/28/2021**
		Quarterly Event:	**2nd Quarter**	**2nd Quarter**	**2nd 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-15.

Bold - compound was detected

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

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-01	MW-01
		Sample Designator:	07062021	10252021
		Sample Date:	7/6/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	NA	0.0500 U
Arsenic	mg/L	10	NA	0.0250 U
Copper	mg/L	1,300	NA	0.0050 U
Lead	mg/L	15	NA	0.0150 U
Zinc	mg/L	4.69	NA	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-01	MW-01
		Sample Designator:	07062021	10252021
		Sample Date:	7/6/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0182 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-01	MW-01
		Sample Designator:	07062021	10252021
		Sample Date:	7/6/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-01	MW-01
		Sample Designator:	07062021	10252021
		Sample Date:	7/6/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-01**	**MW-01**
		Sample Designator:	**07062021**	**10252021**
		Sample Date:	**7/6/2021**	**10/25/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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-02	MW-02/DUP	MW-02
		Sample Designator:	07072021	07072021	10252021
		Sample Date:	7/7/2021	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	1st 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	0.0500 U	0.0500 U	NA
Arsenic	mg/L	10	0.0250 U	0.0250 U	NA
Copper	mg/L	1,300	0.0050 U	0.0050 U	NA
Lead	mg/L	15	0.0150 U	0.0150 U	NA
Zinc	mg/L	4.69	0.0100 U	0.0100 U	NA
Polychlorinated Biphenyls					
Aroclor 1016	mg/L	0.0172	0.00105 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00105 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00105 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00105 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00105 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00105 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00105 U	0.00100 U	0.00100 U
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/L	1,610	0.00100 U	0.00400 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	0.00400 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	0.00400 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00400 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00400 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00400 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00400 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00400 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	0.00400 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00400 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	0.00400 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	0.00400 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00400 U	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	0.00400 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	0.00400 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	0.00400 U	0.00100 U
Total Petroleum Hydrocarbons[2]					
Gasoline Range Organics	mg/L	18.1	0.5 U	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	2 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	2.8 U	NA

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

		Group Name:	GFC	GFC	GFC
		Sample Point:	MW-02	MW-02/DUP	MW-02
		Sample Designator:	07072021	07072021	10252021
		Sample Date:	7/7/2021	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	1st 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	0.0135 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-02	MW-02/DUP	MW-02
		Sample Designator:	07072021	07072021	10252021
		Sample Date:	7/7/2021	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	1st 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	0.001 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-02	MW-02/DUP	MW-02
		Sample Designator:	07072021	07072021	10252021
		Sample Date:	7/7/2021	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	1st 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-02**	**MW-02/DUP**	**MW-02**
		Sample Designator:	**07072021**	**07072021**	**10252021**
		Sample Date:	**7/7/2021**	**7/7/2021**	**10/25/2021**
		Quarterly Event:	**1st Quarter**	**1st 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-03	MW-03
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-03	MW-03
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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 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-03	MW-03
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-03	MW-03
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-03**	**MW-03**
			Sample Designator:	**07072021**	**10252021**
			Sample Date:	**7/7/2021**	**10/25/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-04	MW-04
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	NA	0.0500 U
Arsenic	mg/L	10	NA	0.0250 U
Copper	mg/L	1,300	NA	0.0050 U
Lead	mg/L	15	NA	0.0150 U
Zinc	mg/L	4.69	NA	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-04	MW-04
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0180 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-04	MW-04
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-04	MW-04
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-04**	**MW-04**
			Sample Designator:	**07072021**	**10262021**
			Sample Date:	**7/7/2021**	**10/26/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-05	MW-05
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/201
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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
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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-05	MW-05
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/201
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-05	MW-05
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/201
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-05	MW-05
		Sample Designator:	07072021	10252021
		Sample Date:	7/7/2021	10/25/201
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-05**	**MW-05**
		Sample Designator:	**07072021**	**10252021**
		Sample Date:	**7/7/2021**	**10/25/201**
		Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-06	MW-06
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-06	MW-06
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-06	MW-06
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-06	MW-06
		Sample Designator:	07072021	10262021
		Sample Date:	7/7/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-06**	**MW-06**
		Sample Designator:	**07072021**	**10262021**
		Sample Date:	**7/7/2021**	**10/26/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-07	MW-07
		Sample Designator:	07082021	10282021
		Sample Date:	7/8/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-07	MW-07
		Sample Designator:	07082021	10282021
		Sample Date:	7/8/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0144 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-07	MW-07
		Sample Designator:	07082021	10282021
		Sample Date:	7/8/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-07	MW-07
		Sample Designator:	07082021	10282021
		Sample Date:	7/8/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-07**	**MW-07**
			Sample Designator:	**07082021**	**10282021**
			Sample Date:	**7/8/2021**	**10/28/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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-09	MW-09
		Sample Designator:	07092021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	NA	0.05 U
Arsenic	mg/L	10	NA	0.025 U
Copper	mg/L	1,300	NA	0.005 U
Lead	mg/L	15	NA	0.015 U
Zinc	mg/L	4.69	NA	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-09	MW-09
		Sample Designator:	07092021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-09	MW-09
		Sample Designator:	07092021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-09	MW-09
		Sample Designator:	07092021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-09**	**MW-09**
			Sample Designator:	**07092021**	**10272021**
			Sample Date:	**7/9/2021**	**10/27/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-10	MW-10
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-10	MW-10
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0207 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-10	MW-10
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-10	MW-10
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-10**	**MW-10**
		Sample Designator:	**07082021**	**10262021**
		Sample Date:	**7/8/2021**	**10/26/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-11	MW-11
		Sample Designator:	NS	NS
		Sample Date:	NS	NS
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	Dry	Dry
Parameter	**Units**	**PAL[1]**		
Metals, Total				
Antimony	mg/L	6	NS	NS
Arsenic	mg/L	10	NS	NS
Copper	mg/L	1,300	NS	NS
Lead	mg/L	15	NS	NS
Zinc	mg/L	4.69	NS	NS
Metals, Dissolved				
Antimony	mg/L	6	NS	NS
Arsenic	mg/L	10	NS	NS
Copper	mg/L	1,300	NS	NS
Lead	mg/L	15	NS	NS
Zinc	mg/L	4.69	NS	NS
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	0.0172	NS	NS
Aroclor 1221	mg/L	0.002	NS	NS
Aroclor 1232	mg/L	0.002	NS	NS
Aroclor 1242	mg/L	0.00101	NS	NS
Aroclor 1248	mg/L	0.002	NS	NS
Aroclor 1254	mg/L	0.00125	NS	NS
Aroclor 1260	mg/L	0.002	NS	NS
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	mg/L	1,610	NS	NS
Acenaphthylene	mg/L	2,060	NS	NS
Anthracene	mg/L	2,290	NS	NS
Benzo(a)anthracene	mg/L	0.133	NS	NS
Benzo(a)pyrene	mg/L	0.2	NS	NS
Benzo(b)fluoranthene	mg/L	7.65	NS	NS
Benzo(g,h,i)perylene	mg/L	218,000	NS	NS
Benzo(k)fluoranthene	mg/L	937	NS	NS
Chrysene	mg/L	81.7	NS	NS
Dibenzo(a,h)anthracene	mg/L	985	NS	NS
Fluoranthene	mg/L	14,200	NS	NS
Fluorene	mg/L	3,010	NS	NS
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	NS
Naphthalene	mg/L	0.1	NS	NS
Phenanthrene	mg/L	1,190	NS	NS
Pyrene	mg/L	17,300	NS	NS
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	NS	NS
Diesel Range Organics	mg/L	34.3	NS	NS
Oil Range Organics	mg/L	31.8	NS	NS

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

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

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

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

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

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

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

		Group Name:	**GFC**	**GFC**
		Sample Point:	**MW-11**	**MW-11**
		Sample Designator:	**NS**	**NS**
		Sample Date:	**NS**	**NS**
		Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-12	MW-12
		Sample Designator:	0709/2021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	**0.0206**	**0.0211**
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	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	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-12	MW-12
		Sample Designator:	0709/2021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-12	MW-12
		Sample Designator:	0709/2021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-12	MW-12
		Sample Designator:	0709/2021	10272021
		Sample Date:	7/9/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-12**	**MW-12**
			Sample Designator:	**0709/2021**	**10272021**
			Sample Date:	**7/9/2021**	**10/27/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-13	MW-13
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	**0.0129**	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	NA
Arsenic	mg/L	10	0.0250 U	NA
Copper	mg/L	1,300	**0.0129**	NA
Lead	mg/L	15	0.0150 U	NA
Zinc	mg/L	4.69	**0.0196**	NA
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	0.00400 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00400 U	0.00100 U
Anthracene	mg/L	2,290	0.00400 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00400 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00400 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00400 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00400 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00400 U	0.00100 U
Chrysene	mg/L	81.7	0.00400 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00400 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00400 U	0.00100 U
Fluorene	mg/L	3,010	0.00400 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00400 U	0.00100 U
Naphthalene	mg/L	0.1	0.00400 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00400 U	0.00100 U
Pyrene	mg/L	17,300	0.00400 U	0.00100 U
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	0.5 U	NA
Diesel Range Organics	mg/L	34.3	2 U	NA
Oil Range Organics	mg/L	31.8	2.8 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-13	MW-13
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0225 U	0.0332 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-13	MW-13
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-13	MW-13
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	**0.0059 J+**
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-13**	**MW-13**
			Sample Designator:	**07082021**	**10272021**
			Sample Date:	**7/8/2021**	**10/27/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-14	MW-14
		Sample Designator:	NS	10262021
		Sample Date:	NS	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	Dry	-
Parameter	**Units**	**PAL[1]**		
Metals, Total				
Antimony	mg/L	6	NS	0.0500 U
Arsenic	mg/L	10	NS	0.0250 U
Copper	mg/L	1,300	NS	0.0050 U
Lead	mg/L	15	NS	0.0150 U
Zinc	mg/L	4.69	NS	0.0100 U
Metals, Dissolved				
Antimony	mg/L	6	NS	NA
Arsenic	mg/L	10	NS	NA
Copper	mg/L	1,300	NS	NA
Lead	mg/L	15	NS	NA
Zinc	mg/L	4.69	NS	NA
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	0.0172	NS	0.001 U
Aroclor 1221	mg/L	0.002	NS	0.001 U
Aroclor 1232	mg/L	0.002	NS	0.001 U
Aroclor 1242	mg/L	0.00101	NS	0.001 U
Aroclor 1248	mg/L	0.002	NS	0.001 U
Aroclor 1254	mg/L	0.00125	NS	0.001 U
Aroclor 1260	mg/L	0.002	NS	0.001 U
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	mg/L	1,610	NS	0.001 U
Acenaphthylene	mg/L	2,060	NS	0.001 U
Anthracene	mg/L	2,290	NS	0.001 U
Benzo(a)anthracene	mg/L	0.133	NS	0.001 U
Benzo(a)pyrene	mg/L	0.2	NS	0.001 U
Benzo(b)fluoranthene	mg/L	7.65	NS	0.001 U
Benzo(g,h,i)perylene	mg/L	218,000	NS	0.001 U
Benzo(k)fluoranthene	mg/L	937	NS	0.001 U
Chrysene	mg/L	81.7	NS	0.001 U
Dibenzo(a,h)anthracene	mg/L	985	NS	0.001 U
Fluoranthene	mg/L	14,200	NS	0.001 U
Fluorene	mg/L	3,010	NS	0.001 U
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	0.001 U
Naphthalene	mg/L	0.1	NS	0.001 U
Phenanthrene	mg/L	1,190	NS	0.001 U
Pyrene	mg/L	17,300	NS	0.001 U
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	NS	NA
Diesel Range Organics	mg/L	34.3	NS	NA
Oil Range Organics	mg/L	31.8	NS	NA

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

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

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

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

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

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

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

		Group Name:	**GFC**	**GFC**
		Sample Point:	**MW-14**	**MW-14**
		Sample Designator:	**NS**	**10262021**
		Sample Date:	**NS**	**10/26/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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-16	MW-16
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-16	MW-16
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-16	MW-16
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-16	MW-16
		Sample Designator:	07082021	10272021
		Sample Date:	7/8/2021	10/27/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-16**	**MW-16**
			Sample Designator:	**07082021**	**10272021**
			Sample Date:	**7/8/2021**	**10/27/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-17	MW-17
		Sample Designator:	07292021	10262021
		Sample Date:	7/29/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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	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	0.001 U
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-17	MW-17
		Sample Designator:	07292021	10262021
		Sample Date:	7/29/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0103 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-17	MW-17
		Sample Designator:	07292021	10262021
		Sample Date:	7/29/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-17	MW-17
		Sample Designator:	07292021	10262021
		Sample Date:	7/29/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-17**	**MW-17**
		Sample Designator:	**07292021**	**10262021**
		Sample Date:	**7/29/2021**	**10/26/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-18	MW-18
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	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
Polychlorinated Biphenyls				
Aroclor 1016	mg/L	0.0172	0.00100 U	**0.00102**
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	0.5 U	NA
Diesel Range Organics	mg/L	34.3	0.5 U	NA
Oil Range Organics	mg/L	31.8	0.7 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-18	MW-18
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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	0.0219 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-18	MW-18
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-18	MW-18
		Sample Designator:	07082021	10262021
		Sample Date:	7/8/2021	10/26/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-18**	**MW-18**
			Sample Designator:	**07082021**	**10262021**
			Sample Date:	**7/8/2021**	**10/26/2021**
			Quarterly Event:	**1st Quarter**	**2nd 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
		Sample Point:	MW-19	MW-19
		Sample Designator:	07092021	10282021
		Sample Date:	7/9/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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	**0.0105**
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	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	0.00400 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00400 U	0.00100 U
Anthracene	mg/L	2,290	0.00400 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00400 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00400 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00400 U	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00400 U	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00400 U	0.00100 U
Chrysene	mg/L	81.7	0.00400 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00400 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00400 U	0.00100 U
Fluorene	mg/L	3,010	0.00400 U	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00400 U	0.00100 U
Naphthalene	mg/L	0.1	0.00400 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00400 U	0.00100 U
Pyrene	mg/L	17,300	0.00400 U	0.00100 U
Total Petroleum Hydrocarbons[2]				
Gasoline Range Organics	mg/L	18.1	NA	NA
Diesel Range Organics	mg/L	34.3	2 U	NA
Oil Range Organics	mg/L	31.8	2.8 U	NA

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

		Group Name:	GFC	GFC
		Sample Point:	MW-19	MW-19
		Sample Designator:	07092021	10282021
		Sample Date:	7/9/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds				
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-19	MW-19
		Sample Designator:	07092021	10282021
		Sample Date:	7/9/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
Parameter	**Units**	**PAL[1]**		
Volatile Organic Compounds (continued)				
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-19	MW-19
		Sample Designator:	07092021	10282021
		Sample Date:	7/9/2021	10/28/2021
		Quarterly Event:	1st Quarter	2nd Quarter
		Notes:	-	-
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-19**	**MW-19**
		Sample Designator:	**07092021**	**10282021**
		Sample Date:	**7/9/2021**	**10/28/2021**
		Quarterly Event:	**1st Quarter**	**2nd 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

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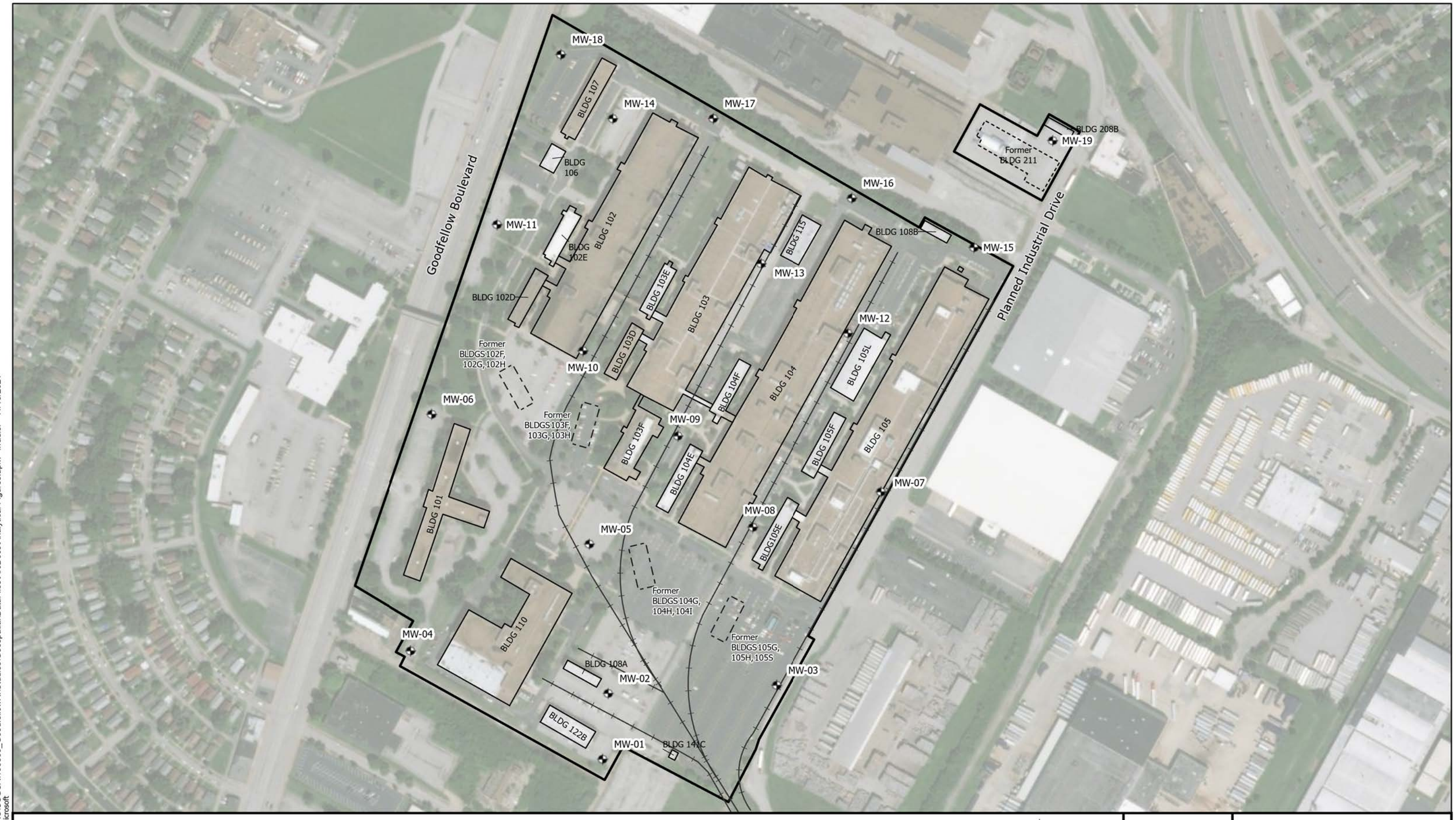
Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau 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

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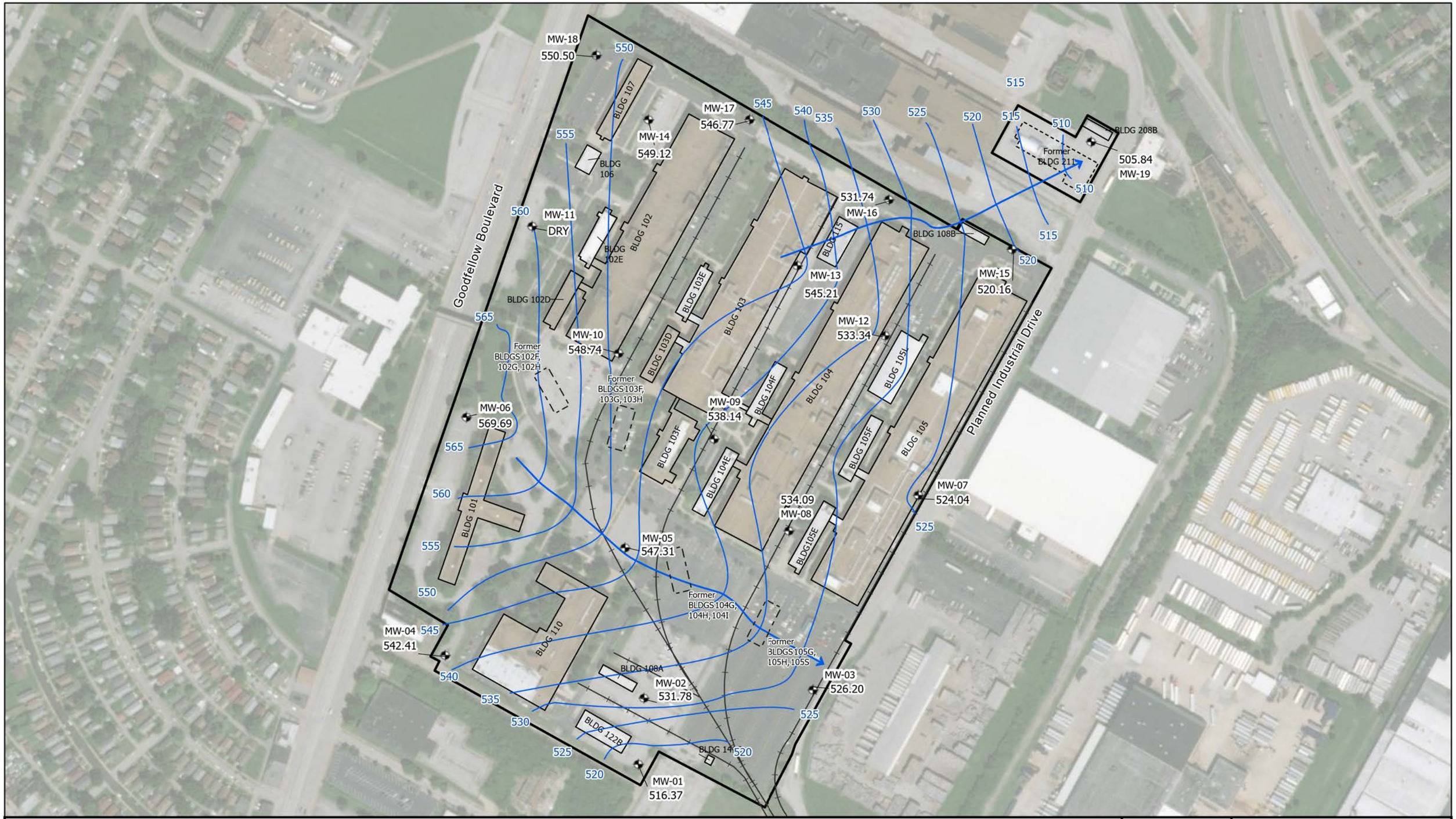
Service Layer Credits: Maxar, Microsoft



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

Notes:
1. Site monitoring wells were gauged on October 25th, 2021
2. Elevations presented in feet above mean sea level.

NORTH
0 125 250 500
Feet

BURNS McDONNELL

Figure 3
Potentiometric Surface Map
October 2021
Goodfellow Federal Complex
St. Louis, Missouri

Issued: 12/17/2021

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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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?		X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition	10/25/2021			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?	10/25/2021	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?	10/25/2021	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?		X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition	10/25/2021			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?		X					
Is well clearly labeled?		X					
Is well easily seen?		X					
Is there water in the vault?			X				
Vegetation overgrowth			X				
Overall vault condition	10/25/2021			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?	10/25/2021	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?	10/25/2021	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-12**

Item Inspected	Date	Yes	No	Good	Poor	Needs Repair	Comments
Is well locked?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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?	10/25/2021	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	
10/25/2021	1135	10.00	4.00 / 7.00 / 10.02	1414	10.2 / 104 / 804	220.1	
10/26/2021	0712	10.01	4.00 / 7.00 / 10.02	1433	10.0 / 102 / 803	220.9	
10/26/2021	0805	9.94	4.00 / 7.01 / 10.03	1428	10.0 / 101 / 804	221.4	
10/27/2021	0738	9.98	4.00 / 7.01 / 10.04	1246	10.2 / 105 / 805	220.7	
10/28/2021	0745	9.98	4.00 / 7.01 / 10.01	1420	10.5 / 102 / 804	222.2	

EQUIPMENT TYPE (Manufacturer, Model No. Version)

Muit-Meter YSI 556 MPS

Turbidity Meter LaMotte 2020we

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: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

27.34 DEPTH TO WATER (FT) 45.37 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)
12:05	27.36	250	0.25	17.2	2.11	1.748	6.21	240.10	354
12:10	27.31	250	0.4	17.2	1.80	1.743	6.22	236.20	208
12:15	27.30	250	0.6	17.2	1.64	1.744	6.25	233.00	170
12:20	27.30	250	1	17.2	1.56	1.757	6.29	230.90	119
12:25	27.30	250	1.25	17.2	1.49	1.765	6.32	229.30	85.7
12:30	27.30	250	1.25	17.2	1.44	1.766	6.35	228.30	68.9

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.
12:30	1.25	17.2	1.44	1.766	6.35	228.3	69.9	27.3	Muddy

SAMPLE ID: MW-01 10252021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.25 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-01

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: FIELD FILTERED

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/25/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-02

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.31 DEPTH TO WATER (FT) 40.15 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)
13:20	13.71	200.0	0.2	18.8	5.16	1.221	6.74	215	59.9
13:25	15.21	200.0	0.50	18.7	5.66	1.22	6.80	213.50	31
13:30	16.14	160.0	0.75	18.8	5.76	1.22	6.82	213.30	28.3
13:35	16.75	160.0	0.75	18.8	5.73	1.22	6.81	213.70	25.8

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.
13:35	0.75	18.8	5.73	1.22	6.81	213.7	25.8	16.75	Clear

SAMPLE ID: MW-02 10252021 SAMPLE ID FOR QC:

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

IDW TOTAL: 0.75 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-02

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/25/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-03

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

12.7 DEPTH TO WATER (FT) 35.54 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)
14:35	12.90	200	0.25	19.8	5.31	1.368	6.85	209.2	49.4
14:40	14.80	200	0.25	19.7	5.03	1.379	6.84	207.70	40
14:45	15.15	100	0.25	19.5	4.92	1.379	6.85	206.90	37.9
14:50	15.50	100	0.5	19.9	4.94	1.377	6.84	206.80	25
14:55	15.70	100	0.6	19.9	4.89	1.376	6.84	206.90	20.3

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.
14:55	0.6	19.9	4.89	1.376	6.84	206.9	20.3	15.7	Clear

SAMPLE ID: MW-03 10252021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.60 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-03

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/25/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-04

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

16.05 DEPTH TO WATER (FT) 38.48 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)
8:25	16.60	160	0.1	17.6	2.76	4.068	6.63	193.60	29.1
8:30	16.71	160	0.1	17.9	1.86	4.141	6.65	192.20	33.8
8:35	16.80	160	0.2	18.1	1.53	4.166	6.69	189.50	29
8:40	16.91	160	0.25	18.1	1.37	4.172	6.71	188.70	20.8
8:45	16.94	160	0.35	18.1	1.38	4.177	6.71	188.20	17.6
8:50	16.98	160	0.5	18.1	1.35	4.176	6.71	188.10	17.7

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.
8:50	0.5	18.1	1.35	4.176	6.71	188.1	17.7	16.98	Clear

SAMPLE ID: MW-04 10262021 SAMPLE ID FOR QC: MW-04 10262021 MS/MSD

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.5 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-04

DATE: 10/26/2021 **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)	10/26/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-05

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

3.23 DEPTH TO WATER (FT) 33.34 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)
15:53	3.59	200	0.1	20.4	2.11	5.591	7.1	210.7	29.8
15:58	3.86	200	0.3	20.3	1.44	5.697	7.11	206.9	26.40
16:03	4.16	200	0.5	20.4	1.06	5.685	7.12	204.4	32.30
16:08	4.57	200	0.8	20.5	0.89	5.712	7.14	203.3	11.80
16:13	4.88	200	1.0	20.5	0.74	5.731	7.14	202.6	7.18
16:18	5.22	200	1.5	20.6	0.69	5.728	7.15	202.0	5.73
16:23	5.65	200	1.8	20.6	0.68	5.711	7.15	201.7	3.46

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.
16:23	1.75	20.6	0.68	5.711	7.15	201.7	3.46	5.65	Clear

SAMPLE ID: MW-05 10252021 SAMPLE ID FOR QC: NA

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

IDW TOTAL: 1.75 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-05

DATE: 10/25/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/25/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-06

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

7.63 DEPTH TO WATER (FT) 31.11 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)
9:55	8.28	150	0.1	19.9	7.71	4.129	7.05	188.8	158
10:00	8.56	150	0.2	19.7	7.79	4.431	7.01	188.3	147
10:05	9.02	150	0.3	19.5	7.68	4.482	7.00	188.10	173
10:10	9.57	150	0.5	19.6	7.59	4.481	6.99	187.50	139
10:15	10.03	150	0.75	19.6	7.78	4.469	6.99	187.40	110
10:20	10.50	150	0.9	19.6	7.60	4.485	6.99	188.30	85.6
10:25	10.81	150	1	19.6	7.67	4.451	6.99	188.00	66.3
10:30	11.13	150	1.25	19.6	7.61	4.423	6.98	189.30	49.2

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.
10:30	1.25	19.6	7.61	4.423	6.98	189.3	49.2	11.13	Clearish

SAMPLE ID: MW-06 10262021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.25 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-06

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/26/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-07

DATE: 10/28/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

16.31 DEPTH TO WATER (FT) 30.45 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)
9:30	16.55	200	0.1	18.6	7.26	2.034	7.11	185.9	37.4
9:35	17.04	200	0.25	19.3	6.83	2.023	6.69	190.50	30.9
9:40	17.17	200	0.5	19.4	6.63	2.017	6.64	191.50	25.1
9:45	17.48	200	1	19.6	6.52	2.011	6.64	192.60	20.7
9:50	17.83	200	1.25	19.7	6.48	2.015	6.68	193.50	12.3
9:55	18.15	200	1.5	19.8	6.57	2.021	6.67	193.80	10.1

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.
9:55	1.5	19.8	6.57	2.021	6.67	193.8	10.1	18.15	Clear

SAMPLE ID: MW-07 10282021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.50 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-07

DATE: 10/28/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/28/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-08

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

DEPTH TO WATER (FT) 30.61 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)
14:55	11.44	100	0.1	20.4	5.65	3.162	6.74	185.1	13.5
15:00	11.76	100	0.1	20.2	5.40	3.206	6.71	185.30	6.29
15:05	12.18	100	0.25	20.1	5.20	3.209	6.69	185.50	6.23
15:10	12.56	100	0.25	20.2	5.07	3.207	6.69	185.90	5.98
15:15	12.76	100	0.4	20.4	5.01	3.206	6.68	186.30	5.35
15:20	13.00	100	0.5	20.4	5.02	3.204	6.68	186.90	2.87

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	0.5	20.3	5.02	3.204	6.68	186.9	2.87	13	Clear

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

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

IDW TOTAL: 0.50 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-08

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DUPLICATE SAMPLED FOR EXPLOSIVES ONLY (PACE ANALYTICAL)

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/27/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-09

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

11.98 DEPTH TO WATER (FT) 35.78 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)
8:37	12.72	160	0.1	18.4	3.79	7.245	6.49	205.9	61
8:42	13.26	160	0.1	18.7	3.50	7.27	6.62	197.90	62
8:47	14.16	160	0.25	18.6	3.18	7.288	6.69	193.90	65.2
8:52	14.67	100	0.4	18.8	2.85	7.287	6.72	192.40	74
8:57	15.00	100	0.5	18.9	2.71	7.291	6.73	192.20	69.8
9:02	15.36	100	0.5	18.9	2.60	7.304	6.73	192.10	62
9:07	15.65	100	0.6	18.9	2.59	7.303	6.74	192.10	63.5

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.
9:07	0.6	18.9	2.59	7.303	6.74	192.1	63.5	15.65	Clear

SAMPLE ID: MW-09 10272021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.6 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-09

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: FIELD FILTERED

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/27/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-10

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

8.14 DEPTH TO WATER (FT) 32.39 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)
16:10	9.92	200	0.25	18.8	4.72	3.162	7.04	192.8	72.5
16:15	10.27	160	0.25	18.9	4.72	3.163	7.01	193.30	72.3
16:20	10.69	160	0.5	19.2	4.74	3.172	7.00	193.40	72.7
16:25	11.02	160	0.75	19.1	4.72	3.174	7.00	193.40	59.5
16:30	11.25	160	1	19.1	4.73	3.172	7.00	193.70	50.6

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.
16:30	1	19.1	4.73	3.172	7	193.7	50.6	11.25	Clear

SAMPLE ID: MW-10 10262021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.0 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-10

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6) [redacted]	10/28/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-11

DATE: NA **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

DRY DEPTH TO WATER (FT) NA 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)
MONITORING WELL MW-11 WAS DRY - NO SAMPLE 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: NA SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: NA

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

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-11

DATE: NA **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/25/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-12

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

11.5 DEPTH TO WATER (FT) 45.8 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)
13:17	12.19	200	0.1	19.9	2.32	1.400	7.54	158.3	142
13:22	12.58	100	0.1	19.8	1.72	1.392	7.43	159.00	148
13:27	12.80	100	0.2	20.4	1.48	1.391	7.37	159.30	182
13:32	12.94	100	0.3	20.4	1.37	1.392	7.34	159.40	193
13:37	13.12	100	0.4	20.5	1.30	1.392	7.33	159.30	201
13:42	13.25	100	0.4	20.5	1.22	1.392	7.32	159.00	196
13:47	13.28	100	0.5	20l5	1.19	1.390	7.32	158.70	164
13:52	13.33	100	0.5	20.6	1.15	1.388	7.31	158.40	176
13:57	13.37	100	0.6	20.6	1.12	1.387	7.31	158.20	182

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.
13:57	0.6	20.6	1.12	1.387	7.31	158.2	182	13.37	Cloudy

SAMPLE ID: MW-12 10272021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.6 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-12

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/27/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-13

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

5.9 DEPTH TO WATER (FT) 21.16 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)
10:05	6.10	200	0.1	20.7	1.64	1.732	7.8	170.2	103
10:10	6.55	200	0.25	21	0.91	1.629	8.44	163.30	399
10:15	6.66	200	0.4	21	0.97	1.584	8.57	161.50	379
10:20	6.83	200	0.5	21	0.97	1.553	8.62	159.60	285
10:25	7.05	200	0.75	21.2	0.91	1.526	8.61	157.00	172
10:30	7.25	200	1	21.4	0.80	1.472	8.49	153.10	99.7
10:35	7.45	200	1.25	21.4	0.75	1.5	8.42	144.00	41.9
10:40	7.62	200	1.5	21.2	0.72	1.552	8.38	128.30	29.7
10:45	7.78	200	1.75	21.3	0.76	1.62	8.36	129.50	22.9

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.
10:45	1.75	21.3	0.76	1.62	8.36	129.5	22.9	7.78	Clear

SAMPLE ID: MW-13 10272021 SAMPLE ID FOR QC:

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

IDW TOTAL: 1.75 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-13

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6) [redacted]	10/27/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-14

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

14.5 DEPTH TO WATER (FT) NA 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)
MONITORING WELL MW-14 WAS DRY - NO SAMPLE COLLECTED									
12:12	14.75	120	0.1	19.4	8.07	1.714	7.14	188.70	37.5
12:17	14.90	120	0.1	19.6	7.94	1.707	7.04	191.20	41
12:22	15.07	120	0.25	19.7	7.79	1.763	6.98	192.30	39.5
12:27	15.20	120	0.25	19.7	7.74	1.840	6.95	193.00	30.7
12:32	15.43	120	0.5	19.8	7.72	1.967	6.91	194.40	19.2
12:37	15.58	120	0.6	19.8	7.71	2.035	6.9	195.30	12.7
12:42	15.77	120	0.75	19.8	7.70	2.075	6.89	196.00	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.
12:42	0.75	19.8	7.7	2.075	6.89	196	10.4	15.77	Clear

SAMPLE ID: MW-14 10262021 SAMPLE ID FOR QC: NA

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

IDW TOTAL: 0.75 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-14

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/26/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-15

DATE: 10/28/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

20.63 DEPTH TO WATER (FT) 38.65 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)
7:53	21.00	150	0.1	17.3	5.28	9.122	6.27	205.5	22.1
7:58	21.21	150	0.1	17.6	4.93	9.289	6.34	202.10	22.60
8:03	21.44	150	0.2	17.7	4.81	9.314	6.41	200.10	21.90
8:08	21.62	150	0.25	17.6	4.71	9.316	6.43	200.00	17.20
8:13	21.82	150	0.4	17.6	4.66	9.314	6.44	200.60	15.20
8:18	22.02	150	0.5	17.7	4.62	9.304	6.44	200.40	12.70

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.
8:18	0.5	17.7	4.62	9.304	6.44	200.4	12.7	22.02	Clear

SAMPLE ID: MW-15 10282021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.50 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-15

DATE: 10/28/2021 **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)	10/28/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-16

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

16.5 DEPTH TO WATER (FT) 38.58 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)
11:55	17.38	200	0.1	18.9	6.53	6.774	6.94	170.8	31
12:02	18.32	200	0.25	18.7	6.54	6.67	6.92	171.70	24.7
12:07	18.71	100	0.5	19.3	6.41	6.753	6.91	173.20	21.5
12:12	18.95	100	0.5	19.4	6.35	6.75	6.9	174.80	21.2
12:17	19.23	100	0.6	19.3	6.39	6.754	6.91	171.60	19.3

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.
12:17	0.6	19.3	6.39	6.754	6.91	171.6	19.3	19.23	Clear

SAMPLE ID: MW-16 10272021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.60 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-16

DATE: 10/27/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/27/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-17

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

10.97 DEPTH TO WATER (FT) 24.65 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)
14:55	11.18	200	0.1	20.2	1.5	7.195	6.67	211.2	37.7
15:00	11.41	200	0.25	20.1	0.92	7.168	6.63	206.60	65.7
15:05	11.84	200	0.5	20.3	0.83	7.162	6.63	205.30	81.1
15:10	12.41	200	0.75	20.4	0.73	7.168	6.63	204.60	46.8
15:15	12.57	200	1.25	20.7	0.63	7.524	6.64	204.00	29.9
15:20	12.82	200	1.5	20.8	0.60	7.589	6.64	203.50	18.9
15:25	13.13	200	1.75	20.8	0.67	7.587	6.65	203.00	12.6

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.
15:25	1.75	20.8	0.67	7.587	6.65	203	12.6	13.13	Clear

SAMPLE ID: MW-10262021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 1.75 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-17

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/26/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-18

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

14.25 DEPTH TO WATER (FT) 28.68 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)
13:30	14.54	200	0.1	20.6	5.45	4.231	6.61	202.4	28.6
13:35	14.75	200	0.25	21	4.65	4.242	6.53	197.80	20.9
13:40	15.00	200	0.4	21.1	4.26	4.244	6.52	197.10	26.3
13:45	15.27	200	0.75	21.3	3.83	4.285	6.51	196.80	16.5
13:50	15.47	200	1	21.5	3.52	4.344	6.51	196.30	8.81
13:55	15.67	200	1.4	21.4	3.19	4.399	6.50	196.60	5.7
14:00	15.85	200	1.6	21.3	3.07	4.417	6.50	196.70	2.99
14:05	15.97	200	1.75	21.3	3.02	4.417	6.49	196.90	2.15
14:10	16.11	200	2	21.2	3.00	4.418	6.48	196.90	1.83

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.
0.590277778	2	21.2	3	4.418	6.48	196.9	1.83	16.11	Clear

SAMPLE ID: MW-10262021 SAMPLE ID FOR QC: NA

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

IDW TOTAL: 2.0 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-18

DATE: 10/26/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6)	10/26/2021
REVIEWED:	Justin Carter		11/1/2021

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-19

DATE: 10/28/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

WATER LEVEL MEASUREMENTS

18.09 DEPTH TO WATER (FT) 40.62 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)
11:15	19.45	150	0.1	18	5.23	3.234	6.58	205.8	152
11:20	20.00	150	0.25	18.1	5.07	4.237	6.59	205.40	224
11:25	20.25	100	0.3	18.2	4.98	3.232	6.60	205.20	253
11:30	20.51	100	0.4	18.4	4.90	3.236	6.61	205.40	237
11:35	20.75	100	0.5	18.4	4.88	3.241	6.61	205.70	268
11:40	21.02	100	0.6	18.4	4.86	3.242	6.61	205.80	271
11:45	21.20	100	0.65	18.3	4.83	3.24	6.61	206.00	295

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.
11:45	0.65	18.3	4.83	3.24	6.61	206	295	21.2	Clear

SAMPLE ID: MW-19 10282021 SAMPLE ID FOR QC: NA

ANALYSES REQUESTED: VOCs, PAHs, PCBs, Total Metals

IDW TOTAL: 0.65 GAL WATER QUALITY INSTRUMENT MODEL NO.: YSI 556 MPS

FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-19

DATE: 10/28/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS:

	NAME	SIGNATURE	DATE
PREPARED:	Benjamin Lockwood	(b) (6) [redacted]	10/28/2021
REVIEWED:	Justin Carter		11/1/2021

[redacted]

10/25/21 12848?

Task: GW Sampling Q4

Weather: Cloudy, 50s, morning.

830 Lockwood onsite

849 2-55gal Drums setup at SE Parking Lot By Bldg.

850 Begin Gauging wells

Well ID	DTW (Bgs)	ID (Bgs)	Notes
mw-01	27.18	95.38	Slight Product.
mw-02	13.14	40.14	Sht. Product
mw-03	13.75	36.55	Sht. Product
mw-04	16.86	38.48	
mw-05	3.20	33.39	Slt Wet Product
mw-06	8.03	31.36	
mw-07	16.45	30.46	
mw-08	11.19	30.62	
mw-09	12.59	31.79	
mw-10	8.66	32.40	
mw-11	DRY	33.03	
mw-12	12.23	45.80	
mw-13	5.99	21.19	
mw-14	14.74	21.19	
mw-15	21.02	38.80	
mw-16	17.02	38.53	
mw-17	11.07	24.65	

[redacted]

10/25/21 12848?

Well ID	DTW	ID	Notes
mw-18	14.39	28.71	
mw-19	18.67	40.60	

1105 Finish Gauging wells. Quick Cutoff

1135 Setup on mw-01 & calibrate YSI/Horiba

1145 Begin pumping mw-01

1231 Begin Sampling mw-01 10252021 w/ Field Filtered Bottle

1242 Finish Sampling & Begin Cleanup.

1301 Finish Cleanup, Setup on mw-02

1315 Begin Pumping mw-02

1337 Begin Sampling mw-02 10252021

1352 Finish Sampling mw-02 Begin Cleanup

1400 Finish Cleanup

1410 Begin Setup on mw-03

1430 Begin pumping mw03

1457 Begin Sampling mw-03 10252021

1503 Finish Sampling mw-03, Begin Cleanup

1520 Finish cleanup, Lock Break.

1540 Begin Setup on mw-05

1550 Begin pumping mw-05

1625 Begin Sampling mw-05 10252021

1638 Finish Sampling mw-05. Begin cleanup.

1650 Cleanup complete.

1700 Lockwood Offsite

Rite in the Rain

10/26/21 128487 [redacted]

Task: Q4 GW Sampling

Weather: Sunny, 60s, windy

750 Lockwood onsite. Set up on MW-04: calibrate YSI & check.

820 Begin pumping MW-04

850 Begin sampling MW-04 10262021 w/ MS/MSD & field filtering.

~~9~~927 Finish sampling, begin cleanup

938 Move to MW-06

950 Begin pumping MW-06

1031 Begin sampling MW-06 10262021

1042 Finish sampling, begin cleanup

1055 Cleanup complete.

1110 Lockwood offsite for ICE & lunch

1150 Begin setup on MW-14

1207 Begin pumping MW-14

1244 Begin sampling MW-14 10262021

1252 Finish sampling, begin cleanup.

1308 Finish cleanup. Dump 1 DW & move to MW-18

1327 Begin pumping MW-18

1411 Begin sampling MW-18 10262021

1420 Finish sampling MW-18. Begin cleanup.

1436 Finish cleanup. Move to MW-17

1452 Begin pumping ~~sampling~~ MW-17

1527 Begin sampling MW-17 10262021

10/26/21 128487 [redacted]

1535 Finish sampling MW-17. Begin cleanup.

1546 Finish cleanup. Dump 1 DW & move to MW-10

1602 Begin pumping MW-10.

1632 Begin sampling MW-10 10262021

1640 Finish sampling, begin cleanup.

1659 Cleanup complete & 1 DW dumped.

1703 Lockwood offsite & to call Carter

[redacted]

Rite in the Rain

10/27/21 128487 (b) (6) [redacted]

TASK: Q4 GW Sampling

WEATHER: Sun, Part Clouds, 60s

805 Lockwood onsite, mob to MW-09 & calibrate YSI/Hach

832 Begin pumping MW-09

910 Begin sampling MW-09 10272021 with field filtered bottles

921 Finish sampling MW-09, Begin Cleanup

935 Finish Cleanup

940 Phone tag w/ Parc Carter to set up pickup time.

1002 Begin pumping MW-~~8~~13

1046 Begin ~~pumping~~ Sampling MW-13 10272021

1056 Finish Sampling MW-13, Begin Cleanup

1114 Finish Cleanup, Quick Break

1153 Setup on MW-16

1148 Begin pumping MW-16

1220 Begin Sampling MW-16 10272021

1233 Finish Sampling MW-16, Begin Cleanup

1254 Finish cleanup, mob to MW-12

1257 Begin Setup on MW-12, note ongoing Diesel Gen Test

1304 Begin pumping MW-12

1341 Call w/ Carter to discuss high turbidity @ MW-12. Will pump for 20 min more or so to see if it drops or stabilizes

1400 Begin Sampling MW-12 10272021

10/27/21 128487 (b) (6) [redacted]

1415 Finish sampling MW-12, Begin Cleanup

1430 Finish Cleanup, mob to MW-08

1435 Begin Setup on MW-08

1448 Begin pumping MW-08

1522 Begin Sampling MW-08 10272021 (& Explosives

1551 Finish Sampling MW-08, Begin Cleanup

1608 Finish Cleanup

1625 Finish marking wells & adding labels for drums. Drums covered w/ plastic for rain ~~protect~~

1640 Lockwood to call Carter for update

1650 Lockwood offsite

(b) (6) [redacted]

10 10/28/21 128487 [redacted]

Task: Qy. GW Sampling

Weather: Cloudy, Rain. 50s

725 Lockwood onsite. Mob to MW-15 for setup.

744 Begin pumping MW-15

820 Begin Sampling MW-15 10282021 & Dup w/ Sta

842 Finish Sampling MW-15, Begin Cleanup.

855 collect Rinse-10282021

908 Finish cleanup. Quick Decon

915 mob to MW-07

925 Begin pumping MW-07

956 Begin Sampling MW-07

1004 Finish sampling MW-07 10282021. Begin cleanup.

1021 Finish cleanup. Lockwood to call for Gate

Access for MW-19.

1040 Setup on MW-19

1052 Begin pumping on MW-19

1117 Begin Sampling MW-19 10282021

1200 Finish Sampling MW-19, Begin Cleanup.

1227 Cleanup complete. Call w/ Carrier to discuss

Weekly

1230 Lockwood offsite for sample drop off.

1310 Samples Dropped off to Teklab

10/29/21 128487 [redacted]

Tasks: Asphalt Patching

Weather:

1015 Lockwood onsite. Begin checking

All Asphalt Holes.

- Holes are Hit w/ 5LBS Sledge

Holes patched

- GB-48

- GB-46

- GB-52

- GB-24

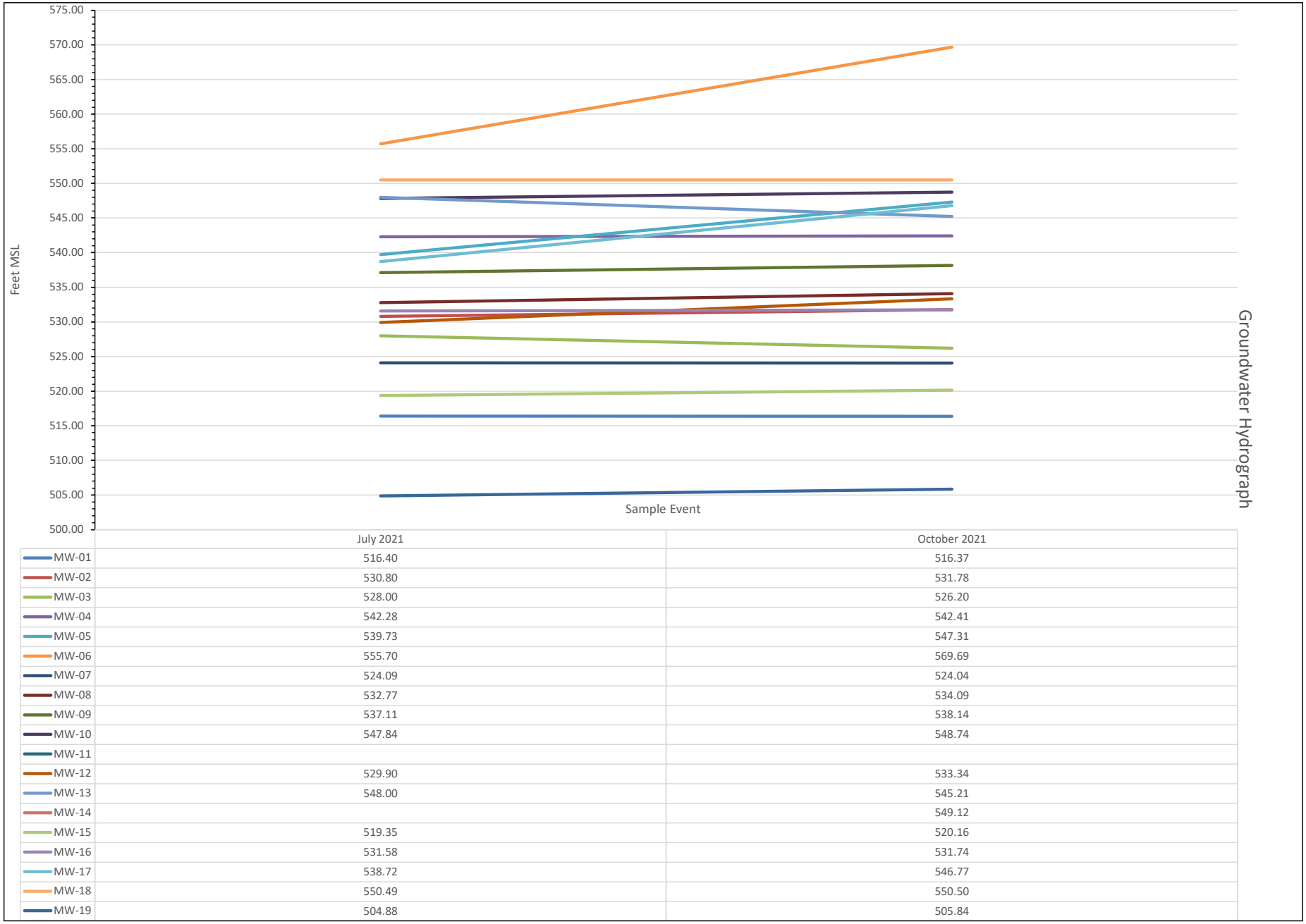
- GB-29

1140 Lockwood offsite

[redacted]

Rite in the Rain

APPENDIX B – GROUNDWATER HYDROGRAPH



	July 2021	October 2021
MW-01	516.40	516.37
MW-02	530.80	531.78
MW-03	528.00	526.20
MW-04	542.28	542.41
MW-05	539.73	547.31
MW-06	555.70	569.69
MW-07	524.09	524.04
MW-08	532.77	534.09
MW-09	537.11	538.14
MW-10	547.84	548.74
MW-11		
MW-12	529.90	533.34
MW-13	548.00	545.21
MW-14		549.12
MW-15	519.35	520.16
MW-16	531.58	531.74
MW-17	538.72	546.77
MW-18	550.49	550.50
MW-19	504.88	505.84

APPENDIX C – ANALYTICAL LABORATORY REPORTS

November 04, 2021

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:** 21101729

Dear Justin Carter:

TEKLAB, INC received 22 samples on 10/28/2021 1:14:00 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: 21101729
Report Date: 04-Nov-21

This reporting package includes the following:

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

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: 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21

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: 21101729
Report Date: 04-Nov-21

Cooler Receipt Temp: 1.2 °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:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2022	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		5/31/2021	Collinsville
Kentucky	UST	0073		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-001 **Client Sample ID:** MW-09 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 9:10

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	10/29/2021 16:59	184438
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 16:59	184438
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 16:59	184438
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 16:59	184438
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 16:59	184438
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	10/29/2021 20:01	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:01	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:01	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:01	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:01	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:08	184496
Surr: Decachlorobiphenyl	*	10-152		**97.1**	%REC	1	11/04/2021 3:08	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**108.5**	%REC	1	11/04/2021 3:08	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:57	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**79.5**	%REC	1	11/01/2021 17:57	184485
Surr: Nitrobenzene-d5	*	29.1-125		**91.1**	%REC	1	11/01/2021 17:57	184485
Surr: p-Terphenyl-d14	*	35.2-164		**129.0**	%REC	1	11/01/2021 17:57	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 13:34	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-001 **Client Sample ID:** MW-09 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 9:10

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	10/29/2021 13:34	184486
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 13:34	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 13:34	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 13:34	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 13:34	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 13:34	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 13:34	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 13:34	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 13:34	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-001 **Client Sample ID:** MW-09 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 9:10

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	10/29/2021 13:34	184486
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Cyclohexanone	*	20.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 13:34	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 13:34	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 13:34	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 13:34	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-001 **Client Sample ID:** MW-09 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 9:10

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	10/29/2021 13:34	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 13:34	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**103.4**	%REC	1	10/29/2021 13:34	184486
Surr: 4-Bromofluorobenzene	*	80-120		**97.6**	%REC	1	10/29/2021 13:34	184486
Surr: Toluene-d8	*	80-120		**96.5**	%REC	1	10/29/2021 13:34	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-002 **Client Sample ID:** MW-13 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 10:46

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	10/29/2021 20:04	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:04	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:04	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:04	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:04	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 3:26	184496
Surr: Decachlorobiphenyl	*	10-152		**90.8**	%REC	1	11/04/2021 3:26	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**124.1**	%REC	1	11/04/2021 3:26	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:08	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**79.7**	%REC	1	11/02/2021 8:08	184485
Surr: Nitrobenzene-d5	*	29.1-125		**85.2**	%REC	1	11/02/2021 8:08	184485
Surr: p-Terphenyl-d14	*	35.2-164		**130.6**	%REC	1	11/02/2021 8:08	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-002 **Client Sample ID:** MW-13 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 10:46

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	10/29/2021 14:00	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:00	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:00	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:00	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:00	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:00	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 14:00	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:00	184486
Acetone	NELAP	10.0		33.2	µg/L	1	10/29/2021 14:00	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 14:00	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 14:00	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 14:00	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 14:00	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 14:00	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:00	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-002 **Client Sample ID:** MW-13 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 10:46

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	10/29/2021 14:00	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 14:00	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:00	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:00	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:00	184486
Tetrahydrofuran	NELAP	5.0		**5.9**	µg/L	1	10/29/2021 14:00	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 14:00	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**102.4**	%REC	1	10/29/2021 14:00	184486
Surr: 4-Bromofluorobenzene	*	80-120		**96.4**	%REC	1	10/29/2021 14:00	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-002 **Client Sample ID:** MW-13 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 10:46

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		**97.9**	%REC	1	10/29/2021 14:00	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-003 **Client Sample ID:** MW-16 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 12:20

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	10/29/2021 20:08	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:08	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:08	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:08	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:08	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 4:52	184496
Surr: Decachlorobiphenyl	*	10-152		**86.6**	%REC	1	11/04/2021 4:52	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**110.8**	%REC	1	11/04/2021 4:52	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 8:47	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**80.9**	%REC	1	11/02/2021 8:47	184485
Surr: Nitrobenzene-d5	*	29.1-125		**83.1**	%REC	1	11/02/2021 8:47	184485
Surr: p-Terphenyl-d14	*	35.2-164		**122.7**	%REC	1	11/02/2021 8:47	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-003 **Client Sample ID:** MW-16 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 12:20

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	10/29/2021 14:27	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:27	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:27	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:27	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 14:27	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 14:27	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 14:27	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 14:27	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 14:27	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:27	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-003 **Client Sample ID:** MW-16 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 12:20

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	10/29/2021 14:27	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 14:27	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:27	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:27	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:27	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 14:27	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**104.4**	%REC	1	10/29/2021 14:27	184486
Surr: 4-Bromofluorobenzene	*	80-120		**98.7**	%REC	1	10/29/2021 14:27	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-003 **Client Sample ID:** MW-16 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 12:20

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		**96.0**	%REC	1	10/29/2021 14:27	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-004 **Client Sample ID:** MW-12 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 14:00

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	10/29/2021 20:12	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:12	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:12	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:12	184419
Zinc	NELAP	0.0100		**0.0211**	mg/L	1	10/29/2021 20:12	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:09	184496
Surr: Decachlorobiphenyl	*	10-152		**60.6**	%REC	1	11/04/2021 5:09	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**113.3**	%REC	1	11/04/2021 5:09	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:49	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**85.3**	%REC	1	11/01/2021 19:49	184485
Surr: Nitrobenzene-d5	*	29.1-125		**92.4**	%REC	1	11/01/2021 19:49	184485
Surr: p-Terphenyl-d14	*	35.2-164		**128.2**	%REC	1	11/01/2021 19:49	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-004 **Client Sample ID:** MW-12 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 14:00

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	10/29/2021 14:53	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:53	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:53	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 14:53	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 14:53	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 14:53	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 14:53	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 14:53	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 14:53	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 14:53	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-004 **Client Sample ID:** MW-12 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 14:00

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	10/29/2021 14:53	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 14:53	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:53	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 14:53	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 14:53	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 14:53	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.8**	%REC	1	10/29/2021 14:53	184486
Surr: 4-Bromofluorobenzene	*	80-120		**98.2**	%REC	1	10/29/2021 14:53	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-004 **Client Sample ID:** MW-12 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 14:00

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		**98.3**	%REC	1	10/29/2021 14:53	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-005 **Client Sample ID:** MW-08 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 15:22

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	10/29/2021 20:16	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:16	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:16	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:16	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:16	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:26	184496
Surr: Decachlorobiphenyl	*	10-152		**87.3**	%REC	1	11/04/2021 5:26	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**121.2**	%REC	1	11/04/2021 5:26	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:26	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**82.4**	%REC	1	11/01/2021 20:26	184485
Surr: Nitrobenzene-d5	*	29.1-125		**87.1**	%REC	1	11/01/2021 20:26	184485
Surr: p-Terphenyl-d14	*	35.2-164		**122.9**	%REC	1	11/01/2021 20:26	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-005 **Client Sample ID:** MW-08 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 15:22

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	10/29/2021 15:20	184486
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2-Butanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Acetone	NELAP	10.0		**10.3**	µg/L	1	10/29/2021 15:20	184486
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Acrolein	NELAP	20.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Benzene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 15:20	184486
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Bromoform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Bromomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Carbon tetrachloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Chlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Chloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Chloroform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Chloromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Chloroprene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Cyclohexanone	*	20.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-005 **Client Sample ID:** MW-08 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 15:22

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	10/29/2021 15:20	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 15:20	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 15:20	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 15:20	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 15:20	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**103.2**	%REC	1	10/29/2021 15:20	184486
Surr: 4-Bromofluorobenzene	*	80-120		**99.9**	%REC	1	10/29/2021 15:20	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-005 **Client Sample ID:** MW-08 10272021

Matrix: GROUNDWATER **Collection Date:** 10/27/2021 15:22

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		**97.3**	%REC	1	10/29/2021 15:20	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-006 **Client Sample ID:** TB-02

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	10/29/2021 12:14	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2-Butanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Acetone	NELAP	10.0		**31.0**	µg/L	1	10/29/2021 12:14	184486
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Acrolein	NELAP	20.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Benzene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 12:14	184486
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Bromoform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Bromomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-006 **Client Sample ID:** TB-02

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	10/29/2021 12:14	184486
Chlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Chloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Chloroform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Chloromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Chloroprene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
cis-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
cis-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Cyclohexanone	*	20.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Dibromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Dibromomethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 12:14	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 12:14	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 12:14	184486
Tetrahydrofuran	NELAP	5.0		**5.7**	µg/L	1	10/29/2021 12:14	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-006 **Client Sample ID:** TB-02

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	10/29/2021 12:14	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 12:14	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**102.7**	%REC	1	10/29/2021 12:14	184486
Surr: 4-Bromofluorobenzene	*	80-120		**96.0**	%REC	1	10/29/2021 12:14	184486
Surr: Toluene-d8	*	80-120		**96.4**	%REC	1	10/29/2021 12:14	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-007 **Client Sample ID:** MW-15 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 17:03	184438
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 17:03	184438
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 17:03	184438
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 17:03	184438
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 17:03	184438
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	10/29/2021 20:19	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:19	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:19	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:19	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:19	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 5:44	184496
Surr: Decachlorobiphenyl	*	10-152		**95.0**	%REC	1	11/04/2021 5:44	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**113.8**	%REC	1	11/04/2021 5:44	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 23:33	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**86.9**	%REC	1	11/01/2021 23:33	184485
Surr: Nitrobenzene-d5	*	29.1-125		**89.9**	%REC	1	11/01/2021 23:33	184485
Surr: p-Terphenyl-d14	*	35.2-164		**125.7**	%REC	1	11/01/2021 23:33	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:48	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:48	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:48	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 15:48	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 15:48	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-007 **Client Sample ID:** MW-15 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 15:48	184486
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 15:48	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 15:48	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 15:48	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 15:48	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 15:48	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-007 **Client Sample ID:** MW-15 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 15:48	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 15:48	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Dibromomethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Diisopropyl ether	*	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Ethyl acetate	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
Ethyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Ethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Hexachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Iodomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Methylacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Methylene chloride	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Naphthalene	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
n-Butyl acetate	*	2.0		ND	µg/L	1	10/29/2021 15:48	184486
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
n-Heptane	*	5.0		ND	µg/L	1	10/29/2021 15:48	184486
n-Hexane	*	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Nitrobenzene	NELAP	50.0		ND	µg/L	1	10/29/2021 15:48	184486
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
o-Xylene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Pentachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Propionitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Styrene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	10/29/2021 15:48	184486
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	10/29/2021 15:48	184486
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	10/29/2021 15:48	184486
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	10/29/2021 15:48	184486
Toluene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486
Trichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 15:48	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-007 **Client Sample ID:** MW-15 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 15:48	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 15:48	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 15:48	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 15:48	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**103.7**	%REC	1	10/29/2021 15:48	184486
Surr: 4-Bromofluorobenzene	*	80-120		**99.8**	%REC	1	10/29/2021 15:48	184486
Surr: Toluene-d8	*	80-120		**95.5**	%REC	1	10/29/2021 15:48	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-008 **Client Sample ID:** RINSE- 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:55

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	10/29/2021 20:38	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:38	184419
Copper	NELAP	0.0050		**0.0205**	mg/L	1	10/29/2021 20:38	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:38	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:38	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:01	184496
Surr: Decachlorobiphenyl	*	10-152		**59.8**	%REC	1	11/04/2021 6:01	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**107.2**	%REC	1	11/04/2021 6:01	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:10	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**93.1**	%REC	1	11/02/2021 0:10	184485
Surr: Nitrobenzene-d5	*	29.1-125		**94.7**	%REC	1	11/02/2021 0:10	184485
Surr: p-Terphenyl-d14	*	35.2-164		**119.9**	%REC	1	11/02/2021 0:10	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-008 **Client Sample ID:** RINSE- 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:55

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	10/29/2021 16:15	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:15	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:15	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:15	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:15	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:15	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 16:15	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:15	184486
Acetone	NELAP	10.0		26.0	µg/L	1	10/29/2021 16:15	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 16:15	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 16:15	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 16:15	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 16:15	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 16:15	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:15	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-008 **Client Sample ID:** RINSE- 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:55

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	10/29/2021 16:15	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 16:15	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:15	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:15	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 16:15	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 16:15	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**102.8**	%REC	1	10/29/2021 16:15	184486
Surr: 4-Bromofluorobenzene	*	80-120		**96.0**	%REC	1	10/29/2021 16:15	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-008 **Client Sample ID:** RINSE- 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:55

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		**97.0**	%REC	1	10/29/2021 16:15	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-009 **Client Sample ID:** MW-07 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 10:04

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	10/29/2021 20:42	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:42	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:42	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:42	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:42	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:18	184496
Surr: Decachlorobiphenyl	*	10-152		**120.3**	%REC	1	11/04/2021 6:18	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**125.3**	%REC	1	11/04/2021 6:18	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 0:47	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**82.0**	%REC	1	11/02/2021 0:47	184485
Surr: Nitrobenzene-d5	*	29.1-125		**88.6**	%REC	1	11/02/2021 0:47	184485
Surr: p-Terphenyl-d14	*	35.2-164		**117.1**	%REC	1	11/02/2021 0:47	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-009 **Client Sample ID:** MW-07 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 10:04

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	10/29/2021 16:42	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:42	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:42	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 16:42	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:42	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:42	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 16:42	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 16:42	184486
Acetone	NELAP	10.0		14.4	µg/L	1	10/29/2021 16:42	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 16:42	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 16:42	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 16:42	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 16:42	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 16:42	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 16:42	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-009 **Client Sample ID:** MW-07 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 10:04

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	10/29/2021 16:42	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 16:42	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:42	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 16:42	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 16:42	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 16:42	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.6**	%REC	1	10/29/2021 16:42	184486
Surr: 4-Bromofluorobenzene	*	80-120		**98.1**	%REC	1	10/29/2021 16:42	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-009 **Client Sample ID:** MW-07 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 10:04

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		**98.7**	%REC	1	10/29/2021 16:42	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-010 **Client Sample ID:** MW-15 10282021/DUP

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 17:06	184438
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 17:06	184438
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 17:06	184438
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 17:06	184438
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 17:06	184438
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	10/29/2021 20:45	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:45	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:45	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:45	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:45	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:35	184496
Surr: Decachlorobiphenyl	*	10-152		**95.5**	%REC	1	11/04/2021 6:35	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**115.6**	%REC	1	11/04/2021 6:35	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 1:25	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**92.8**	%REC	1	11/02/2021 1:25	184485
Surr: Nitrobenzene-d5	*	29.1-125		**91.0**	%REC	1	11/02/2021 1:25	184485
Surr: p-Terphenyl-d14	*	35.2-164		**127.4**	%REC	1	11/02/2021 1:25	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:08	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:08	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:08	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 17:08	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 17:08	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-010 **Client Sample ID:** MW-15 10282021/DUP

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 17:08	184486
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:08	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:08	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:08	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 17:08	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 17:08	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-010
Client Sample ID: MW-15 10282021/DUP
Matrix: GROUNDWATER
Collection Date: 10/28/2021 8:20

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	10/29/2021 17:08	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 17:08	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Dibromomethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Diisopropyl ether	*	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Ethyl acetate	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
Ethyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Ethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Hexachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Iodomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Methylacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Methylene chloride	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Naphthalene	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
n-Butyl acetate	*	2.0		ND	µg/L	1	10/29/2021 17:08	184486
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
n-Heptane	*	5.0		ND	µg/L	1	10/29/2021 17:08	184486
n-Hexane	*	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Nitrobenzene	NELAP	50.0		ND	µg/L	1	10/29/2021 17:08	184486
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
o-Xylene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Pentachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Propionitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Styrene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	10/29/2021 17:08	184486
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	10/29/2021 17:08	184486
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	10/29/2021 17:08	184486
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	10/29/2021 17:08	184486
Toluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486
Trichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:08	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-010 **Client Sample ID:** MW-15 10282021/DUP

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 8:20

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	10/29/2021 17:08	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:08	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:08	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 17:08	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**103.3**	%REC	1	10/29/2021 17:08	184486
Surr: 4-Bromofluorobenzene	*	80-120		**97.6**	%REC	1	10/29/2021 17:08	184486
Surr: Toluene-d8	*	80-120		**96.6**	%REC	1	10/29/2021 17:08	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-011 **Client Sample ID:** MW-19 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 11:47

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	10/29/2021 20:49	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:49	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:49	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:49	184419
Zinc	NELAP	0.0100		**0.0105**	mg/L	1	10/29/2021 20:49	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/04/2021 6:53	184496
Surr: Decachlorobiphenyl	*	10-152		**78.5**	%REC	1	11/04/2021 6:53	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**123.4**	%REC	1	11/04/2021 6:53	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/02/2021 2:02	184485
Surr: 2-Fluorobiphenyl	*	1.39-137		**89.9**	%REC	1	11/02/2021 2:02	184485
Surr: Nitrobenzene-d5	*	29.1-125		**90.1**	%REC	1	11/02/2021 2:02	184485
Surr: p-Terphenyl-d14	*	35.2-164		**126.3**	%REC	1	11/02/2021 2:02	184485
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-011 **Client Sample ID:** MW-19 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 11:47

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	10/29/2021 17:35	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:35	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:35	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 17:35	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
Acetone	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 17:35	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 17:35	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 17:35	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 17:35	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 17:35	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 17:35	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-011 **Client Sample ID:** MW-19 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 11:47

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	10/29/2021 17:35	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 17:35	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 17:35	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 17:35	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 17:35	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 17:35	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**102.4**	%REC	1	10/29/2021 17:35	184486
Surr: 4-Bromofluorobenzene	*	80-120		**99.4**	%REC	1	10/29/2021 17:35	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-011 **Client Sample ID:** MW-19 10282021

Matrix: GROUNDWATER **Collection Date:** 10/28/2021 11:47

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		**97.1**	%REC	1	10/29/2021 17:35	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-012 **Client Sample ID:** MW-01 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 12:31

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	10/29/2021 17:25	184438
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 17:25	184438
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 17:25	184438
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 17:25	184438
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 17:25	184438
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	10/29/2021 20:53	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:53	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:53	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:53	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:53	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:25	184451
Surr: Decachlorobiphenyl	*	10-152		**91.1**	%REC	1	11/01/2021 18:25	184451
Surr: Tetrachloro-meta-xylene	*	9.73-128		**109.6**	%REC	1	11/01/2021 18:25	184451
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 18:34	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**34.6**	%REC	1	11/01/2021 18:34	184447
Surr: Nitrobenzene-d5	*	29.1-125		**63.2**	%REC	1	11/01/2021 18:34	184447
Surr: p-Terphenyl-d14	*	35.2-164		**102.5**	%REC	1	11/01/2021 18:34	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 18:02	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-012 **Client Sample ID:** MW-01 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 12:31

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	10/29/2021 18:02	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2-Butanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:02	184486
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:02	184486
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Acetone	NELAP	10.0		**18.2**	µg/L	1	10/29/2021 18:02	184486
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Acrolein	NELAP	20.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Benzene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 18:02	184486
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Bromoform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Bromomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Carbon tetrachloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Chlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Chloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Chloroform	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Chloromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-012 **Client Sample ID:** MW-01 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 12:31

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	10/29/2021 18:02	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 18:02	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Dibromomethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Diisopropyl ether	*	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Ethyl acetate	NELAP	10.0		ND	µg/L	1	10/29/2021 18:02	184486
Ethyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Ethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Hexachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Iodomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Methylacrylate	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Methylene chloride	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Naphthalene	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
n-Butyl acetate	*	2.0		ND	µg/L	1	10/29/2021 18:02	184486
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
n-Heptane	*	5.0		ND	µg/L	1	10/29/2021 18:02	184486
n-Hexane	*	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Nitrobenzene	NELAP	50.0		ND	µg/L	1	10/29/2021 18:02	184486
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
o-Xylene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Pentachloroethane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Propionitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 18:02	184486
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Styrene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	10/29/2021 18:02	184486
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	10/29/2021 18:02	184486
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	10/29/2021 18:02	184486
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	10/29/2021 18:02	184486
Toluene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486
Trichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:02	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-012 **Client Sample ID:** MW-01 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 12:31

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	10/29/2021 18:02	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 18:02	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**103.2**	%REC	1	10/29/2021 18:02	184486
Surr: 4-Bromofluorobenzene	*	80-120		**97.5**	%REC	1	10/29/2021 18:02	184486
Surr: Toluene-d8	*	80-120		**97.9**	%REC	1	10/29/2021 18:02	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-013 **Client Sample ID:** MW-02 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 13:37

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	10/29/2021 20:56	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:56	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:56	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:56	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:56	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/01/2021 18:43	184451
Surr: Decachlorobiphenyl	*	10-152		**95.7**	%REC	1	11/01/2021 18:43	184451
Surr: Tetrachloro-meta-xylene	*	9.73-128		**107.5**	%REC	1	11/01/2021 18:43	184451
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:13	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**42.0**	%REC	1	11/01/2021 19:13	184447
Surr: Nitrobenzene-d5	*	29.1-125		**66.3**	%REC	1	11/01/2021 19:13	184447
Surr: p-Terphenyl-d14	*	35.2-164		**106.7**	%REC	1	11/01/2021 19:13	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-013 **Client Sample ID:** MW-02 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 13:37

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	10/29/2021 18:28	184486
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	10/29/2021 18:28	184486
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	10/29/2021 18:28	184486
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	10/29/2021 18:28	184486
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
2-Butanone	NELAP	10.0		ND	µg/L	1	10/29/2021 18:28	184486
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
2-Hexanone	NELAP	10.0		ND	µg/L	1	10/29/2021 18:28	184486
2-Nitropropane	NELAP	10.0		ND	µg/L	1	10/29/2021 18:28	184486
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	10/29/2021 18:28	184486
Acetone	NELAP	10.0		13.5	µg/L	1	10/29/2021 18:28	184486
Acetonitrile	NELAP	10.0		ND	µg/L	1	10/29/2021 18:28	184486
Acrolein	NELAP	20.0		ND	µg/L	1	10/29/2021 18:28	184486
Acrylonitrile	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
Allyl chloride	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
Benzene	NELAP	0.5		ND	µg/L	1	10/29/2021 18:28	184486
Bromobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Bromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Bromoform	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Bromomethane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
Carbon disulfide	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Chlorobenzene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Chloroethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Chloroform	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Chloromethane	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
Chloroprene	NELAP	5.0		ND	µg/L	1	10/29/2021 18:28	184486
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486
Cyclohexanone	*	20.0		ND	µg/L	1	10/29/2021 18:28	184486
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	10/29/2021 18:28	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-013 **Client Sample ID:** MW-02 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 13:37

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	10/29/2021 18:28	184486
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Diisopropyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Iodomethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Naphthalene	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
n-Butyl acetate	*	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
n-Heptane	*	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
n-Hexane	*	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	10/29/2021 18:28	184486
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
o-Xylene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Propionitrile	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:28	184486
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Styrene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	10/29/2021 18:28	184486
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	10/29/2021 18:28	184486
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Toluene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	10/29/2021 18:28	184486
Surr: 1,2-Dichloroethane-d4	*	80-120		**104.1**	%REC	1	10/29/2021 18:28	184486
Surr: 4-Bromofluorobenzene	*	80-120		**97.6**	%REC	1	10/29/2021 18:28	184486

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-013 **Client Sample ID:** MW-02 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 13:37

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		**96.0**	%REC	1	10/29/2021 18:28	184486

LCS recovered outside upper control limits for 1,1-Dichloro-2-propanone, Ethyl acetate, Methylacrylate, Propionitrile & tert-Butyl alcohol. Sample results are below the reporting limit. Data is reportable per the TNI Standard.

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-014 **Client Sample ID:** MW-03 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 14:57

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	10/29/2021 21:00	184419
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 21:00	184419
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 21:00	184419
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 21:00	184419
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 21:00	184419
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:00	184451
Surr: Decachlorobiphenyl	*	10-152		**88.2**	%REC	1	11/01/2021 19:00	184451
Surr: Tetrachloro-meta-xylene	*	9.73-128		**101.4**	%REC	1	11/01/2021 19:00	184451
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 19:52	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**54.7**	%REC	1	11/01/2021 19:52	184447
Surr: Nitrobenzene-d5	*	29.1-125		**67.3**	%REC	1	11/01/2021 19:52	184447
Surr: p-Terphenyl-d14	*	35.2-164		**102.9**	%REC	1	11/01/2021 19:52	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-014 **Client Sample ID:** MW-03 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 14:57

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	11/01/2021 12:51	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 12:51	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 12:51	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 12:51	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
Acetone	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 12:51	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 12:51	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 12:51	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 12:51	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 12:51	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:51	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-014 **Client Sample ID:** MW-03 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 14:57

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	11/01/2021 12:51	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 12:51	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:51	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:51	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 12:51	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 12:51	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**100.6**	%REC	1	11/01/2021 12:51	184526
Surr: 4-Bromofluorobenzene	*	80-120		**101.9**	%REC	1	11/01/2021 12:51	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-014
Client Sample ID: MW-03 10252021
Matrix: GROUNDWATER
Collection Date: 10/25/2021 14:57

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		**99.0**	%REC	1	11/01/2021 12:51	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-015 **Client Sample ID:** MW-05 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 16:25

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	10/29/2021 20:46	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:46	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:46	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:46	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:46	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/01/2021 19:17	184451
Surr: Decachlorobiphenyl	*	10-152		**86.5**	%REC	1	11/01/2021 19:17	184451
Surr: Tetrachloro-meta-xylene	*	9.73-128		**107.2**	%REC	1	11/01/2021 19:17	184451
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 20:30	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**41.0**	%REC	1	11/01/2021 20:30	184447
Surr: Nitrobenzene-d5	*	29.1-125		**64.3**	%REC	1	11/01/2021 20:30	184447
Surr: p-Terphenyl-d14	*	35.2-164		**104.3**	%REC	1	11/01/2021 20:30	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-015 **Client Sample ID:** MW-05 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 16:25

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	11/01/2021 13:17	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 13:17	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 13:17	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 13:17	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
Acetone	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 13:17	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 13:17	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 13:17	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 13:17	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 13:17	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:17	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-015 **Client Sample ID:** MW-05 10252021

Matrix: GROUNDWATER **Collection Date:** 10/25/2021 16:25

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	11/01/2021 13:17	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 13:17	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:17	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:17	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 13:17	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 13:17	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**100.1**	%REC	1	11/01/2021 13:17	184526
Surr: 4-Bromofluorobenzene	*	80-120		**101.1**	%REC	1	11/01/2021 13:17	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-015
Client Sample ID: MW-05 10252021
Matrix: GROUNDWATER
Collection Date: 10/25/2021 16:25

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		**99.7**	%REC	1	11/01/2021 13:17	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-016 **Client Sample ID:** TB-01

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	11/01/2021 12:25	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2-Butanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:25	184526
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:25	184526
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Acetone	NELAP	10.0		**10.4**	µg/L	1	11/01/2021 12:25	184526
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Acrolein	NELAP	20.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Benzene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 12:25	184526
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Bromoform	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Bromomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-016 **Client Sample ID:** TB-01

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	11/01/2021 12:25	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 12:25	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Dibromomethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Diisopropyl ether	*	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Ethyl acetate	NELAP	10.0		ND	µg/L	1	11/01/2021 12:25	184526
Ethyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Ethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Hexachloroethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Iodomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Methylacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Methylene chloride	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Naphthalene	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
n-Butyl acetate	*	2.0		ND	µg/L	1	11/01/2021 12:25	184526
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
n-Heptane	*	5.0		ND	µg/L	1	11/01/2021 12:25	184526
n-Hexane	*	5.0		ND	µg/L	1	11/01/2021 12:25	184526
Nitrobenzene	NELAP	50.0		ND	µg/L	1	11/01/2021 12:25	184526
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
o-Xylene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Pentachloroethane	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Propionitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 12:25	184526
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Styrene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	11/01/2021 12:25	184526
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	11/01/2021 12:25	184526
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 12:25	184526
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	11/01/2021 12:25	184526
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	11/01/2021 12:25	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-016 **Client Sample ID:** TB-01

Matrix: TRIP BLANK **Collection Date:** 10/28/2021 13:14

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	11/01/2021 12:25	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 12:25	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**100.0**	%REC	1	11/01/2021 12:25	184526
Surr: 4-Bromofluorobenzene	*	80-120		**102.2**	%REC	1	11/01/2021 12:25	184526
Surr: Toluene-d8	*	80-120		**99.8**	%REC	1	11/01/2021 12:25	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-017 **Client Sample ID:** MW-04 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 8:50

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	10/29/2021 17:29	184438
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 17:29	184438
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 17:29	184438
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 17:29	184438
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 17:29	184438
SW-846 3005A, 6010B, METALS BY ICP (TOTAL)								
Antimony	NELAP	0.0500		**< 0.0500**	mg/L	1	10/29/2021 20:50	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:50	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:50	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:50	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:50	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 1:19	184496
Surr: Decachlorobiphenyl	*	10-152		**60.9**	%REC	1	11/02/2021 1:19	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**102.4**	%REC	1	11/02/2021 1:19	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 13:00	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**77.8**	%REC	1	11/01/2021 13:00	184447
Surr: Nitrobenzene-d5	*	29.1-125		**78.4**	%REC	1	11/01/2021 13:00	184447
Surr: p-Terphenyl-d14	*	35.2-164		**100.1**	%REC	1	11/01/2021 13:00	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 13:44	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-017 **Client Sample ID:** MW-04 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 8:50

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	11/01/2021 13:44	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2,3-Trimethylbenzene	*	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2,4-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2,4-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dibromoethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dichloroethene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,3,5-Trimethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,3-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,3-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,3-Dichloropropene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,4-Dichloro-2-butene, Total	*	4.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1,4-Dichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
1-Chlorobutane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2,2-Dichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2-Butanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2-Chloroethyl vinyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2-Hexanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:44	184526
2-Nitropropane	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:44	184526
4-Chlorotoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
4-Methyl-2-pentanone	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Acetone	NELAP	10.0		**18.0**	µg/L	1	11/01/2021 13:44	184526
Acetonitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Acrolein	NELAP	20.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Acrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Allyl chloride	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Benzene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 13:44	184526
Bromobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Bromochloromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Bromodichloromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Bromoform	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Bromomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Carbon disulfide	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Carbon tetrachloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Chlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Chloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Chloroform	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Chloromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-017 **Client Sample ID:** MW-04 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 8:50

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	11/01/2021 13:44	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 13:44	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Dibromomethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Diisopropyl ether	*	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Ethyl acetate	NELAP	10.0		ND	µg/L	1	11/01/2021 13:44	184526
Ethyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Ethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Hexachloroethane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Iodomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Methylacrylate	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Methylene chloride	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Naphthalene	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
n-Butyl acetate	*	2.0		ND	µg/L	1	11/01/2021 13:44	184526
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
n-Heptane	*	5.0		ND	µg/L	1	11/01/2021 13:44	184526
n-Hexane	*	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Nitrobenzene	NELAP	50.0		ND	µg/L	1	11/01/2021 13:44	184526
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
o-Xylene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Pentachloroethane	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Propionitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 13:44	184526
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Styrene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	11/01/2021 13:44	184526
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	11/01/2021 13:44	184526
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	11/01/2021 13:44	184526
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	11/01/2021 13:44	184526
Toluene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526
Trichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 13:44	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-017
Client Sample ID: MW-04 10262021
Matrix: GROUNDWATER
Collection Date: 10/26/2021 8:50

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	11/01/2021 13:44	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 13:44	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.0**	%REC	1	11/01/2021 13:44	184526
Surr: 4-Bromofluorobenzene	*	80-120		**100.7**	%REC	1	11/01/2021 13:44	184526
Surr: Toluene-d8	*	80-120		**99.1**	%REC	1	11/01/2021 13:44	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-018 **Client Sample ID:** MW-06 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 10:31

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	10/29/2021 20:48	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:48	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:48	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:48	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:48	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:11	184496
Surr: Decachlorobiphenyl	*	10-152		**78.6**	%REC	1	11/02/2021 2:11	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**102.1**	%REC	1	11/02/2021 2:11	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 14:52	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**68.0**	%REC	1	11/01/2021 14:52	184447
Surr: Nitrobenzene-d5	*	29.1-125		**69.5**	%REC	1	11/01/2021 14:52	184447
Surr: p-Terphenyl-d14	*	35.2-164		**92.4**	%REC	1	11/01/2021 14:52	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-018 **Client Sample ID:** MW-06 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 10:31

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	11/01/2021 15:02	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:02	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:02	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:02	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
Acetone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 15:02	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 15:02	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 15:02	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 15:02	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 15:02	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:02	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-018 **Client Sample ID:** MW-06 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 10:31

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	11/01/2021 15:02	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 15:02	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:02	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:02	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:02	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 15:02	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.8**	%REC	1	11/01/2021 15:02	184526
Surr: 4-Bromofluorobenzene	*	80-120		**101.7**	%REC	1	11/01/2021 15:02	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-018
Client Sample ID: MW-06 10262021
Matrix: GROUNDWATER
Collection Date: 10/26/2021 10:31

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		**99.2**	%REC	1	11/01/2021 15:02	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-019 **Client Sample ID:** MW-14 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 12:44

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	10/29/2021 20:55	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:55	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:55	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:55	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:55	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:28	184496
Surr: Decachlorobiphenyl	*	10-152		**104.0**	%REC	1	11/02/2021 2:28	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**122.8**	%REC	1	11/02/2021 2:28	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 15:29	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**63.2**	%REC	1	11/01/2021 15:29	184447
Surr: Nitrobenzene-d5	*	29.1-125		**69.7**	%REC	1	11/01/2021 15:29	184447
Surr: p-Terphenyl-d14	*	35.2-164		**98.3**	%REC	1	11/01/2021 15:29	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-019 **Client Sample ID:** MW-14 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 12:44

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	11/01/2021 15:28	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:28	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:28	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:28	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:28	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:28	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 15:28	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:28	184526
Acetone	NELAP	10.0		18.0	µg/L	1	11/01/2021 15:28	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 15:28	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 15:28	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 15:28	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 15:28	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 15:28	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:28	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-019 **Client Sample ID:** MW-14 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 12:44

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	11/01/2021 15:28	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 15:28	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:28	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:28	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:28	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 15:28	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**100.5**	%REC	1	11/01/2021 15:28	184526
Surr: 4-Bromofluorobenzene	*	80-120		**102.0**	%REC	1	11/01/2021 15:28	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-019
Client Sample ID: MW-14 10262021
Matrix: GROUNDWATER
Collection Date: 10/26/2021 12:44

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		**99.4**	%REC	1	11/01/2021 15:28	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-020 **Client Sample ID:** MW-18 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 14:11

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	10/29/2021 20:57	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:57	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:57	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:57	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:57	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**1.02**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 2:45	184496
Surr: Decachlorobiphenyl	*	10-152		**92.4**	%REC	1	11/02/2021 2:45	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**99.0**	%REC	1	11/02/2021 2:45	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:06	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**45.7**	%REC	1	11/01/2021 16:06	184447
Surr: Nitrobenzene-d5	*	29.1-125		**69.2**	%REC	1	11/01/2021 16:06	184447
Surr: p-Terphenyl-d14	*	35.2-164		**100.0**	%REC	1	11/01/2021 16:06	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-020 **Client Sample ID:** MW-18 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 14:11

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	11/01/2021 15:54	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:54	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:54	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 15:54	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:54	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:54	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 15:54	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 15:54	184526
Acetone	NELAP	10.0		21.9	µg/L	1	11/01/2021 15:54	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 15:54	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 15:54	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 15:54	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 15:54	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 15:54	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 15:54	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-020 **Client Sample ID:** MW-18 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 14:11

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	11/01/2021 15:54	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 15:54	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:54	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 15:54	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 15:54	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 15:54	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**102.1**	%REC	1	11/01/2021 15:54	184526
Surr: 4-Bromofluorobenzene	*	80-120		**101.8**	%REC	1	11/01/2021 15:54	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-020 **Client Sample ID:** MW-18 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 14:11

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		**98.3**	%REC	1	11/01/2021 15:54	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-021 **Client Sample ID:** MW-17 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 15:27

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	10/29/2021 20:58	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 20:58	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 20:58	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 20:58	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 20:58	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:02	184496
Surr: Decachlorobiphenyl	*	10-152		**105.3**	%REC	1	11/02/2021 3:02	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**89.9**	%REC	1	11/02/2021 3:02	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 16:43	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**55.4**	%REC	1	11/01/2021 16:43	184447
Surr: Nitrobenzene-d5	*	29.1-125		**73.4**	%REC	1	11/01/2021 16:43	184447
Surr: p-Terphenyl-d14	*	35.2-164		**104.8**	%REC	1	11/01/2021 16:43	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-021 **Client Sample ID:** MW-17 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 15:27

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	11/01/2021 16:21	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:21	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:21	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:21	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:21	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:21	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 16:21	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:21	184526
Acetone	NELAP	10.0		10.3	µg/L	1	11/01/2021 16:21	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 16:21	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 16:21	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 16:21	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 16:21	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 16:21	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:21	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-021 **Client Sample ID:** MW-17 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 15:27

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	11/01/2021 16:21	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 16:21	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:21	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:21	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 16:21	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 16:21	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.2**	%REC	1	11/01/2021 16:21	184526
Surr: 4-Bromofluorobenzene	*	80-120		**101.6**	%REC	1	11/01/2021 16:21	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-021
Client Sample ID: MW-17 10262021
Matrix: GROUNDWATER
Collection Date: 10/26/2021 15:27

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		**99.4**	%REC	1	11/01/2021 16:21	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-022 **Client Sample ID:** MW-10 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 16:32

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	10/29/2021 21:09	184420
Arsenic	NELAP	0.0250		**< 0.0250**	mg/L	1	10/29/2021 21:09	184420
Copper	NELAP	0.0050		**< 0.0050**	mg/L	1	10/29/2021 21:09	184420
Lead	NELAP	0.0150		**< 0.0150**	mg/L	1	10/29/2021 21:09	184420
Zinc	NELAP	0.0100		**< 0.0100**	mg/L	1	10/29/2021 21:09	184420
SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD								
Aroclor 1016	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1221	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1232	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1242	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1248	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1254	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Aroclor 1260	NELAP	1.00		**ND**	µg/L	1	11/02/2021 3:19	184496
Surr: Decachlorobiphenyl	*	10-152		**89.1**	%REC	1	11/02/2021 3:19	184496
Surr: Tetrachloro-meta-xylene	*	9.73-128		**96.2**	%REC	1	11/02/2021 3:19	184496
SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS								
Acenaphthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Acenaphthylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Benzo(a)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Benzo(a)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Benzo(b)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Benzo(g,h,i)perylene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Benzo(k)fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Chrysene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Dibenzo(a,h)anthracene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Fluoranthene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Fluorene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Naphthalene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Phenanthrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Pyrene	NELAP	0.00100		**ND**	mg/L	1	11/01/2021 17:20	184447
Surr: 2-Fluorobiphenyl	*	1.39-137		**71.7**	%REC	1	11/01/2021 17:20	184447
Surr: Nitrobenzene-d5	*	29.1-125		**74.0**	%REC	1	11/01/2021 17:20	184447
Surr: p-Terphenyl-d14	*	35.2-164		**98.5**	%REC	1	11/01/2021 17:20	184447
SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS								
1,1,1,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1,1-Trichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1,2,2-Tetrachloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1,2-Trichloroethane	NELAP	0.5		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1-Dichloro-2-propanone	NELAP	30.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1-Dichloroethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,1-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,2,3-Trichlorobenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
1,2,3-Trichloropropane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-022 **Client Sample ID:** MW-10 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 16:32

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	11/01/2021 16:47	184526
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:47	184526
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:47	184526
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	11/01/2021 16:47	184526
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
2-Butanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:47	184526
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
2-Hexanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:47	184526
2-Nitropropane	NELAP	10.0		ND	µg/L	1	11/01/2021 16:47	184526
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	11/01/2021 16:47	184526
Acetone	NELAP	10.0		20.7	µg/L	1	11/01/2021 16:47	184526
Acetonitrile	NELAP	10.0		ND	µg/L	1	11/01/2021 16:47	184526
Acrolein	NELAP	20.0		ND	µg/L	1	11/01/2021 16:47	184526
Acrylonitrile	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
Allyl chloride	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
Benzene	NELAP	0.5		ND	µg/L	1	11/01/2021 16:47	184526
Bromobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Bromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Bromoform	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Bromomethane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
Carbon disulfide	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Chlorobenzene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Chloroethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Chloroform	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Chloromethane	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
Chloroprene	NELAP	5.0		ND	µg/L	1	11/01/2021 16:47	184526
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526
Cyclohexanone	*	20.0		ND	µg/L	1	11/01/2021 16:47	184526
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	11/01/2021 16:47	184526

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Lab ID: 21101729-022 **Client Sample ID:** MW-10 10262021

Matrix: GROUNDWATER **Collection Date:** 10/26/2021 16:32

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	11/01/2021 16:47	184526
Dichlorodifluoromethane	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Diisopropyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Ethyl acetate	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Ethyl ether	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Ethyl methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Ethylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Ethyl-tert-butyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Hexachlorobutadiene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Hexachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Iodomethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Isopropylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
m,p-Xylenes	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Methacrylonitrile	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Methyl Methacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Methyl tert-butyl ether	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Methylacrylate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Methylene chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Naphthalene	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
n-Butyl acetate	*	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
n-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
n-Heptane	*	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
n-Hexane	*	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Nitrobenzene	NELAP	50.0		**ND**	µg/L	1	11/01/2021 16:47	184526
n-Propylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
o-Xylene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Pentachloroethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
p-Isopropyltoluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Propionitrile	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:47	184526
sec-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Styrene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
tert-Amyl methyl ether	*	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
tert-Butyl alcohol	NELAP	10.0		**ND**	µg/L	1	11/01/2021 16:47	184526
tert-Butylbenzene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Tetrachloroethene	NELAP	0.5		**ND**	µg/L	1	11/01/2021 16:47	184526
Tetrahydrofuran	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Toluene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
trans-1,2-Dichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
trans-1,3-Dichloropropene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
trans-1,4-Dichloro-2-butene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Trichloroethene	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Trichlorofluoromethane	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Vinyl acetate	NELAP	5.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Vinyl chloride	NELAP	2.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Xylenes, Total	NELAP	4.0		**ND**	µg/L	1	11/01/2021 16:47	184526
Surr: 1,2-Dichloroethane-d4	*	80-120		**101.4**	%REC	1	11/01/2021 16:47	184526
Surr: 4-Bromofluorobenzene	*	80-120		**102.3**	%REC	1	11/01/2021 16:47	184526

Client: Burns & McDonnell Waste Consultants
Work Order: 21101729
Client Project: BMCD KC GSA Goodfellow Groundwater
Report Date: 04-Nov-21
Lab ID: 21101729-022
Client Sample ID: MW-10 10262021
Matrix: GROUNDWATER
Collection Date: 10/26/2021 16:32

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		**98.8**	%REC	1	11/01/2021 16:47	184526

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

Work Order: 21101729
Report Date: 04-Nov-21

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21101729-001	MW-09 10272021	Groundwater	5	10/27/2021 9:10
21101729-002	MW-13 10272021	Groundwater	5	10/27/2021 10:46
21101729-003	MW-16 10272021	Groundwater	5	10/27/2021 12:20
21101729-004	MW-12 10272021	Groundwater	5	10/27/2021 14:00
21101729-005	MW-08 10272021	Groundwater	5	10/27/2021 15:22
21101729-006	TB-02	Trip Blank	1	10/28/2021 13:14
21101729-007	MW-15 10282021	Groundwater	5	10/28/2021 8:20
21101729-008	RINSE- 10282021	Groundwater	5	10/28/2021 8:55
21101729-009	MW-07 10282021	Groundwater	5	10/28/2021 10:04
21101729-010	MW-15 10282021/DUP	Groundwater	5	10/28/2021 8:20
21101729-011	MW-19 10282021	Groundwater	5	10/28/2021 11:47
21101729-012	MW-01 10252021	Groundwater	5	10/25/2021 12:31
21101729-013	MW-02 10252021	Groundwater	5	10/25/2021 13:37
21101729-014	MW-03 10252021	Groundwater	5	10/25/2021 14:57
21101729-015	MW-05 10252021	Groundwater	5	10/25/2021 16:25
21101729-016	TB-01	Trip Blank	1	10/28/2021 13:14
21101729-017	MW-04 10262021	Groundwater	5	10/26/2021 8:50
21101729-018	MW-06 10262021	Groundwater	5	10/26/2021 10:31
21101729-019	MW-14 10262021	Groundwater	5	10/26/2021 12:44
21101729-020	MW-18 10262021	Groundwater	5	10/26/2021 14:11
21101729-021	MW-17 10262021	Groundwater	5	10/26/2021 15:27
21101729-022	MW-10 10262021	Groundwater	5	10/26/2021 16:32

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
21101729-001A	MW-09 10272021	10/27/2021 9:10	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 3:08
21101729-001B	MW-09 10272021	10/27/2021 9:10	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/01/2021 17:57
21101729-001C	MW-09 10272021	10/27/2021 9:10	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:01
21101729-001D	MW-09 10272021	10/27/2021 9:10	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			10/29/2021 8:36	10/29/2021 16:59
21101729-001E	MW-09 10272021	10/27/2021 9:10	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 13:34
21101729-002A	MW-13 10272021	10/27/2021 10:46	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 3:26
21101729-002B	MW-13 10272021	10/27/2021 10:46	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/02/2021 8:08
21101729-002C	MW-13 10272021	10/27/2021 10:46	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:04
21101729-002E	MW-13 10272021	10/27/2021 10:46	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 14:00
21101729-003A	MW-16 10272021	10/27/2021 12:20	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 4:52
21101729-003B	MW-16 10272021	10/27/2021 12:20	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/02/2021 8:47
21101729-003C	MW-16 10272021	10/27/2021 12:20	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:08
21101729-003E	MW-16 10272021	10/27/2021 12:20	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 14:27
21101729-004A	MW-12 10272021	10/27/2021 14:00	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 5:09
21101729-004B	MW-12 10272021	10/27/2021 14:00	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/01/2021 19:49
21101729-004C	MW-12 10272021	10/27/2021 14:00	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:12
21101729-004E	MW-12 10272021	10/27/2021 14:00	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 14:53
21101729-005A	MW-08 10272021	10/27/2021 15:22	10/28/2021 13:14		

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

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			11/02/2021 12:00	11/04/2021 5:26
21101729-005B	MW-08 10272021	10/27/2021 15:22	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/01/2021 20:26
21101729-005C	MW-08 10272021	10/27/2021 15:22	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:16
21101729-005E	MW-08 10272021	10/27/2021 15:22	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 15:20
21101729-006A	TB-02	10/28/2021 13:14	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 12:14
21101729-007A	MW-15 10282021	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 5:44
21101729-007B	MW-15 10282021	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/01/2021 23:33
21101729-007C	MW-15 10282021	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:19
21101729-007D	MW-15 10282021	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			10/29/2021 8:36	10/29/2021 17:03
21101729-007E	MW-15 10282021	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 15:48
21101729-008A	RINSE- 10282021	10/28/2021 8:55	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 6:01
21101729-008B	RINSE- 10282021	10/28/2021 8:55	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 11:00	11/02/2021 0:10
21101729-008C	RINSE- 10282021	10/28/2021 8:55	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:38
21101729-008E	RINSE- 10282021	10/28/2021 8:55	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 16:15
21101729-009A	MW-07 10282021	10/28/2021 10:04	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 6:18
21101729-009B	MW-07 10282021	10/28/2021 10:04	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/02/2021 0:47
21101729-009C	MW-07 10282021	10/28/2021 10:04	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:42
21101729-009E	MW-07 10282021	10/28/2021 10:04	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 16:42

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
21101729-010A	MW-15 10282021/DUP	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 6:35
21101729-010B	MW-15 10282021/DUP	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/02/2021 1:25
21101729-010C	MW-15 10282021/DUP	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:45
21101729-010D	MW-15 10282021/DUP	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			10/29/2021 8:36	10/29/2021 17:06
21101729-010E	MW-15 10282021/DUP	10/28/2021 8:20	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 17:08
21101729-011A	MW-19 10282021	10/28/2021 11:47	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/02/2021 12:00	11/04/2021 6:53
21101729-011B	MW-19 10282021	10/28/2021 11:47	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			11/01/2021 9:03	11/02/2021 2:02
21101729-011C	MW-19 10282021	10/28/2021 11:47	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:49
21101729-011E	MW-19 10282021	10/28/2021 11:47	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 17:35
21101729-012A	MW-01 10252021	10/25/2021 12:31	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			10/29/2021 13:52	11/01/2021 18:25
21101729-012B	MW-01 10252021	10/25/2021 12:31	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 18:34
21101729-012C	MW-01 10252021	10/25/2021 12:31	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:53
21101729-012D	MW-01 10252021	10/25/2021 12:31	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			10/29/2021 8:36	10/29/2021 17:25
21101729-012E	MW-01 10252021	10/25/2021 12:31	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 18:02
21101729-013A	MW-02 10252021	10/25/2021 13:37	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			10/29/2021 13:52	11/01/2021 18:43
21101729-013B	MW-02 10252021	10/25/2021 13:37	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 19:13
21101729-013C	MW-02 10252021	10/25/2021 13:37	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 20:56
21101729-013E	MW-02 10252021	10/25/2021 13:37	10/28/2021 13:14		

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				10/29/2021 18:28
21101729-014A	MW-03 10252021	10/25/2021 14:57	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			10/29/2021 13:52	11/01/2021 19:00
21101729-014B	MW-03 10252021	10/25/2021 14:57	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 19:52
21101729-014C	MW-03 10252021	10/25/2021 14:57	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:11	10/29/2021 21:00
21101729-014E	MW-03 10252021	10/25/2021 14:57	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 12:51
21101729-015A	MW-05 10252021	10/25/2021 16:25	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			10/29/2021 13:52	11/01/2021 19:17
21101729-015B	MW-05 10252021	10/25/2021 16:25	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 20:30
21101729-015C	MW-05 10252021	10/25/2021 16:25	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:46
21101729-015E	MW-05 10252021	10/25/2021 16:25	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 13:17
21101729-016A	TB-01	10/28/2021 13:14	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 12:25
21101729-017A	MW-04 10262021	10/26/2021 8:50	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 1:19
21101729-017B	MW-04 10262021	10/26/2021 8:50	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 13:00
21101729-017C	MW-04 10262021	10/26/2021 8:50	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:50
21101729-017D	MW-04 10262021	10/26/2021 8:50	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			10/29/2021 8:36	10/29/2021 17:29
21101729-017E	MW-04 10262021	10/26/2021 8:50	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 13:44
21101729-018A	MW-06 10262021	10/26/2021 10:31	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 2:11
21101729-018B	MW-06 10262021	10/26/2021 10:31	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 14:52
21101729-018C	MW-06 10262021	10/26/2021 10:31	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:48

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

Sample ID	Client Sample ID	Collection Date	Received Date		
	Test Name			Prep Date/Time	Analysis Date/Time
21101729-018E	MW-06 10262021	10/26/2021 10:31	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 15:02
21101729-019A	MW-14 10262021	10/26/2021 12:44	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 2:28
21101729-019B	MW-14 10262021	10/26/2021 12:44	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 15:29
21101729-019C	MW-14 10262021	10/26/2021 12:44	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:55
21101729-019E	MW-14 10262021	10/26/2021 12:44	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 15:28
21101729-020A	MW-18 10262021	10/26/2021 14:11	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 2:45
21101729-020B	MW-18 10262021	10/26/2021 14:11	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 16:06
21101729-020C	MW-18 10262021	10/26/2021 14:11	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:57
21101729-020E	MW-18 10262021	10/26/2021 14:11	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 15:54
21101729-021A	MW-17 10262021	10/26/2021 15:27	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 3:02
21101729-021B	MW-17 10262021	10/26/2021 15:27	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 16:43
21101729-021C	MW-17 10262021	10/26/2021 15:27	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 20:58
21101729-021E	MW-17 10262021	10/26/2021 15:27	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 16:21
21101729-022A	MW-10 10262021	10/26/2021 16:32	10/28/2021 13:14		
	SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD			11/01/2021 12:13	11/02/2021 3:19
21101729-022B	MW-10 10262021	10/26/2021 16:32	10/28/2021 13:14		
	SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS			10/29/2021 11:15	11/01/2021 17:20
21101729-022C	MW-10 10262021	10/26/2021 16:32	10/28/2021 13:14		
	SW-846 3005A, 6010B, Metals by ICP (Total)			10/28/2021 15:14	10/29/2021 21:09
21101729-022E	MW-10 10262021	10/26/2021 16:32	10/28/2021 13:14		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				11/01/2021 16:47

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)

Batch 184438 **SampType:** MBLK Units **mg/L**

SampID: MBLK-184438

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	10/29/2021
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	10/29/2021
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	10/29/2021
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	10/29/2021
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	10/29/2021

Batch 184438 **SampType:** LCS Units **mg/L**

SampID: LCS-184438

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.426**	0.5000	0	85.1	85	115	10/29/2021
Arsenic		0.0250		**0.470**	0.5000	0	93.9	85	115	10/29/2021
Copper		0.0050		**0.235**	0.2500	0	94.0	85	115	10/29/2021
Lead		0.0150		**0.461**	0.5000	0	92.2	85	115	10/29/2021
Zinc		0.0100		**0.463**	0.5000	0	92.6	85	115	10/29/2021

Batch 184438 **SampType:** MS Units **mg/L**

SampID: 21101729-017DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.452**	0.5000	0	90.4	75	125	10/29/2021
Arsenic		0.0250		**0.481**	0.5000	0	96.3	75	125	10/29/2021
Copper		0.0050		**0.240**	0.2500	0	96.0	75	125	10/29/2021
Lead		0.0150		**0.463**	0.5000	0	92.5	75	125	10/29/2021
Zinc		0.0100		**0.468**	0.5000	0	93.6	75	125	10/29/2021

Batch 184438 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 21101729-017DMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.442**	0.5000	0	88.3	0.4518	2.28	10/29/2021
Arsenic		0.0250		**0.481**	0.5000	0	96.1	0.4813	0.15	10/29/2021
Copper		0.0050		**0.233**	0.2500	0	93.4	0.2400	2.79	10/29/2021
Lead		0.0150		**0.448**	0.5000	0	89.6	0.4626	3.18	10/29/2021
Zinc		0.0100		**0.456**	0.5000	0	91.2	0.4680	2.55	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 184419 **SampType:** MBLK Units **mg/L**

SampID: MBLK-184419

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	10/29/2021
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	10/29/2021
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	10/29/2021
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	10/29/2021
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	10/29/2021

Batch 184419 **SampType:** LCS Units **mg/L**

SampID: LCS-184419

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.496**	0.5000	0	99.2	85	115	10/29/2021
Arsenic		0.0250		**0.531**	0.5000	0	106.2	85	115	10/29/2021
Copper		0.0050		**0.261**	0.2500	0	104.3	85	115	10/29/2021
Lead		0.0150		**0.506**	0.5000	0	101.2	85	115	10/29/2021
Zinc		0.0100		**0.512**	0.5000	0	102.3	85	115	10/29/2021

Batch 184420 **SampType:** MBLK Units **mg/L**

SampID: MBLK-184420

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	10/29/2021
Arsenic		0.0250		**< 0.0250**	0.0087	0	0	-100	100	10/29/2021
Copper		0.0050		**< 0.0050**	0.0013	0	0	-100	100	10/29/2021
Lead		0.0150		**< 0.0150**	0.0014	0	0	-100	100	10/29/2021
Zinc		0.0100		**< 0.0100**	0.0050	0	0	-100	100	10/29/2021

Batch 184420 **SampType:** LCS Units **mg/L**

SampID: LCS-184420

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.533**	0.5000	0	106.7	85	115	10/29/2021
Arsenic		0.0250		**0.561**	0.5000	0	112.2	85	115	10/29/2021
Copper		0.0050		**0.274**	0.2500	0	109.8	85	115	10/29/2021
Lead		0.0150		**0.543**	0.5000	0	108.5	85	115	10/29/2021
Zinc		0.0100		**0.552**	0.5000	0	110.4	85	115	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3005A, 6010B, METALS BY ICP (TOTAL)

Batch 184420 **SampType:** MS Units **mg/L**

SampID: 21101729-017CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		**0.522**	0.5000	0	104.4	75	125	10/29/2021
Arsenic		0.0250		**0.552**	0.5000	0	110.3	75	125	10/29/2021
Copper		0.0050		**0.265**	0.2500	0	106.0	75	125	10/29/2021
Lead		0.0150		**0.523**	0.5000	0.008100	103.0	75	125	10/29/2021
Zinc		0.0100		**0.541**	0.5000	0	108.3	75	125	10/29/2021

Batch 184420 **SampType:** MSD Units **mg/L** RPD Limit **20**

SampID: 21101729-017CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		**0.526**	0.5000	0	105.2	0.5218	0.80	10/29/2021
Arsenic		0.0250		**0.558**	0.5000	0	111.6	0.5515	1.19	10/29/2021
Copper		0.0050		**0.272**	0.2500	0	108.8	0.2650	2.57	10/29/2021
Lead		0.0150		**0.526**	0.5000	0.008100	103.6	0.5232	0.51	10/29/2021
Zinc		0.0100		**0.548**	0.5000	0	109.6	0.5414	1.25	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 184451 **SampType:** MBLK Units µg/L

SampID: MBLK-184451

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**ND**						11/01/2021
Aroclor 1016		0.095		**ND**						11/01/2021
Aroclor 1221		0.095		**ND**						11/01/2021
Aroclor 1221		1.00		**ND**						11/01/2021
Aroclor 1232		0.095		**ND**						11/01/2021
Aroclor 1232		1.00		**ND**						11/01/2021
Aroclor 1242		0.095		**ND**						11/01/2021
Aroclor 1242		1.00		**ND**						11/01/2021
Aroclor 1248		0.095		**ND**						11/01/2021
Aroclor 1248		1.00		**ND**						11/01/2021
Aroclor 1254		0.095		**ND**						11/01/2021
Aroclor 1254		1.00		**ND**						11/01/2021
Aroclor 1260		0.095		**ND**						11/01/2021
Aroclor 1260		1.00		**ND**						11/01/2021
Surr: Decachlorobiphenyl	*			**0.08**	0.1250		64.5	27.5	143	11/01/2021
Surr: Decachlorobiphenyl	*			**0.081**	0.1250		64.5	31.2	141	11/01/2021
Surr: Decachlorobiphenyl	*			**0.084**	0.1250		66.9	31.2	141	11/01/2021
Surr: Tetrachloro-meta-xylene	*			**0.13**	0.1250		101.8	35.2	135	11/01/2021

Batch 184451 **SampType:** LCS Units µg/L

SampID: LCSPCB-184451

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**2.62**	2.500	0	104.6	56.2	136	11/01/2021
Aroclor 1016		0.095		**2.62**	2.500	0	104.6	50	140	11/01/2021
Aroclor 1260		1.00		**1.84**	2.500	0	73.5	42.1	125	11/01/2021
Aroclor 1260		0.095		**1.84**	2.500	0	73.5	8	140	11/01/2021
Surr: Decachlorobiphenyl	*			**0.078**	0.1250		62.7	31.2	141	11/01/2021
Surr: Decachlorobiphenyl	*			**0.08**	0.1250		62.7	27.5	143	11/01/2021
Surr: Tetrachloro-meta-xylene	*			**0.12**	0.1250		93.1	35.2	135	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 184451 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSPCBD-184451

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		1.00		**2.82**	2.500	0	112.8	2.616	7.50	11/01/2021
Aroclor 1016		0.095		**2.82**	2.500	0	112.8	2.616	7.50	11/01/2021
Aroclor 1260		0.095		**2.37**	2.500	0	94.6	1.838	25.11	11/01/2021
Aroclor 1260		1.00		**2.37**	2.500	0	94.6	1.838	25.11	11/01/2021
Surr: Decachlorobiphenyl	*			**0.108**	0.1250		86.2			11/01/2021
Surr: Decachlorobiphenyl	*			**0.11**	0.1250		86.2			11/01/2021
Surr: Tetrachloro-meta-xylene	*			**0.13**	0.1250		102.4			11/01/2021

Batch 184451 **SampType:** LCS Units %REC

SampID: LCSPST-184451

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.114**	0.1250		91.3	31.2	141	11/01/2021

Batch 184451 **SampType:** LCSD Units %REC RPD Limit 0

SampID: LCSPSTD-184451

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: Decachlorobiphenyl	*			**0.111**	0.1250		88.5			11/01/2021

Batch 184496 **SampType:** MBLK Units µg/L

SampID: MBLK-184496

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**ND**						11/02/2021
Aroclor 1221		1.00		**ND**						11/02/2021
Aroclor 1232		1.00		**ND**						11/02/2021
Aroclor 1242		1.00		**ND**						11/02/2021
Aroclor 1248		1.00		**ND**						11/02/2021
Aroclor 1254		1.00		**ND**						11/02/2021
Aroclor 1260		1.00		**ND**						11/02/2021
Surr: Decachlorobiphenyl	*			**0.12**	0.1250		95.9	27.5	143	11/02/2021
Surr: Tetrachloro-meta-xylene	*			**0.16**	0.1250		124.6	35.2	135	11/02/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD

Batch 184496 **SampType:** LCS Units µg/L

SampID: LCSPCB-184496

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**2.65**	2.500	0	105.9	56.2	136	11/02/2021
Aroclor 1260		1.00		**2.30**	2.500	0	92.2	42.1	125	11/02/2021
Surr: Decachlorobiphenyl	*			**0.10**	0.1250		80.9	27.5	143	11/02/2021
Surr: Tetrachloro-meta-xylene	*			**0.12**	0.1250		99.2	35.2	135	11/02/2021

Batch 184496 **SampType:** LCSD Units µg/L RPD Limit 40

SampID: LCSPCBD-184496

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		1.00		**2.89**	2.500	0	115.8	2.647	8.94	11/02/2021
Aroclor 1260		1.00		**2.48**	2.500	0	99.2	2.304	7.36	11/02/2021
Surr: Decachlorobiphenyl	*			**0.10**	0.1250		77.5			11/02/2021
Surr: Tetrachloro-meta-xylene	*			**0.14**	0.1250		110.4			11/02/2021

Batch 184496 **SampType:** MS Units µg/L

SampID: 21101729-017AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		**3.02**	2.500	0	120.6	51	130	11/02/2021
Aroclor 1260		1.00		**2.49**	2.500	0	99.7	38.4	123	11/02/2021
Surr: Decachlorobiphenyl	*			**0.10**	0.1250		83.1	10	152	11/02/2021
Surr: Tetrachloro-meta-xylene	*			**0.14**	0.1250		109.1	9.73	128	11/02/2021

Batch 184496 **SampType:** MSD Units µg/L RPD Limit 40

SampID: 21101729-017AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Aroclor 1016		1.00		**2.94**	2.500	0	117.6	3.016	2.55	11/02/2021
Aroclor 1260		1.00		**2.32**	2.500	0	92.9	2.492	7.06	11/02/2021
Surr: Decachlorobiphenyl	*			**0.10**	0.1250		77.0			11/02/2021
Surr: Tetrachloro-meta-xylene	*			**0.14**	0.1250		110.6			11/02/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184447 **SampType:** MBLK Units **mg/L**

SampID: MBLK-184447

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**ND**						11/01/2021
Acenaphthylene		0.00100		**ND**						11/01/2021
Anthracene		0.00100		**ND**						11/01/2021
Benzo(a)anthracene		0.00100		**ND**						11/01/2021
Benzo(a)pyrene		0.00100		**ND**						11/01/2021
Benzo(b)fluoranthene		0.00100		**ND**						11/01/2021
Benzo(g,h,i)perylene		0.00100		**ND**						11/01/2021
Benzo(k)fluoranthene		0.00100		**ND**						11/01/2021
Chrysene		0.00100		**ND**						11/01/2021
Dibenzo(a,h)anthracene		0.00100		**ND**						11/01/2021
Fluoranthene		0.00100		**ND**						11/01/2021
Fluorene		0.00100		**ND**						11/01/2021
Indeno(1,2,3-cd)pyrene		0.00100		**ND**						11/01/2021
Naphthalene		0.00100		**ND**						11/01/2021
Phenanthrene		0.00100		**ND**						11/01/2021
Pyrene		0.00100		**ND**						11/01/2021
Surr: 2-Fluorobiphenyl	*			**0.00624**	0.0125		49.9	1.09	175	11/01/2021
Surr: Nitrobenzene-d5	*			**0.00917**	0.0125		73.4	35.5	156	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0143**	0.0125		114.0	35	222	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184447 **SampType:** LCS Units **mg/L**

SampID: LCS-184447

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**0.00727**	0.0100	0	72.7	39.6	145	11/01/2021
Acenaphthylene		0.00100		**0.00742**	0.0100	0	74.2	38.3	147	11/01/2021
Anthracene		0.00100		**0.00767**	0.0100	0	76.7	47.7	153	11/01/2021
Benzo(a)anthracene		0.00100		**0.00878**	0.0100	0	87.8	45	136	11/01/2021
Benzo(a)pyrene		0.00100		**0.00726**	0.0100	0	72.6	49.8	164	11/01/2021
Benzo(b)fluoranthene		0.00100		**0.00842**	0.0100	0	84.2	45.7	167	11/01/2021
Benzo(g,h,i)perylene		0.00100		**0.00802**	0.0100	0	80.2	41	157	11/01/2021
Benzo(k)fluoranthene		0.00100		**0.00885**	0.0100	0	88.5	46.7	166	11/01/2021
Chrysene		0.00100		**0.00889**	0.0100	0	88.9	45.5	162	11/01/2021
Dibenzo(a,h)anthracene		0.00100		**0.00790**	0.0100	0	79.0	40.4	154	11/01/2021
Fluoranthene		0.00100		**0.00871**	0.0100	0	87.1	47.3	168	11/01/2021
Fluorene		0.00100		**0.00796**	0.0100	0	79.6	45.2	153	11/01/2021
Indeno(1,2,3-cd)pyrene		0.00100		**0.00806**	0.0100	0	80.6	44.6	166	11/01/2021
Naphthalene		0.00100		**0.00663**	0.0100	0	66.3	16.6	137	11/01/2021
Phenanthrene		0.00100		**0.00805**	0.0100	0	80.5	50.8	149	11/01/2021
Pyrene		0.00100		**0.00862**	0.0100	0	86.2	44.9	163	11/01/2021
Surr: 2-Fluorobiphenyl	*			**0.00606**	0.0125		48.5	1.09	175	11/01/2021
Surr: Nitrobenzene-d5	*			**0.00827**	0.0125		66.2	35.5	156	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0134**	0.0125		106.8	35	222	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184447 **SampType:** LCSD Units **mg/L** RPD Limit **40**

SampID: LCSD-184447

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		**0.00689**	0.0100	0	68.9	0.007274	5.41	11/01/2021
Acenaphthylene		0.00100		**0.00681**	0.0100	0	68.1	0.007418	8.60	11/01/2021
Anthracene		0.00100		**0.00744**	0.0100	0	74.4	0.007674	3.06	11/01/2021
Benzo(a)anthracene		0.00100		**0.00874**	0.0100	0	87.4	0.008780	0.51	11/01/2021
Benzo(a)pyrene		0.00100		**0.00727**	0.0100	0	72.7	0.007264	0.11	11/01/2021
Benzo(b)fluoranthene		0.00100		**0.00827**	0.0100	0	82.7	0.008422	1.83	11/01/2021
Benzo(g,h,i)perylene		0.00100		**0.00764**	0.0100	0	76.4	0.008018	4.84	11/01/2021
Benzo(k)fluoranthene		0.00100		**0.00850**	0.0100	0	85.0	0.008846	4.00	11/01/2021
Chrysene		0.00100		**0.00901**	0.0100	0	90.1	0.008892	1.36	11/01/2021
Dibenzo(a,h)anthracene		0.00100		**0.00766**	0.0100	0	76.6	0.007902	3.10	11/01/2021
Fluoranthene		0.00100		**0.00852**	0.0100	0	85.2	0.008706	2.21	11/01/2021
Fluorene		0.00100		**0.00753**	0.0100	0	75.3	0.007960	5.58	11/01/2021
Indeno(1,2,3-cd)pyrene		0.00100		**0.00787**	0.0100	0	78.7	0.008057	2.40	11/01/2021
Naphthalene		0.00100		**0.00595**	0.0100	0	59.5	0.006630	10.82	11/01/2021
Phenanthrene		0.00100		**0.00793**	0.0100	0	79.3	0.008048	1.50	11/01/2021
Pyrene		0.00100		**0.00854**	0.0100	0	85.4	0.008622	0.99	11/01/2021
Surr: 2-Fluorobiphenyl	*			**0.00670**	0.0125		53.6			11/01/2021
Surr: Nitrobenzene-d5	*			**0.00796**	0.0125		63.7			11/01/2021
Surr: p-Terphenyl-d14	*			**0.0130**	0.0125		103.9			11/01/2021

Batch 184447 **SampType:** LCSG Units **%REC**

SampID: LCSG-184447

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.00947**	0.0125		75.8	1.09	175	11/01/2021
Surr: Nitrobenzene-d5	*			**0.00909**	0.0125		72.8	35.5	156	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0140**	0.0125		111.9	35	222	11/01/2021

Batch 184447 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-184447

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0101**	0.0125		80.4			11/01/2021
Surr: Nitrobenzene-d5	*			**0.00872**	0.0125		69.7			11/01/2021
Surr: p-Terphenyl-d14	*			**0.0131**	0.0125		104.7			11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184447 **SampType:** MS Units **%REC**

SampID: 21101729-017BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.00908**	0.0125		72.6	1.39	137	11/01/2021
Surr: Nitrobenzene-d5	*			**0.00870**	0.0125		69.6	29.1	125	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0129**	0.0125		103.4	35.2	164	11/01/2021

Batch 184447 **SampType:** MSD Units **%REC** RPD Limit **0**

SampID: 21101729-017BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.00994**	0.0125		79.5			11/01/2021
Surr: Nitrobenzene-d5	*			**0.00948**	0.0125		75.8			11/01/2021
Surr: p-Terphenyl-d14	*			**0.0135**	0.0125		107.9			11/01/2021

Batch 184485 **SampType:** MBLK Units **mg/L**

SampID: MBLK-184485

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**ND**						11/01/2021
Acenaphthylene		0.00100		**ND**						11/01/2021
Anthracene		0.00100		**ND**						11/01/2021
Benzo(a)anthracene		0.00100		**ND**						11/01/2021
Benzo(a)pyrene		0.00100		**ND**						11/01/2021
Benzo(b)fluoranthene		0.00100		**ND**						11/01/2021
Benzo(g,h,i)perylene		0.00100		**ND**						11/01/2021
Benzo(k)fluoranthene		0.00100		**ND**						11/01/2021
Chrysene		0.00100		**ND**						11/01/2021
Dibenzo(a,h)anthracene		0.00100		**ND**						11/01/2021
Fluoranthene		0.00100		**ND**						11/01/2021
Fluorene		0.00100		**ND**						11/01/2021
Indeno(1,2,3-cd)pyrene		0.00100		**ND**						11/01/2021
Naphthalene		0.00100		**ND**						11/01/2021
Phenanthrene		0.00100		**ND**						11/01/2021
Pyrene		0.00100		**ND**						11/01/2021
Surr: 2-Fluorobiphenyl	*			**0.00941**	0.0125		75.3	1.09	175	11/01/2021
Surr: Nitrobenzene-d5	*			**0.0115**	0.0125		92.1	35.5	156	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0173**	0.0125		138.2	35	222	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184485 **SampType:** LCS Units **mg/L**

SampID: LCS-184485

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		**0.00788**	0.0100	0	78.8	39.6	145	11/01/2021
Acenaphthylene		0.00100		**0.00830**	0.0100	0	83.0	38.3	147	11/01/2021
Anthracene		0.00100		**0.00925**	0.0100	0	92.5	47.7	153	11/01/2021
Benzo(a)anthracene		0.00100		**0.0106**	0.0100	0	106.5	45	136	11/01/2021
Benzo(a)pyrene		0.00100		**0.00942**	0.0100	0	94.2	49.8	164	11/01/2021
Benzo(b)fluoranthene		0.00100		**0.0121**	0.0100	0	121.2	45.7	167	11/01/2021
Benzo(g,h,i)perylene		0.00100		**0.0108**	0.0100	0	107.8	41	157	11/01/2021
Benzo(k)fluoranthene		0.00100		**0.0123**	0.0100	0	123.4	46.7	166	11/01/2021
Chrysene		0.00100		**0.0110**	0.0100	0	110.1	45.5	162	11/01/2021
Dibenzo(a,h)anthracene		0.00100		**0.0103**	0.0100	0	103.2	40.4	154	11/01/2021
Fluoranthene		0.00100		**0.0123**	0.0100	0	123.0	47.3	168	11/01/2021
Fluorene		0.00100		**0.00865**	0.0100	0	86.5	45.2	153	11/01/2021
Indeno(1,2,3-cd)pyrene		0.00100		**0.0105**	0.0100	0	105.4	44.6	166	11/01/2021
Naphthalene		0.00100		**0.00617**	0.0100	0	61.7	16.6	137	11/01/2021
Phenanthrene		0.00100		**0.00967**	0.0100	0	96.7	50.8	149	11/01/2021
Pyrene		0.00100		**0.0123**	0.0100	0	122.9	44.9	163	11/01/2021
Surr: 2-Fluorobiphenyl	*			**0.0118**	0.0125		94.1	1.09	175	11/01/2021
Surr: Nitrobenzene-d5	*			**0.0107**	0.0125		85.8	35.5	156	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0190**	0.0125		151.9	35	222	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184485 **SampType:** LCSD Units **mg/L** RPD Limit **40**

SampID: LCSD-184485

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		**0.00854**	0.0100	0	85.4	0.007878	8.05	11/02/2021
Acenaphthylene		0.00100		**0.00826**	0.0100	0	82.6	0.008301	0.49	11/02/2021
Anthracene		0.00100		**0.00950**	0.0100	0	95.0	0.009248	2.67	11/02/2021
Benzo(a)anthracene		0.00100		**0.0110**	0.0100	0	109.6	0.01065	2.91	11/02/2021
Benzo(a)pyrene		0.00100		**0.00917**	0.0100	0	91.7	0.009422	2.77	11/02/2021
Benzo(b)fluoranthene		0.00100		**0.0105**	0.0100	0	105.4	0.01212	13.96	11/02/2021
Benzo(g,h,i)perylene		0.00100		**0.00989**	0.0100	0	98.9	0.01078	8.64	11/02/2021
Benzo(k)fluoranthene		0.00100		**0.0108**	0.0100	0	107.6	0.01234	13.75	11/02/2021
Chrysene		0.00100		**0.0111**	0.0100	0	110.9	0.01101	0.68	11/02/2021
Dibenzo(a,h)anthracene		0.00100		**0.00989**	0.0100	0	98.9	0.01032	4.25	11/02/2021
Fluoranthene		0.00100		**0.0107**	0.0100	0	107.4	0.01230	13.53	11/02/2021
Fluorene		0.00100		**0.00988**	0.0100	0	98.8	0.008652	13.30	11/02/2021
Indeno(1,2,3-cd)pyrene		0.00100		**0.00987**	0.0100	0	98.7	0.01054	6.62	11/02/2021
Naphthalene		0.00100		**0.00567**	0.0100	0	56.7	0.006168	8.41	11/02/2021
Phenanthrene		0.00100		**0.0100**	0.0100	0	100.5	0.009666	3.85	11/02/2021
Pyrene		0.00100		**0.0106**	0.0100	0	105.8	0.01229	14.87	11/02/2021
Surr: 2-Fluorobiphenyl	*			**0.0114**	0.0125		91.2			11/02/2021
Surr: Nitrobenzene-d5	*			**0.0108**	0.0125		86.7			11/02/2021
Surr: p-Terphenyl-d14	*			**0.0164**	0.0125		131.4			11/02/2021

Batch 184485 **SampType:** LCSG Units **%REC**

SampID: LCSG-184485

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0127**	0.0125		101.3	1.09	175	11/02/2021
Surr: Nitrobenzene-d5	*			**0.0107**	0.0125		85.5	35.5	156	11/02/2021
Surr: p-Terphenyl-d14	*			**0.0165**	0.0125		132.2	35	222	11/02/2021

Batch 184485 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-184485

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0119**	0.0125		95.0			11/02/2021
Surr: Nitrobenzene-d5	*			**0.0112**	0.0125		89.8			11/02/2021
Surr: p-Terphenyl-d14	*			**0.0170**	0.0125		135.7			11/02/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184485 **SampType:** MS Units **%REC**

SampID: 21101729-001BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0115**	0.0125		92.4	1.39	137	11/01/2021
Surr: Nitrobenzene-d5	*			**0.0111**	0.0125		88.8	29.1	125	11/01/2021
Surr: p-Terphenyl-d14	*			**0.0155**	0.0125		123.8	35.2	164	11/01/2021

Batch 184485 **SampType:** MSD Units **%REC** RPD Limit **0**

SampID: 21101729-001BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 2-Fluorobiphenyl	*			**0.0141**	0.0125		112.8			11/01/2021
Surr: Nitrobenzene-d5	*			**0.0136**	0.0125		109.1			11/01/2021
Surr: p-Terphenyl-d14	*			**0.0188**	0.0125		150.8			11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** MBLK Units µg/L

SampID: MBLK-AE211029A-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**						10/29/2021
1,1,1-Trichloroethane	*	2.0		**ND**						10/29/2021
1,1,2,2-Tetrachloroethane	*	2.0		**ND**						10/29/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**ND**						10/29/2021
1,1,2-Trichloroethane	*	0.5		**ND**						10/29/2021
1,1-Dichloro-2-propanone	*	30.0		**ND**						10/29/2021
1,1-Dichloroethane	*	2.0		**ND**						10/29/2021
1,1-Dichloroethene	*	2.0		**ND**						10/29/2021
1,1-Dichloropropene	*	2.0		**ND**						10/29/2021
1,2,3-Trichlorobenzene	*	2.0		**ND**						10/29/2021
1,2,3-Trichloropropane	*	2.0		**ND**						10/29/2021
1,2,3-Trimethylbenzene	*	2.0		**ND**						10/29/2021
1,2,4-Trichlorobenzene	*	2.0		**ND**						10/29/2021
1,2,4-Trimethylbenzene	*	2.0		**ND**						10/29/2021
1,2-Dibromo-3-chloropropane	*	5.0		**ND**						10/29/2021
1,2-Dibromoethane	*	2.0		**ND**						10/29/2021
1,2-Dichlorobenzene	*	2.0		**ND**						10/29/2021
1,2-Dichloroethane	*	2.0		**ND**						10/29/2021
1,2-Dichloropropane	*	2.0		**ND**						10/29/2021
1,3,5-Trimethylbenzene	*	2.0		**ND**						10/29/2021
1,3-Dichlorobenzene	*	2.0		**ND**						10/29/2021
1,3-Dichloropropane	*	2.0		**ND**						10/29/2021
1,4-Dichlorobenzene	*	2.0		**ND**						10/29/2021
1-Chlorobutane	*	5.0		**ND**						10/29/2021
2,2-Dichloropropane	*	2.0		**ND**						10/29/2021
2-Butanone	*	10.0		**ND**						10/29/2021
2-Chloroethyl vinyl ether	*	5.0		**ND**						10/29/2021
2-Chlorotoluene	*	2.0		**ND**						10/29/2021
2-Hexanone	*	10.0		**ND**						10/29/2021
2-Nitropropane	*	10.0		**ND**						10/29/2021
4-Chlorotoluene	*	2.0		**ND**						10/29/2021
4-Methyl-2-pentanone	*	10.0		**ND**						10/29/2021
Acetone	*	10.0		**ND**						10/29/2021
Acetonitrile	*	10.0		**ND**						10/29/2021
Acrolein	*	20.0		**ND**						10/29/2021
Acrylonitrile	*	5.0		**ND**						10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** MBLK Units µg/L

SampID: MBLK-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**ND**						10/29/2021
Benzene	*	0.5		**ND**						10/29/2021
Bromobenzene	*	2.0		**ND**						10/29/2021
Bromochloromethane	*	2.0		**ND**						10/29/2021
Bromodichloromethane	*	2.0		**ND**						10/29/2021
Bromoform	*	2.0		**ND**						10/29/2021
Bromomethane	*	5.0		**ND**						10/29/2021
Carbon disulfide	*	2.0		**ND**						10/29/2021
Carbon tetrachloride	*	2.0		**ND**						10/29/2021
Chlorobenzene	*	2.0		**ND**						10/29/2021
Chloroethane	*	2.0		**ND**						10/29/2021
Chloroform	*	2.0		**ND**						10/29/2021
Chloromethane	*	5.0		**ND**						10/29/2021
Chloroprene	*	5.0		**ND**						10/29/2021
cis-1,2-Dichloroethene	*	2.0		**ND**						10/29/2021
cis-1,3-Dichloropropene	*	2.0		**ND**						10/29/2021
cis-1,4-Dichloro-2-butene	*	2.0		**ND**						10/29/2021
Cyclohexanone	*	20.0		**ND**						10/29/2021
Dibromochloromethane	*	2.0		**ND**						10/29/2021
Dibromomethane	*	2.0		**ND**						10/29/2021
Dichlorodifluoromethane	*	2.0		**ND**						10/29/2021
Diisopropyl ether	*	2.0		**ND**						10/29/2021
Ethyl acetate	*	10.0		**ND**						10/29/2021
Ethyl ether	*	5.0		**ND**						10/29/2021
Ethyl methacrylate	*	5.0		**ND**						10/29/2021
Ethylbenzene	*	2.0		**ND**						10/29/2021
Ethyl-tert-butyl ether	*	2.0		**ND**						10/29/2021
Hexachlorobutadiene	*	5.0		**ND**						10/29/2021
Hexachloroethane	*	5.0		**ND**						10/29/2021
Iodomethane	*	5.0		**ND**						10/29/2021
Isopropylbenzene	*	2.0		**ND**						10/29/2021
m,p-Xylenes	*	2.0		**ND**						10/29/2021
Methacrylonitrile	*	5.0		**ND**						10/29/2021
Methyl Methacrylate	*	5.0		**ND**						10/29/2021
Methyl tert-butyl ether	*	2.0		**ND**						10/29/2021
Methylacrylate	*	5.0		**ND**						10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** MBLK Units µg/L

SampID: MBLK-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**ND**						10/29/2021
Naphthalene	*	5.0		**ND**						10/29/2021
n-Butyl acetate	*	2.0		**ND**						10/29/2021
n-Butylbenzene	*	2.0		**ND**						10/29/2021
n-Heptane	*	5.0		**ND**						10/29/2021
n-Hexane	*	5.0		**ND**						10/29/2021
Nitrobenzene	*	50.0		**ND**						10/29/2021
n-Propylbenzene	*	2.0		**ND**						10/29/2021
o-Xylene	*	2.0		**ND**						10/29/2021
Pentachloroethane	*	5.0		**ND**						10/29/2021
p-Isopropyltoluene	*	2.0		**ND**						10/29/2021
Propionitrile	*	10.0		**ND**						10/29/2021
sec-Butylbenzene	*	2.0		**ND**						10/29/2021
Styrene	*	2.0		**ND**						10/29/2021
tert-Amyl methyl ether	*	2.0		**ND**						10/29/2021
tert-Butyl alcohol	*	10.0		**ND**						10/29/2021
tert-Butylbenzene	*	2.0		**ND**						10/29/2021
Tetrachloroethene	*	0.5		**ND**						10/29/2021
Tetrahydrofuran	*	5.0		**ND**						10/29/2021
Toluene	*	2.0		**ND**						10/29/2021
trans-1,2-Dichloroethene	*	2.0		**ND**						10/29/2021
trans-1,3-Dichloropropene	*	2.0		**ND**						10/29/2021
trans-1,4-Dichloro-2-butene	*	2.0		**ND**						10/29/2021
Trichloroethene	*	2.0		**ND**						10/29/2021
Trichlorofluoromethane	*	5.0		**ND**						10/29/2021
Vinyl acetate	*	5.0		**ND**						10/29/2021
Vinyl chloride	*	2.0		**ND**						10/29/2021
Xylenes, Total	*	4.0		**ND**						10/29/2021
1,2-Dichloroethene, Total	*	4.0		**ND**						10/29/2021
1,3-Dichloropropene, Total	*	4.0		**ND**						10/29/2021
1,4-Dichloro-2-butene, Total	*	4.0		**ND**						10/29/2021
Surr: 1,2-Dichloroethane-d4	*			**51.9**	50.00		103.8	80	120	10/29/2021
Surr: 4-Bromofluorobenzene	*			**48.4**	50.00		96.8	80	120	10/29/2021
Surr: Toluene-d8	*			**48.7**	50.00		97.3	80	120	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCS Units µg/L

SampID: LCS-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**53.1**	50.00	0	106.2	82	113	10/29/2021
1,1,1-Trichloroethane	*	2.0		**59.1**	50.00	0	118.2	76.9	128	10/29/2021
1,1,2,2-Tetrachloroethane	*	2.0		**49.4**	50.00	0	98.8	76.7	113	10/29/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**60.3**	50.00	0	120.5	69.5	127	10/29/2021
1,1,2-Trichloroethane	*	0.5		**53.3**	50.00	0	106.5	83.8	111	10/29/2021
1,1-Dichloro-2-propanone	*	30.0		**142**	125.0	0	113.3	74.9	117	10/29/2021
1,1-Dichloroethane	*	2.0		**56.7**	50.00	0	113.3	77	129	10/29/2021
1,1-Dichloroethene	*	2.0		**59.6**	50.00	0	119.3	69.4	127	10/29/2021
1,1-Dichloropropene	*	2.0		**60.0**	50.00	0	119.9	75.1	123	10/29/2021
1,2,3-Trichlorobenzene	*	2.0		**55.2**	50.00	0	110.4	77.3	121	10/29/2021
1,2,3-Trichloropropane	*	2.0		**52.5**	50.00	0	105.0	75.3	109	10/29/2021
1,2,3-Trimethylbenzene	*	2.0		**52.6**	50.00	0	105.1	77	115	10/29/2021
1,2,4-Trichlorobenzene	*	2.0		**54.2**	50.00	0	108.4	76.8	124	10/29/2021
1,2,4-Trimethylbenzene	*	2.0		**54.5**	50.00	0	109.0	75	115	10/29/2021
1,2-Dibromo-3-chloropropane	*	5.0		**54.8**	50.00	0	109.5	71.9	119	10/29/2021
1,2-Dibromoethane	*	2.0		**53.0**	50.00	0	106.0	83.6	110	10/29/2021
1,2-Dichlorobenzene	*	2.0		**49.6**	50.00	0	99.2	72.1	113	10/29/2021
1,2-Dichloroethane	*	2.0		**54.9**	50.00	0	109.8	72.3	117	10/29/2021
1,2-Dichloropropane	*	2.0		**55.2**	50.00	0	110.4	76.5	119	10/29/2021
1,3,5-Trimethylbenzene	*	2.0		**52.2**	50.00	0	104.3	75.2	117	10/29/2021
1,3-Dichlorobenzene	*	2.0		**50.9**	50.00	0	101.8	75.2	115	10/29/2021
1,3-Dichloropropane	*	2.0		**51.4**	50.00	0	102.8	80.9	110	10/29/2021
1,4-Dichlorobenzene	*	2.0		**49.9**	50.00	0	99.9	73.9	112	10/29/2021
1-Chlorobutane	*	5.0		**58.5**	50.00	0	116.9	74.9	130	10/29/2021
2,2-Dichloropropane	*	2.0		**62.3**	50.00	0	124.5	66.5	138	10/29/2021
2-Butanone	*	10.0		**146**	125.0	0	116.8	68.8	134	10/29/2021
2-Chloroethyl vinyl ether	*	5.0		**53.8**	50.00	0	107.7	17.8	163	10/29/2021
2-Chlorotoluene	*	2.0		**50.9**	50.00	0	101.8	74.9	115	10/29/2021
2-Hexanone	*	10.0		**130**	125.0	0	104.0	73.2	117	10/29/2021
2-Nitropropane	*	10.0		**629**	500.0	0	125.7	67.1	140	10/29/2021
4-Chlorotoluene	*	2.0		**51.6**	50.00	0	103.3	75.7	113	10/29/2021
4-Methyl-2-pentanone	*	10.0		**130**	125.0	0	104.2	77	113	10/29/2021
Acetone	*	10.0		**155**	125.0	0	124.3	61.4	130	10/29/2021
Acetonitrile	*	10.0		**590**	500.0	0	118.0	68.8	136	10/29/2021
Acrolein	*	20.0		**482**	500.0	0	96.5	28.4	168	10/29/2021
Acrylonitrile	*	5.0		**57.3**	50.00	0	114.6	77.9	124	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCS Units µg/L

SampID: LCS-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**60.8**	50.00	0	121.6	75.8	130	10/29/2021
Benzene	*	0.5		**56.9**	50.00	0	113.7	78.5	119	10/29/2021
Bromobenzene	*	2.0		**49.6**	50.00	0	99.2	77.5	113	10/29/2021
Bromochloromethane	*	2.0		**49.4**	50.00	0	98.7	71.5	123	10/29/2021
Bromodichloromethane	*	2.0		**60.2**	50.00	0	120.4	75.7	123	10/29/2021
Bromoform	*	2.0		**55.9**	50.00	0	111.7	78.9	121	10/29/2021
Bromomethane	*	5.0		**60.7**	50.00	0	121.4	30.5	192	10/29/2021
Carbon disulfide	*	2.0		**56.4**	50.00	0	112.7	66.7	121	10/29/2021
Carbon tetrachloride	*	2.0		**61.4**	50.00	0	122.8	70.9	127	10/29/2021
Chlorobenzene	*	2.0		**51.8**	50.00	0	103.5	80	111	10/29/2021
Chloroethane	*	2.0		**54.1**	50.00	0	108.2	69.6	135	10/29/2021
Chloroform	*	2.0		**57.1**	50.00	0	114.3	76.2	120	10/29/2021
Chloromethane	*	5.0		**47.8**	50.00	0	95.5	50.9	138	10/29/2021
Chloroprene	*	5.0		**60.7**	50.00	0	121.5	68.4	127	10/29/2021
cis-1,2-Dichloroethene	*	2.0		**58.0**	50.00	0	115.9	79.5	121	10/29/2021
cis-1,3-Dichloropropene	*	2.0		**57.5**	50.00	0	115.0	79.8	123	10/29/2021
cis-1,4-Dichloro-2-butene	*	2.0		**54.7**	50.00	0	109.3	64.6	130	10/29/2021
Cyclohexanone	*	20.0		**533**	500.0	0	106.6	70.5	114	10/29/2021
Dibromochloromethane	*	2.0		**54.7**	50.00	0	109.5	84.5	114	10/29/2021
Dibromomethane	*	2.0		**57.2**	50.00	0	114.3	76	119	10/29/2021
Dichlorodifluoromethane	*	2.0		**58.3**	50.00	0	116.6	46.6	142	10/29/2021
Diisopropyl ether	*	2.0		**53.1**	50.00	0	106.1	72	128	10/29/2021
Ethyl acetate	*	10.0		**56.5**	50.00	0	113.1	70.3	115	10/29/2021
Ethyl ether	*	5.0		**55.9**	50.00	0	111.8	74.6	120	10/29/2021
Ethyl methacrylate	*	5.0		**54.1**	50.00	0	108.3	81.4	116	10/29/2021
Ethylbenzene	*	2.0		**53.0**	50.00	0	106.1	78.2	114	10/29/2021
Ethyl-tert-butyl ether	*	2.0		**55.2**	50.00	0	110.4	74.6	124	10/29/2021
Hexachlorobutadiene	*	5.0		**58.1**	50.00	0	116.2	73.9	129	10/29/2021
Hexachloroethane	*	5.0		**53.6**	50.00	0	107.2	78.3	123	10/29/2021
Iodomethane	*	5.0		**53.3**	50.00	0	106.5	50	151	10/29/2021
Isopropylbenzene	*	2.0		**54.8**	50.00	0	109.6	79.3	115	10/29/2021
m,p-Xylenes	*	2.0		**106**	100.0	0	105.7	77.2	116	10/29/2021
Methacrylonitrile	*	5.0		**58.6**	50.00	0	117.2	73.9	127	10/29/2021
Methyl Methacrylate	*	5.0		**55.4**	50.00	0	110.7	70.7	129	10/29/2021
Methyl tert-butyl ether	*	2.0		**57.5**	50.00	0	115.0	80.3	122	10/29/2021
Methylacrylate	*	5.0	S	**62.5**	50.00	0	125.0	75.2	124	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCS Units µg/L

SampID: LCS-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**52.3**	50.00	0	104.6	71.8	115	10/29/2021
Naphthalene	*	5.0		**54.6**	50.00	0	109.1	75.6	121	10/29/2021
n-Butyl acetate	*	2.0		**49.8**	50.00	0	99.5	72.4	118	10/29/2021
n-Butylbenzene	*	2.0		**55.0**	50.00	0	110.0	70.8	118	10/29/2021
n-Heptane	*	5.0		**67.3**	50.00	0	134.6	50.4	143	10/29/2021
n-Hexane	*	5.0		**56.7**	50.00	0	113.4	60.6	139	10/29/2021
Nitrobenzene	*	50.0		**551**	500.0	0	110.1	49.4	129	10/29/2021
n-Propylbenzene	*	2.0		**53.0**	50.00	0	106.0	74	119	10/29/2021
o-Xylene	*	2.0		**51.1**	50.00	0	102.3	79.2	112	10/29/2021
Pentachloroethane	*	5.0		**52.8**	50.00	0	105.6	71.8	124	10/29/2021
p-Isopropyltoluene	*	2.0		**54.2**	50.00	0	108.5	74.4	119	10/29/2021
Propionitrile	*	10.0		**615**	500.0	0	123.1	76.2	127	10/29/2021
sec-Butylbenzene	*	2.0		**55.3**	50.00	0	110.5	74.4	119	10/29/2021
Styrene	*	2.0		**54.7**	50.00	0	109.5	80.4	117	10/29/2021
tert-Amyl methyl ether	*	2.0		**56.5**	50.00	0	113.0	80.8	125	10/29/2021
tert-Butyl alcohol	*	10.0	S	**301**	250.0	0	120.6	64.9	118	10/29/2021
tert-Butylbenzene	*	2.0		**54.2**	50.00	0	108.4	74	115	10/29/2021
Tetrachloroethene	*	0.5		**53.4**	50.00	0	106.9	70.1	120	10/29/2021
Tetrahydrofuran	*	5.0		**55.1**	50.00	0	110.2	63.5	122	10/29/2021
Toluene	*	2.0		**52.8**	50.00	0	105.5	78.6	112	10/29/2021
trans-1,2-Dichloroethene	*	2.0		**58.0**	50.00	0	115.9	75.7	130	10/29/2021
trans-1,3-Dichloropropene	*	2.0		**54.9**	50.00	0	109.8	80.3	116	10/29/2021
trans-1,4-Dichloro-2-butene	*	2.0		**50.6**	50.00	0	101.2	65.5	124	10/29/2021
Trichloroethene	*	2.0		**59.8**	50.00	0	119.5	76.2	121	10/29/2021
Trichlorofluoromethane	*	5.0		**57.9**	50.00	0	115.8	71.1	131	10/29/2021
Vinyl acetate	*	5.0		**59.4**	50.00	0	118.8	79.8	129	10/29/2021
Vinyl chloride	*	2.0		**53.6**	50.00	0	107.2	58.6	141	10/29/2021
Xylenes, Total	*	4.0		**157**	150.0	0	104.6	78.3	114	10/29/2021
1,2-Dichloroethene, Total	*	4.0		**116**	100.0	0	115.9	78.5	125	10/29/2021
1,3-Dichloropropene, Total	*	4.0		**112**	100.0	0	112.4	82.3	117	10/29/2021
1,4-Dichloro-2-butene, Total	*	4.0		**105**	100.0	0	105.3	65.9	126	10/29/2021
Surr: 1,2-Dichloroethane-d4	*			**50.9**	50.00		101.9	80	120	10/29/2021
Surr: 4-Bromofluorobenzene	*			**47.8**	50.00		95.6	80	120	10/29/2021
Surr: Toluene-d8	*			**47.9**	50.00		95.8	80	120	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**54.2**	50.00	0	108.5	53.10	2.14	10/29/2021
1,1,1-Trichloroethane	*	2.0		**59.0**	50.00	0	117.9	59.12	0.25	10/29/2021
1,1,2,2-Tetrachloroethane	*	2.0		**50.7**	50.00	0	101.3	49.38	2.56	10/29/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**59.4**	50.00	0	118.8	60.26	1.40	10/29/2021
1,1,2-Trichloroethane	*	0.5		**52.8**	50.00	0	105.5	53.27	0.94	10/29/2021
1,1-Dichloro-2-propanone	*	30.0	S	**149**	125.0	0	119.4	141.6	5.26	10/29/2021
1,1-Dichloroethane	*	2.0		**56.9**	50.00	0	113.8	56.66	0.39	10/29/2021
1,1-Dichloroethene	*	2.0		**58.0**	50.00	0	116.0	59.64	2.81	10/29/2021
1,1-Dichloropropene	*	2.0		**58.2**	50.00	0	116.4	59.96	2.96	10/29/2021
1,2,3-Trichlorobenzene	*	2.0		**55.0**	50.00	0	109.9	55.20	0.44	10/29/2021
1,2,3-Trichloropropane	*	2.0		**54.4**	50.00	0	108.8	52.51	3.57	10/29/2021
1,2,3-Trimethylbenzene	*	2.0		**52.7**	50.00	0	105.4	52.56	0.27	10/29/2021
1,2,4-Trichlorobenzene	*	2.0		**55.1**	50.00	0	110.1	54.18	1.61	10/29/2021
1,2,4-Trimethylbenzene	*	2.0		**53.6**	50.00	0	107.2	54.49	1.65	10/29/2021
1,2-Dibromo-3-chloropropane	*	5.0		**55.0**	50.00	0	110.0	54.75	0.42	10/29/2021
1,2-Dibromoethane	*	2.0		**53.3**	50.00	0	106.7	53.00	0.62	10/29/2021
1,2-Dichlorobenzene	*	2.0		**49.5**	50.00	0	99.1	49.62	0.16	10/29/2021
1,2-Dichloroethane	*	2.0		**55.3**	50.00	0	110.7	54.90	0.78	10/29/2021
1,2-Dichloropropane	*	2.0		**54.6**	50.00	0	109.3	55.18	0.97	10/29/2021
1,3,5-Trimethylbenzene	*	2.0		**51.9**	50.00	0	103.9	52.16	0.44	10/29/2021
1,3-Dichlorobenzene	*	2.0		**50.9**	50.00	0	101.9	50.91	0.06	10/29/2021
1,3-Dichloropropane	*	2.0		**52.1**	50.00	0	104.2	51.42	1.29	10/29/2021
1,4-Dichlorobenzene	*	2.0		**51.0**	50.00	0	102.1	49.93	2.18	10/29/2021
1-Chlorobutane	*	5.0		**57.8**	50.00	0	115.7	58.47	1.10	10/29/2021
2,2-Dichloropropane	*	2.0		**61.4**	50.00	0	122.9	62.26	1.31	10/29/2021
2-Butanone	*	10.0		**148**	125.0	0	118.3	145.9	1.29	10/29/2021
2-Chloroethyl vinyl ether	*	5.0		**54.9**	50.00	0	109.8	53.83	1.93	10/29/2021
2-Chlorotoluene	*	2.0		**50.9**	50.00	0	101.9	50.91	0.04	10/29/2021
2-Hexanone	*	10.0		**134**	125.0	0	107.1	130.0	2.94	10/29/2021
2-Nitropropane	*	10.0		**656**	500.0	0	131.2	628.7	4.25	10/29/2021
4-Chlorotoluene	*	2.0		**51.6**	50.00	0	103.3	51.64	0.00	10/29/2021
4-Methyl-2-pentanone	*	10.0		**133**	125.0	0	106.8	130.2	2.45	10/29/2021
Acetone	*	10.0		**157**	125.0	0	125.9	155.4	1.25	10/29/2021
Acetonitrile	*	10.0		**615**	500.0	0	123.0	590.0	4.15	10/29/2021
Acrolein	*	20.0		**511**	500.0	0	102.3	482.4	5.84	10/29/2021
Acrylonitrile	*	5.0		**59.6**	50.00	0	119.2	57.32	3.93	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		**56.8**	50.00	0	113.5	60.81	6.87	10/29/2021
Benzene	*	0.5		**56.9**	50.00	0	113.9	56.87	0.11	10/29/2021
Bromobenzene	*	2.0		**50.5**	50.00	0	101.0	49.61	1.82	10/29/2021
Bromochloromethane	*	2.0		**48.2**	50.00	0	96.5	49.36	2.27	10/29/2021
Bromodichloromethane	*	2.0		**59.6**	50.00	0	119.2	60.19	0.97	10/29/2021
Bromoform	*	2.0		**56.5**	50.00	0	113.1	55.87	1.19	10/29/2021
Bromomethane	*	5.0		**65.2**	50.00	0	130.5	60.72	7.18	10/29/2021
Carbon disulfide	*	2.0		**56.7**	50.00	0	113.5	56.35	0.69	10/29/2021
Carbon tetrachloride	*	2.0		**61.6**	50.00	0	123.1	61.39	0.28	10/29/2021
Chlorobenzene	*	2.0		**52.0**	50.00	0	104.1	51.76	0.52	10/29/2021
Chloroethane	*	2.0		**53.0**	50.00	0	106.1	54.08	1.94	10/29/2021
Chloroform	*	2.0		**56.9**	50.00	0	113.8	57.13	0.40	10/29/2021
Chloromethane	*	5.0		**47.7**	50.00	0	95.5	47.77	0.06	10/29/2021
Chloroprene	*	5.0		**59.7**	50.00	0	119.3	60.74	1.78	10/29/2021
cis-1,2-Dichloroethene	*	2.0		**57.5**	50.00	0	115.0	57.97	0.80	10/29/2021
cis-1,3-Dichloropropene	*	2.0		**57.7**	50.00	0	115.4	57.52	0.31	10/29/2021
cis-1,4-Dichloro-2-butene	*	2.0		**56.6**	50.00	0	113.1	54.67	3.38	10/29/2021
Cyclohexanone	*	20.0		**560**	500.0	0	112.1	533.2	4.99	10/29/2021
Dibromochloromethane	*	2.0		**55.1**	50.00	0	110.3	54.73	0.75	10/29/2021
Dibromomethane	*	2.0		**58.2**	50.00	0	116.3	57.15	1.75	10/29/2021
Dichlorodifluoromethane	*	2.0		**57.3**	50.00	0	114.6	58.32	1.76	10/29/2021
Diisopropyl ether	*	2.0		**53.0**	50.00	0	105.9	53.07	0.21	10/29/2021
Ethyl acetate	*	10.0	S	**59.5**	50.00	0	119.0	56.53	5.10	10/29/2021
Ethyl ether	*	5.0		**56.3**	50.00	0	112.6	55.89	0.73	10/29/2021
Ethyl methacrylate	*	5.0		**54.1**	50.00	0	108.1	54.13	0.11	10/29/2021
Ethylbenzene	*	2.0		**52.5**	50.00	0	104.9	53.03	1.08	10/29/2021
Ethyl-tert-butyl ether	*	2.0		**55.2**	50.00	0	110.4	55.22	0.02	10/29/2021
Hexachlorobutadiene	*	5.0		**56.1**	50.00	0	112.1	58.09	3.56	10/29/2021
Hexachloroethane	*	5.0		**53.8**	50.00	0	107.5	53.59	0.30	10/29/2021
Iodomethane	*	5.0		**54.4**	50.00	0	108.7	53.26	2.03	10/29/2021
Isopropylbenzene	*	2.0		**55.0**	50.00	0	110.0	54.80	0.38	10/29/2021
m,p-Xylenes	*	2.0		**105**	100.0	0	104.9	105.7	0.77	10/29/2021
Methacrylonitrile	*	5.0		**59.2**	50.00	0	118.4	58.62	0.97	10/29/2021
Methyl Methacrylate	*	5.0		**56.9**	50.00	0	113.7	55.37	2.66	10/29/2021
Methyl tert-butyl ether	*	2.0		**57.4**	50.00	0	114.9	57.52	0.12	10/29/2021
Methylacrylate	*	5.0	S	**65.7**	50.00	0	131.3	62.49	4.95	10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		**53.3**	50.00	0	106.6	52.30	1.86	10/29/2021
Naphthalene	*	5.0		**55.3**	50.00	0	110.5	54.57	1.27	10/29/2021
n-Butyl acetate	*	2.0		**51.0**	50.00	0	102.0	49.75	2.52	10/29/2021
n-Butylbenzene	*	2.0		**54.6**	50.00	0	109.1	54.98	0.79	10/29/2021
n-Heptane	*	5.0		**65.7**	50.00	0	131.4	67.28	2.39	10/29/2021
n-Hexane	*	5.0		**56.8**	50.00	0	113.5	56.70	0.11	10/29/2021
Nitrobenzene	*	50.0		**577**	500.0	0	115.3	550.6	4.60	10/29/2021
n-Propylbenzene	*	2.0		**52.7**	50.00	0	105.4	53.00	0.61	10/29/2021
o-Xylene	*	2.0		**51.1**	50.00	0	102.3	51.13	0.02	10/29/2021
Pentachloroethane	*	5.0		**52.4**	50.00	0	104.8	52.79	0.70	10/29/2021
p-Isopropyltoluene	*	2.0		**53.5**	50.00	0	107.0	54.23	1.39	10/29/2021
Propionitrile	*	10.0	S	**637**	500.0	0	127.5	615.5	3.49	10/29/2021
sec-Butylbenzene	*	2.0		**55.6**	50.00	0	111.1	55.27	0.51	10/29/2021
Styrene	*	2.0		**53.8**	50.00	0	107.6	54.74	1.71	10/29/2021
tert-Amyl methyl ether	*	2.0		**56.9**	50.00	0	113.7	56.48	0.67	10/29/2021
tert-Butyl alcohol	*	10.0	S	**318**	250.0	0	127.1	301.5	5.24	10/29/2021
tert-Butylbenzene	*	2.0		**53.9**	50.00	0	107.7	54.20	0.63	10/29/2021
Tetrachloroethene	*	0.5		**52.3**	50.00	0	104.6	53.45	2.16	10/29/2021
Tetrahydrofuran	*	5.0		**56.3**	50.00	0	112.6	55.09	2.17	10/29/2021
Toluene	*	2.0		**52.7**	50.00	0	105.3	52.77	0.21	10/29/2021
trans-1,2-Dichloroethene	*	2.0		**57.9**	50.00	0	115.8	57.95	0.05	10/29/2021
trans-1,3-Dichloropropene	*	2.0		**55.0**	50.00	0	110.0	54.91	0.18	10/29/2021
trans-1,4-Dichloro-2-butene	*	2.0		**52.8**	50.00	0	105.6	50.62	4.22	10/29/2021
Trichloroethene	*	2.0		**59.0**	50.00	0	118.1	59.75	1.21	10/29/2021
Trichlorofluoromethane	*	5.0		**56.8**	50.00	0	113.5	57.91	2.01	10/29/2021
Vinyl acetate	*	5.0		**59.7**	50.00	0	119.3	59.38	0.47	10/29/2021
Vinyl chloride	*	2.0		**52.7**	50.00	0	105.3	53.62	1.81	10/29/2021
Xylenes, Total	*	4.0		**156**	150.0	0	104.0	156.8	0.51	10/29/2021
1,2-Dichloroethene, Total	*	4.0		**115**	100.0	0	115.4	115.9	0.42	10/29/2021
1,3-Dichloropropene, Total	*	4.0		**113**	100.0	0	112.7	112.4	0.25	10/29/2021
1,4-Dichloro-2-butene, Total	*	4.0		**109**	100.0	0	109.4	105.3	3.78	10/29/2021
Surr: 1,2-Dichloroethane-d4	*			**50.1**	50.00		100.1			10/29/2021
Surr: 4-Bromofluorobenzene	*			**48.6**	50.00		97.2			10/29/2021
Surr: Toluene-d8	*			**47.7**	50.00		95.4			10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184486 **SampType:** LCSG Units **%REC**

SampID: LCSG-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**50.9**	50.00		101.8	80	120	10/29/2021
Surr: 4-Bromofluorobenzene	*			**48.9**	50.00		97.8	80	120	10/29/2021
Surr: Toluene-d8	*			**49.6**	50.00		99.2	80	120	10/29/2021

Batch 184486 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-AE211029A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**51.7**	50.00		103.4			10/29/2021
Surr: 4-Bromofluorobenzene	*			**48.0**	50.00		96.0			10/29/2021
Surr: Toluene-d8	*			**49.0**	50.00		98.0			10/29/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** MBLK Units µg/L

SampID: MBLK-AM211101A-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						11/01/2021
1,1,1-Trichloroethane	*	2.0		ND						11/01/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						11/01/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						11/01/2021
1,1,2-Trichloroethane	*	0.5		ND						11/01/2021
1,1-Dichloro-2-propanone	*	30.0		ND						11/01/2021
1,1-Dichloroethane	*	2.0		ND						11/01/2021
1,1-Dichloroethene	*	2.0		ND						11/01/2021
1,1-Dichloropropene	*	2.0		ND						11/01/2021
1,2,3-Trichlorobenzene	*	2.0		ND						11/01/2021
1,2,3-Trichloropropane	*	2.0		ND						11/01/2021
1,2,3-Trimethylbenzene	*	2.0		ND						11/01/2021
1,2,4-Trichlorobenzene	*	2.0		ND						11/01/2021
1,2,4-Trimethylbenzene	*	2.0		ND						11/01/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						11/01/2021
1,2-Dibromoethane	*	2.0		ND						11/01/2021
1,2-Dichlorobenzene	*	2.0		ND						11/01/2021
1,2-Dichloroethane	*	2.0		ND						11/01/2021
1,2-Dichloropropane	*	2.0		ND						11/01/2021
1,3,5-Trimethylbenzene	*	2.0		ND						11/01/2021
1,3-Dichlorobenzene	*	2.0		ND						11/01/2021
1,3-Dichloropropane	*	2.0		ND						11/01/2021
1,4-Dichlorobenzene	*	2.0		ND						11/01/2021
1-Chlorobutane	*	5.0		ND						11/01/2021
2,2-Dichloropropane	*	2.0		ND						11/01/2021
2-Butanone	*	10.0		ND						11/01/2021
2-Chloroethyl vinyl ether	*	5.0		ND						11/01/2021
2-Chlorotoluene	*	2.0		ND						11/01/2021
2-Hexanone	*	10.0		ND						11/01/2021
2-Nitropropane	*	10.0		ND						11/01/2021
4-Chlorotoluene	*	2.0		ND						11/01/2021
4-Methyl-2-pentanone	*	10.0		ND						11/01/2021
Acetone	*	10.0		ND						11/01/2021
Acetonitrile	*	10.0		ND						11/01/2021
Acrolein	*	20.0		ND						11/01/2021
Acrylonitrile	*	5.0		ND						11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** MBLK Units µg/L

SampID: MBLK-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**ND**						11/01/2021
Benzene	*	0.5		**ND**						11/01/2021
Bromobenzene	*	2.0		**ND**						11/01/2021
Bromochloromethane	*	2.0		**ND**						11/01/2021
Bromodichloromethane	*	2.0		**ND**						11/01/2021
Bromoform	*	2.0		**ND**						11/01/2021
Bromomethane	*	5.0		**ND**						11/01/2021
Carbon disulfide	*	2.0		**ND**						11/01/2021
Carbon tetrachloride	*	2.0		**ND**						11/01/2021
Chlorobenzene	*	2.0		**ND**						11/01/2021
Chloroethane	*	2.0		**ND**						11/01/2021
Chloroform	*	2.0		**ND**						11/01/2021
Chloromethane	*	5.0		**ND**						11/01/2021
Chloroprene	*	5.0		**ND**						11/01/2021
cis-1,2-Dichloroethene	*	2.0		**ND**						11/01/2021
cis-1,3-Dichloropropene	*	2.0		**ND**						11/01/2021
cis-1,4-Dichloro-2-butene	*	2.0		**ND**						11/01/2021
Cyclohexanone	*	20.0		**ND**						11/01/2021
Dibromochloromethane	*	2.0		**ND**						11/01/2021
Dibromomethane	*	2.0		**ND**						11/01/2021
Dichlorodifluoromethane	*	2.0		**ND**						11/01/2021
Diisopropyl ether	*	2.0		**ND**						11/01/2021
Ethyl acetate	*	10.0		**ND**						11/01/2021
Ethyl ether	*	5.0		**ND**						11/01/2021
Ethyl methacrylate	*	5.0		**ND**						11/01/2021
Ethylbenzene	*	2.0		**ND**						11/01/2021
Ethyl-tert-butyl ether	*	2.0		**ND**						11/01/2021
Hexachlorobutadiene	*	5.0		**ND**						11/01/2021
Hexachloroethane	*	5.0		**ND**						11/01/2021
Iodomethane	*	5.0		**ND**						11/01/2021
Isopropylbenzene	*	2.0		**ND**						11/01/2021
m,p-Xylenes	*	2.0		**ND**						11/01/2021
Methacrylonitrile	*	5.0		**ND**						11/01/2021
Methyl Methacrylate	*	5.0		**ND**						11/01/2021
Methyl tert-butyl ether	*	2.0		**ND**						11/01/2021
Methylacrylate	*	5.0		**ND**						11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** MBLK Units µg/L

SampID: MBLK-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**ND**						11/01/2021
Naphthalene	*	5.0		**ND**						11/01/2021
n-Butyl acetate	*	2.0		**ND**						11/01/2021
n-Butylbenzene	*	2.0		**ND**						11/01/2021
n-Heptane	*	5.0		**ND**						11/01/2021
n-Hexane	*	5.0		**ND**						11/01/2021
Nitrobenzene	*	50.0		**ND**						11/01/2021
n-Propylbenzene	*	2.0		**ND**						11/01/2021
o-Xylene	*	2.0		**ND**						11/01/2021
Pentachloroethane	*	5.0		**ND**						11/01/2021
p-Isopropyltoluene	*	2.0		**ND**						11/01/2021
Propionitrile	*	10.0		**ND**						11/01/2021
sec-Butylbenzene	*	2.0		**ND**						11/01/2021
Styrene	*	2.0		**ND**						11/01/2021
tert-Amyl methyl ether	*	2.0		**ND**						11/01/2021
tert-Butyl alcohol	*	10.0		**ND**						11/01/2021
tert-Butylbenzene	*	2.0		**ND**						11/01/2021
Tetrachloroethene	*	0.5		**ND**						11/01/2021
Tetrahydrofuran	*	5.0		**ND**						11/01/2021
Toluene	*	2.0		**ND**						11/01/2021
trans-1,2-Dichloroethene	*	2.0		**ND**						11/01/2021
trans-1,3-Dichloropropene	*	2.0		**ND**						11/01/2021
trans-1,4-Dichloro-2-butene	*	2.0		**ND**						11/01/2021
Trichloroethene	*	2.0		**ND**						11/01/2021
Trichlorofluoromethane	*	5.0		**ND**						11/01/2021
Vinyl acetate	*	5.0		**ND**						11/01/2021
Vinyl chloride	*	2.0		**ND**						11/01/2021
Xylenes, Total	*	4.0		**ND**						11/01/2021
1,2-Dichloroethene, Total	*	4.0		**ND**						11/01/2021
1,3-Dichloropropene, Total	*	4.0		**ND**						11/01/2021
1,4-Dichloro-2-butene, Total	*	4.0		**ND**						11/01/2021
Surr: 1,2-Dichloroethane-d4	*			**50.6**	50.00		101.1	80	120	11/01/2021
Surr: 4-Bromofluorobenzene	*			**50.7**	50.00		101.5	80	120	11/01/2021
Surr: Toluene-d8	*			**49.2**	50.00		98.4	80	120	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCS Units µg/L

SampID: LCS-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**51.7**	50.00	0	103.4	82	113	11/01/2021
1,1,1-Trichloroethane	*	2.0		**52.5**	50.00	0	104.9	76.9	128	11/01/2021
1,1,2,2-Tetrachloroethane	*	2.0		**51.8**	50.00	0	103.5	76.7	113	11/01/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**52.7**	50.00	0	105.4	69.5	127	11/01/2021
1,1,2-Trichloroethane	*	0.5		**50.0**	50.00	0	100.0	83.8	111	11/01/2021
1,1-Dichloro-2-propanone	*	30.0		**130**	125.0	0	103.8	74.9	117	11/01/2021
1,1-Dichloroethane	*	2.0		**51.7**	50.00	0	103.4	77	129	11/01/2021
1,1-Dichloroethene	*	2.0		**51.9**	50.00	0	103.9	69.4	127	11/01/2021
1,1-Dichloropropene	*	2.0		**52.2**	50.00	0	104.5	75.1	123	11/01/2021
1,2,3-Trichlorobenzene	*	2.0		**50.9**	50.00	0	101.8	77.3	121	11/01/2021
1,2,3-Trichloropropane	*	2.0		**51.8**	50.00	0	103.6	75.3	109	11/01/2021
1,2,3-Trimethylbenzene	*	2.0		**54.4**	50.00	0	108.8	77	115	11/01/2021
1,2,4-Trichlorobenzene	*	2.0		**51.3**	50.00	0	102.6	76.8	124	11/01/2021
1,2,4-Trimethylbenzene	*	2.0		**55.1**	50.00	0	110.2	75	115	11/01/2021
1,2-Dibromo-3-chloropropane	*	5.0		**51.1**	50.00	0	102.3	71.9	119	11/01/2021
1,2-Dibromoethane	*	2.0		**52.1**	50.00	0	104.2	83.6	110	11/01/2021
1,2-Dichlorobenzene	*	2.0		**51.0**	50.00	0	102.0	72.1	113	11/01/2021
1,2-Dichloroethane	*	2.0		**49.7**	50.00	0	99.4	72.3	117	11/01/2021
1,2-Dichloropropane	*	2.0		**50.4**	50.00	0	100.8	76.5	119	11/01/2021
1,3,5-Trimethylbenzene	*	2.0		**54.5**	50.00	0	109.0	75.2	117	11/01/2021
1,3-Dichlorobenzene	*	2.0		**53.8**	50.00	0	107.7	75.2	115	11/01/2021
1,3-Dichloropropane	*	2.0		**52.0**	50.00	0	104.0	80.9	110	11/01/2021
1,4-Dichlorobenzene	*	2.0		**51.6**	50.00	0	103.3	73.9	112	11/01/2021
1-Chlorobutane	*	5.0		**53.3**	50.00	0	106.7	74.9	130	11/01/2021
2,2-Dichloropropane	*	2.0		**56.0**	50.00	0	111.9	66.5	138	11/01/2021
2-Butanone	*	10.0		**125**	125.0	0	100.3	68.8	134	11/01/2021
2-Chloroethyl vinyl ether	*	5.0		**51.4**	50.00	0	102.7	17.8	163	11/01/2021
2-Chlorotoluene	*	2.0		**53.5**	50.00	0	107.1	74.9	115	11/01/2021
2-Hexanone	*	10.0		**132**	125.0	0	105.5	73.2	117	11/01/2021
2-Nitropropane	*	10.0		**570**	500.0	0	114.1	67.1	140	11/01/2021
4-Chlorotoluene	*	2.0		**54.8**	50.00	0	109.5	75.7	113	11/01/2021
4-Methyl-2-pentanone	*	10.0		**131**	125.0	0	105.0	77	113	11/01/2021
Acetone	*	10.0		**128**	125.0	0	102.7	61.4	130	11/01/2021
Acetonitrile	*	10.0		**558**	500.0	0	111.7	68.8	136	11/01/2021
Acrolein	*	20.0		**507**	500.0	0	101.3	28.4	168	11/01/2021
Acrylonitrile	*	5.0		**51.7**	50.00	0	103.5	77.9	124	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCS Units µg/L

SampID: LCS-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		**54.0**	50.00	0	107.9	75.8	130	11/01/2021
Benzene	*	0.5		**51.8**	50.00	0	103.7	78.5	119	11/01/2021
Bromobenzene	*	2.0		**53.0**	50.00	0	106.1	77.5	113	11/01/2021
Bromochloromethane	*	2.0		**48.9**	50.00	0	97.8	71.5	123	11/01/2021
Bromodichloromethane	*	2.0		**52.9**	50.00	0	105.8	75.7	123	11/01/2021
Bromoform	*	2.0		**52.9**	50.00	0	105.8	78.9	121	11/01/2021
Bromomethane	*	5.0		**47.7**	50.00	0	95.4	30.5	192	11/01/2021
Carbon disulfide	*	2.0		**52.1**	50.00	0	104.3	66.7	121	11/01/2021
Carbon tetrachloride	*	2.0		**52.8**	50.00	0	105.7	70.9	127	11/01/2021
Chlorobenzene	*	2.0		**50.6**	50.00	0	101.2	80	111	11/01/2021
Chloroethane	*	2.0		**48.8**	50.00	0	97.7	69.6	135	11/01/2021
Chloroform	*	2.0		**50.3**	50.00	0	100.7	76.2	120	11/01/2021
Chloromethane	*	5.0		**49.6**	50.00	0	99.2	50.9	138	11/01/2021
Chloroprene	*	5.0		**53.6**	50.00	0	107.2	68.4	127	11/01/2021
cis-1,2-Dichloroethene	*	2.0		**51.4**	50.00	0	102.8	79.5	121	11/01/2021
cis-1,3-Dichloropropene	*	2.0		**54.4**	50.00	0	108.7	79.8	123	11/01/2021
cis-1,4-Dichloro-2-butene	*	2.0		**53.6**	50.00	0	107.2	64.6	130	11/01/2021
Cyclohexanone	*	20.0		**559**	500.0	0	111.9	70.5	114	11/01/2021
Dibromochloromethane	*	2.0		**54.3**	50.00	0	108.7	84.5	114	11/01/2021
Dibromomethane	*	2.0		**50.2**	50.00	0	100.3	76	119	11/01/2021
Dichlorodifluoromethane	*	2.0		**52.8**	50.00	0	105.7	46.6	142	11/01/2021
Diisopropyl ether	*	2.0		**51.3**	50.00	0	102.6	72	128	11/01/2021
Ethyl acetate	*	10.0		**50.5**	50.00	0	101.0	70.3	115	11/01/2021
Ethyl ether	*	5.0		**52.3**	50.00	0	104.6	74.6	120	11/01/2021
Ethyl methacrylate	*	5.0		**51.1**	50.00	0	102.2	81.4	116	11/01/2021
Ethylbenzene	*	2.0		**53.1**	50.00	0	106.2	78.2	114	11/01/2021
Ethyl-tert-butyl ether	*	2.0		**54.0**	50.00	0	108.0	74.6	124	11/01/2021
Hexachlorobutadiene	*	5.0		**51.2**	50.00	0	102.4	73.9	129	11/01/2021
Hexachloroethane	*	5.0		**54.6**	50.00	0	109.2	78.3	123	11/01/2021
Iodomethane	*	5.0		**51.7**	50.00	0	103.5	50	151	11/01/2021
Isopropylbenzene	*	2.0		**53.8**	50.00	0	107.6	79.3	115	11/01/2021
m,p-Xylenes	*	2.0		**107**	100.0	0	107.2	77.2	116	11/01/2021
Methacrylonitrile	*	5.0		**53.1**	50.00	0	106.2	73.9	127	11/01/2021
Methyl Methacrylate	*	5.0		**53.1**	50.00	0	106.2	70.7	129	11/01/2021
Methyl tert-butyl ether	*	2.0		**53.5**	50.00	0	107.0	80.3	122	11/01/2021
Methylacrylate	*	5.0		**54.1**	50.00	0	108.2	75.2	124	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCS Units µg/L

SampID: LCS-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		**48.9**	50.00	0	97.8	71.8	115	11/01/2021
Naphthalene	*	5.0		**52.7**	50.00	0	105.4	75.6	121	11/01/2021
n-Butyl acetate	*	2.0		**53.2**	50.00	0	106.5	72.4	118	11/01/2021
n-Butylbenzene	*	2.0		**52.7**	50.00	0	105.4	70.8	118	11/01/2021
n-Heptane	*	5.0		**59.8**	50.00	0	119.6	50.4	143	11/01/2021
n-Hexane	*	5.0		**51.6**	50.00	0	103.2	60.6	139	11/01/2021
Nitrobenzene	*	50.0		**545**	500.0	0	109.0	49.4	129	11/01/2021
n-Propylbenzene	*	2.0		**54.3**	50.00	0	108.6	74	119	11/01/2021
o-Xylene	*	2.0		**51.9**	50.00	0	103.7	79.2	112	11/01/2021
Pentachloroethane	*	5.0		**57.0**	50.00	0	114.0	71.8	124	11/01/2021
p-Isopropyltoluene	*	2.0		**54.7**	50.00	0	109.4	74.4	119	11/01/2021
Propionitrile	*	10.0		**545**	500.0	0	108.9	76.2	127	11/01/2021
sec-Butylbenzene	*	2.0		**54.7**	50.00	0	109.5	74.4	119	11/01/2021
Styrene	*	2.0		**54.9**	50.00	0	109.8	80.4	117	11/01/2021
tert-Amyl methyl ether	*	2.0		**54.5**	50.00	0	109.0	80.8	125	11/01/2021
tert-Butyl alcohol	*	10.0		**268**	250.0	0	107.0	64.9	118	11/01/2021
tert-Butylbenzene	*	2.0		**52.6**	50.00	0	105.2	74	115	11/01/2021
Tetrachloroethene	*	0.5		**49.4**	50.00	0	98.8	70.1	120	11/01/2021
Tetrahydrofuran	*	5.0		**53.0**	50.00	0	105.9	63.5	122	11/01/2021
Toluene	*	2.0		**51.8**	50.00	0	103.7	78.6	112	11/01/2021
trans-1,2-Dichloroethene	*	2.0		**52.7**	50.00	0	105.4	75.7	130	11/01/2021
trans-1,3-Dichloropropene	*	2.0		**53.6**	50.00	0	107.2	80.3	116	11/01/2021
trans-1,4-Dichloro-2-butene	*	2.0		**56.4**	50.00	0	112.8	65.5	124	11/01/2021
Trichloroethene	*	2.0		**51.7**	50.00	0	103.4	76.2	121	11/01/2021
Trichlorofluoromethane	*	5.0		**49.3**	50.00	0	98.6	71.1	131	11/01/2021
Vinyl acetate	*	5.0		**55.2**	50.00	0	110.3	79.8	129	11/01/2021
Vinyl chloride	*	2.0		**50.8**	50.00	0	101.5	58.6	141	11/01/2021
Xylenes, Total	*	4.0		**159**	150.0	0	106.0	78.3	114	11/01/2021
1,2-Dichloroethene, Total	*	4.0		**104**	100.0	0	104.1	78.5	125	11/01/2021
1,3-Dichloropropene, Total	*	4.0		**108**	100.0	0	108.0	82.3	117	11/01/2021
1,4-Dichloro-2-butene, Total	*	4.0		**110**	100.0	0	110.0	65.9	126	11/01/2021
Surr: 1,2-Dichloroethane-d4	*			**49.8**	50.00		99.6	80	120	11/01/2021
Surr: 4-Bromofluorobenzene	*			**51.0**	50.00		102.0	80	120	11/01/2021
Surr: Toluene-d8	*			**49.8**	50.00		99.7	80	120	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		**51.4**	50.00	0	102.7	51.72	0.68	11/01/2021
1,1,1-Trichloroethane	*	2.0		**52.1**	50.00	0	104.3	52.47	0.65	11/01/2021
1,1,2,2-Tetrachloroethane	*	2.0		**50.4**	50.00	0	100.9	51.75	2.56	11/01/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		**51.4**	50.00	0	102.9	52.70	2.42	11/01/2021
1,1,2-Trichloroethane	*	0.5		**49.3**	50.00	0	98.5	49.99	1.45	11/01/2021
1,1-Dichloro-2-propanone	*	30.0		**124**	125.0	0	98.9	129.8	4.92	11/01/2021
1,1-Dichloroethane	*	2.0		**50.6**	50.00	0	101.2	51.69	2.11	11/01/2021
1,1-Dichloroethene	*	2.0		**50.6**	50.00	0	101.2	51.94	2.61	11/01/2021
1,1-Dichloropropene	*	2.0		**51.2**	50.00	0	102.3	52.24	2.07	11/01/2021
1,2,3-Trichlorobenzene	*	2.0		**49.6**	50.00	0	99.3	50.91	2.51	11/01/2021
1,2,3-Trichloropropane	*	2.0		**51.0**	50.00	0	101.9	51.78	1.62	11/01/2021
1,2,3-Trimethylbenzene	*	2.0		**53.0**	50.00	0	105.9	54.40	2.70	11/01/2021
1,2,4-Trichlorobenzene	*	2.0		**49.9**	50.00	0	99.8	51.30	2.73	11/01/2021
1,2,4-Trimethylbenzene	*	2.0		**54.0**	50.00	0	108.0	55.11	2.02	11/01/2021
1,2-Dibromo-3-chloropropane	*	5.0		**49.5**	50.00	0	98.9	51.14	3.32	11/01/2021
1,2-Dibromoethane	*	2.0		**51.6**	50.00	0	103.2	52.11	1.00	11/01/2021
1,2-Dichlorobenzene	*	2.0		**50.5**	50.00	0	101.0	50.99	0.99	11/01/2021
1,2-Dichloroethane	*	2.0		**48.7**	50.00	0	97.4	49.70	2.01	11/01/2021
1,2-Dichloropropane	*	2.0		**50.0**	50.00	0	100.1	50.40	0.72	11/01/2021
1,3,5-Trimethylbenzene	*	2.0		**53.2**	50.00	0	106.3	54.49	2.49	11/01/2021
1,3-Dichlorobenzene	*	2.0		**52.8**	50.00	0	105.6	53.84	1.97	11/01/2021
1,3-Dichloropropane	*	2.0		**51.1**	50.00	0	102.2	52.02	1.82	11/01/2021
1,4-Dichlorobenzene	*	2.0		**50.8**	50.00	0	101.6	51.63	1.62	11/01/2021
1-Chlorobutane	*	5.0		**52.2**	50.00	0	104.4	53.34	2.12	11/01/2021
2,2-Dichloropropane	*	2.0		**54.4**	50.00	0	108.9	55.97	2.75	11/01/2021
2-Butanone	*	10.0		**122**	125.0	0	97.3	125.3	2.98	11/01/2021
2-Chloroethyl vinyl ether	*	5.0		**50.4**	50.00	0	100.9	51.37	1.81	11/01/2021
2-Chlorotoluene	*	2.0		**52.4**	50.00	0	104.8	53.53	2.10	11/01/2021
2-Hexanone	*	10.0		**128**	125.0	0	102.4	131.9	2.95	11/01/2021
2-Nitropropane	*	10.0		**557**	500.0	0	111.3	570.5	2.48	11/01/2021
4-Chlorotoluene	*	2.0		**53.4**	50.00	0	106.9	54.75	2.44	11/01/2021
4-Methyl-2-pentanone	*	10.0		**129**	125.0	0	102.9	131.2	1.97	11/01/2021
Acetone	*	10.0		**125**	125.0	0	99.9	128.4	2.74	11/01/2021
Acetonitrile	*	10.0		**512**	500.0	0	102.3	558.4	8.73	11/01/2021
Acrolein	*	20.0		**506**	500.0	0	101.3	506.6	0.02	11/01/2021
Acrylonitrile	*	5.0		**51.1**	50.00	0	102.3	51.73	1.15	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		**52.1**	50.00	0	104.3	53.95	3.43	11/01/2021
Benzene	*	0.5		**50.8**	50.00	0	101.6	51.85	2.07	11/01/2021
Bromobenzene	*	2.0		**51.7**	50.00	0	103.3	53.03	2.60	11/01/2021
Bromochloromethane	*	2.0		**48.8**	50.00	0	97.6	48.89	0.23	11/01/2021
Bromodichloromethane	*	2.0		**52.0**	50.00	0	103.9	52.92	1.85	11/01/2021
Bromoform	*	2.0		**52.7**	50.00	0	105.5	52.88	0.28	11/01/2021
Bromomethane	*	5.0		**47.9**	50.00	0	95.8	47.69	0.46	11/01/2021
Carbon disulfide	*	2.0		**51.0**	50.00	0	102.0	52.14	2.23	11/01/2021
Carbon tetrachloride	*	2.0		**51.6**	50.00	0	103.3	52.83	2.30	11/01/2021
Chlorobenzene	*	2.0		**50.2**	50.00	0	100.4	50.60	0.79	11/01/2021
Chloroethane	*	2.0		**48.4**	50.00	0	96.8	48.85	0.88	11/01/2021
Chloroform	*	2.0		**49.2**	50.00	0	98.4	50.34	2.29	11/01/2021
Chloromethane	*	5.0		**46.8**	50.00	0	93.6	49.58	5.81	11/01/2021
Chloroprene	*	5.0		**52.8**	50.00	0	105.6	53.58	1.50	11/01/2021
cis-1,2-Dichloroethene	*	2.0		**50.6**	50.00	0	101.3	51.42	1.55	11/01/2021
cis-1,3-Dichloropropene	*	2.0		**53.1**	50.00	0	106.2	54.37	2.33	11/01/2021
cis-1,4-Dichloro-2-butene	*	2.0		**53.0**	50.00	0	106.0	53.58	1.13	11/01/2021
Cyclohexanone	*	20.0		**543**	500.0	0	108.6	559.5	3.03	11/01/2021
Dibromochloromethane	*	2.0		**53.6**	50.00	0	107.3	54.34	1.30	11/01/2021
Dibromomethane	*	2.0		**49.3**	50.00	0	98.6	50.15	1.67	11/01/2021
Dichlorodifluoromethane	*	2.0		**51.5**	50.00	0	103.1	52.84	2.51	11/01/2021
Diisopropyl ether	*	2.0		**50.3**	50.00	0	100.5	51.28	1.99	11/01/2021
Ethyl acetate	*	10.0		**49.5**	50.00	0	99.0	50.49	1.98	11/01/2021
Ethyl ether	*	5.0		**51.0**	50.00	0	102.0	52.30	2.50	11/01/2021
Ethyl methacrylate	*	5.0		**50.8**	50.00	0	101.5	51.12	0.69	11/01/2021
Ethylbenzene	*	2.0		**52.5**	50.00	0	105.0	53.08	1.06	11/01/2021
Ethyl-tert-butyl ether	*	2.0		**53.0**	50.00	0	106.1	54.01	1.83	11/01/2021
Hexachlorobutadiene	*	5.0		**50.4**	50.00	0	100.9	51.20	1.52	11/01/2021
Hexachloroethane	*	5.0		**53.6**	50.00	0	107.2	54.59	1.85	11/01/2021
Iodomethane	*	5.0		**54.2**	50.00	0	108.4	51.74	4.68	11/01/2021
Isopropylbenzene	*	2.0		**53.4**	50.00	0	106.7	53.78	0.80	11/01/2021
m,p-Xylenes	*	2.0		**106**	100.0	0	105.6	107.2	1.51	11/01/2021
Methacrylonitrile	*	5.0		**51.1**	50.00	0	102.2	53.12	3.92	11/01/2021
Methyl Methacrylate	*	5.0		**51.8**	50.00	0	103.6	53.10	2.50	11/01/2021
Methyl tert-butyl ether	*	2.0		**52.5**	50.00	0	105.0	53.52	1.91	11/01/2021
Methylacrylate	*	5.0		**52.5**	50.00	0	104.9	54.08	3.02	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCSD Units µg/L RPD Limit 15.4

SampID: LCSD-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		**47.8**	50.00	0	95.6	48.88	2.23	11/01/2021
Naphthalene	*	5.0		**51.7**	50.00	0	103.3	52.71	1.99	11/01/2021
n-Butyl acetate	*	2.0		**52.1**	50.00	0	104.1	53.23	2.22	11/01/2021
n-Butylbenzene	*	2.0		**51.9**	50.00	0	103.9	52.68	1.41	11/01/2021
n-Heptane	*	5.0		**58.4**	50.00	0	116.8	59.78	2.30	11/01/2021
n-Hexane	*	5.0		**49.8**	50.00	0	99.6	51.61	3.55	11/01/2021
Nitrobenzene	*	50.0		**514**	500.0	0	102.9	545.2	5.83	11/01/2021
n-Propylbenzene	*	2.0		**53.1**	50.00	0	106.1	54.28	2.27	11/01/2021
o-Xylene	*	2.0		**51.0**	50.00	0	102.1	51.86	1.57	11/01/2021
Pentachloroethane	*	5.0		**55.7**	50.00	0	111.4	57.01	2.36	11/01/2021
p-Isopropyltoluene	*	2.0		**53.4**	50.00	0	106.8	54.68	2.35	11/01/2021
Propionitrile	*	10.0		**529**	500.0	0	105.9	544.6	2.86	11/01/2021
sec-Butylbenzene	*	2.0		**53.5**	50.00	0	107.0	54.73	2.31	11/01/2021
Styrene	*	2.0		**54.4**	50.00	0	108.7	54.90	0.97	11/01/2021
tert-Amyl methyl ether	*	2.0		**53.7**	50.00	0	107.3	54.50	1.53	11/01/2021
tert-Butyl alcohol	*	10.0		**254**	250.0	0	101.6	267.6	5.21	11/01/2021
tert-Butylbenzene	*	2.0		**52.8**	50.00	0	105.5	52.60	0.32	11/01/2021
Tetrachloroethene	*	0.5		**48.4**	50.00	0	96.8	49.41	2.11	11/01/2021
Tetrahydrofuran	*	5.0		**50.8**	50.00	0	101.6	52.95	4.18	11/01/2021
Toluene	*	2.0		**51.5**	50.00	0	103.0	51.84	0.70	11/01/2021
trans-1,2-Dichloroethene	*	2.0		**51.4**	50.00	0	102.7	52.71	2.61	11/01/2021
trans-1,3-Dichloropropene	*	2.0		**53.0**	50.00	0	105.9	53.60	1.18	11/01/2021
trans-1,4-Dichloro-2-butene	*	2.0		**54.4**	50.00	0	108.8	56.42	3.68	11/01/2021
Trichloroethene	*	2.0		**50.5**	50.00	0	101.0	51.69	2.29	11/01/2021
Trichlorofluoromethane	*	5.0		**47.9**	50.00	0	95.7	49.29	2.94	11/01/2021
Vinyl acetate	*	5.0		**54.1**	50.00	0	108.2	55.17	1.98	11/01/2021
Vinyl chloride	*	2.0		**49.0**	50.00	0	98.1	50.75	3.43	11/01/2021
Xylenes, Total	*	4.0		**157**	150.0	0	104.4	159.0	1.53	11/01/2021
1,2-Dichloroethene, Total	*	4.0		**102**	100.0	0	102.0	104.1	2.09	11/01/2021
1,3-Dichloropropene, Total	*	4.0		**106**	100.0	0	106.1	108.0	1.76	11/01/2021
1,4-Dichloro-2-butene, Total	*	4.0		**107**	100.0	0	107.4	110.0	2.43	11/01/2021
Surr: 1,2-Dichloroethane-d4	*			**49.6**	50.00		99.2			11/01/2021
Surr: 4-Bromofluorobenzene	*			**49.8**	50.00		99.6			11/01/2021
Surr: Toluene-d8	*			**49.9**	50.00		99.7			11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** LCSG Units **%REC**

SampID: LCSG-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**49.2**	50.00		98.3	80	120	11/01/2021
Surr: 4-Bromofluorobenzene	*			**50.5**	50.00		101.0	80	120	11/01/2021
Surr: Toluene-d8	*			**50.5**	50.00		101.1	80	120	11/01/2021

Batch 184526 **SampType:** LCSGD Units **%REC** RPD Limit **0**

SampID: LCSGD-AM211101A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			**49.3**	50.00		98.6			11/01/2021
Surr: 4-Bromofluorobenzene	*			**51.1**	50.00		102.3			11/01/2021
Surr: Toluene-d8	*			**50.2**	50.00		100.5			11/01/2021

Batch 184526 **SampType:** MS Units **µg/L**

SampID: 21101729-017EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene		2.0		**48.4**	50.00	0	96.9	67.5	123	11/01/2021
Benzene		0.5		**50.2**	50.00	0	100.4	72	120	11/01/2021
Chlorobenzene		2.0		**48.2**	50.00	0.4100	95.6	73.9	108	11/01/2021
Ethylbenzene		2.0		**52.2**	50.00	0.1100	104.2	74.8	115	11/01/2021
m,p-Xylenes		2.0		**50.5**	50.00	0.4300	100.1	69.7	115	11/01/2021
o-Xylene		2.0		**49.5**	50.00	0.1200	98.7	72.9	111	11/01/2021
Toluene		2.0		**48.8**	50.00	0	97.7	70.6	109	11/01/2021
Trichloroethene		2.0		**51.3**	50.00	0	102.6	77.7	119	11/01/2021
Xylenes, Total		4.0		**100**	100.0	0.5500	99.4	72.1	113	11/01/2021
Surr: 1,2-Dichloroethane-d4	*			**50.9**	50.00		101.9	80	120	11/01/2021
Surr: 4-Bromofluorobenzene	*			**51.8**	50.00		103.6	80	120	11/01/2021
Surr: Toluene-d8	*			**49.5**	50.00		99.0	80	120	11/01/2021

Client: Burns & McDonnell Waste Consultants **Work Order:** 21101729

Client Project: BMCD KC GSA Goodfellow Groundwater **Report Date:** 04-Nov-21

SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS

Batch 184526 **SampType:** MSD Units **µg/L** RPD Limit **40**

SampID: 21101729-017EMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1-Dichloroethene		2.0		**48.2**	50.00	0	96.3	48.45	0.60	11/01/2021
Benzene		0.5		**49.8**	50.00	0	99.5	50.21	0.88	11/01/2021
Chlorobenzene		2.0		**48.0**	50.00	0.4100	95.3	48.22	0.37	11/01/2021
Ethylbenzene		2.0		**51.7**	50.00	0.1100	103.1	52.19	1.00	11/01/2021
m,p-Xylenes		2.0		**50.0**	50.00	0.4300	99.1	50.49	1.02	11/01/2021
o-Xylene		2.0		**49.2**	50.00	0.1200	98.2	49.46	0.53	11/01/2021
Toluene		2.0		**48.0**	50.00	0	96.0	48.84	1.69	11/01/2021
Trichloroethene		2.0		**51.3**	50.00	0	102.5	51.30	0.06	11/01/2021
Xylenes, Total		4.0		**99.2**	100.0	0.5500	98.6	99.95	0.77	11/01/2021
Surr: 1,2-Dichloroethane-d4	*			**51.2**	50.00		102.5			11/01/2021
Surr: 4-Bromofluorobenzene	*			**51.0**	50.00		102.0			11/01/2021
Surr: Toluene-d8	*			**49.4**	50.00		98.9			11/01/2021

Receiving Check List

http://www.teklabinc.com/

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

Work Order: 21101729
Report Date: 04-Nov-21

Carrier: Ben Lockwood

Completed by: (b) (6) [redacted]
On: 28-Oct-21
Emily E. Hayer

Received By: EEH

Reviewed by: (b) (6) [redacted]
On: 28-Oct-21
Shelly A. Hennessy

Pages to follow: Chain of custody 2 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 1.2
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.

Trip Blank collection date and time will be reported as the received date and time (end of trip). - SHennessy - 10/28/2021 4:31:43 PM

Sample -018 through -022 dissolved bottles not provided, dissolved analysis will not be analyzed for these samples. SAH 10/28/21

pH strip #77492. - EEH 10/28/2021 4:33:25 PM

2110172[illegible]

BURNS & McDONNELL

021618 Form WCD-KC1-STL

Request for Chemical Analysis and Chain of Custody Record

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: 618-344-1004

Document Control No: 128487-10282021-001

Lab. Reference No. or Episode No.: 21101729

Project Number: 128487

Client Name: GSA

Sample Number: 21101729

Group or SWMU Name	Sample Point	Sample Designator	Round	Year	Sample Depth (in feet) From	To	Sample Collected Date	Time	Liquid	Solid	Gas	Number of Containers	VOCs	PAHs	PCBs	Total Metals	Dissolved Metals	Remarks
MW-09 10272021		-001					10/27	910	X			6	X	X	X	X	X	Field Filtered
MW-13 10272021		-002					10/27	1046	X			5	X	X	X	X		
MW-16 10272021		-003					10/27	1220	X			5	X	X	X	X		
MW-12 10272021		-004					10/27	1400	X			5	X	X	X	X		
MW-08 10272021		-005					10/27	1522	X			5	X	X	X	X		
TB-02		~~-006~~							X			2	X					Lab Prepped
MW-15 10282021		-007					10/28	820	X			6	X	X	X	X	X	Field Filtered
Rinse-10282021		-008					10/28	855	X			5	X	X	X	X		
MW-07 10282021		-009					10/28	1004	X			5	X	X	X	X		
MW-15 10282021/Dup		-010					10/28	820	X			6	X	X	X	X	X	Field Filtered
MW-19 10282021		-011					10/28	1147	X			5	X	X	X	X		

Sampler (signature): (b) (6) [redacted]

Sampler (signature): (b) (6) [redacted]

Special Instructions: All VOAs in 1 cooler

Relinquished By (signature): 1. (b) (6) [redacted]

Date/Time

Received By (signature): 10/28/21

Date/Time 1314

Ice Present in Container: Yes ☐ No ☐

Temperature Upon Receipt: 1.2°C, ice 461

Relinquished By (signature): 2.

Date/Time

Received By (signature):

Date/Time

Laboratory Comments: 2 Ends
pH ✓ 77492 (b) (6) [redacted] 10/28/21

BURNS McDONNELL

021618 Form WCD-KC1-STL

Request for Chemical Analysis and Chain of Custody Record

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: 618-344-1004

Document Control No: 128487-10272021-001
Lab. Reference No. or Episode No.: 21101729

Project Number: 128487

Client Name: GSA 21101729

Sample Type: Matrix

Sample Number: Group or SWMU Name	Sample Number: Sample Point	Sample Number: Sample Designator	Sample Event: Round	Sample Event: Year	Sample Depth (in feet): From	Sample Depth (in feet): To	Sample Collected: Date	Sample Collected: Time	Matrix: Liquid	Matrix: Solid	Matrix: Gas	Number of Containers	Analysis: VOCs	Analysis: PAHs	Analysis: PCBs	Analysis: Total Metals	Analysis: Dissolved Metals	Analysis:	Remarks
MW-01	10252021		-012	2021			10/25	1231	X			6	X	X	X	X	X		Field Filtered
MW-02	10252021		-013				10/25	1337	X			5	X	X	X	X			
MW-03	10252021		-014				10/25	1457	X			5	X	X	X	X			
MW-05	10252021		-015				10/25	1625	X			5	X	X	X	X			
TB-01			-016						X			2	X						
MW-04	10262021		-017				10/26	850	X			6	X	X	X	X	X		Field Filtered
MW-04	10262021	MS					10/26	850	X			6	X	X	X	X	X		
MW-04	10262021	MSD					10/26	850	X			6	X	X	X	X	X		
MW-06	10262021		-018				10/26	1031	X			5	X	X	X	X	X	⊗	Dissolved bottles not received (b) (6) 10/28/21
MW-14	10262021		-019				10/26	1244	X			5	X	X	X	X	X		
MW-18	10262021		-020				10/26	1411	X			5	X	X	X	X	X		
MW-17	10262021		-021				10/26	1527	X			5	X	X	X	X	X		
MW-10	10262021		-022				10/26	1632	X			5	X	X	X	X	X		

Sampler (signature): (b) (6)

Sampler (signature):

Special Instructions: ALL VOAs IN 1 COOLER

Relinquished By (signature): 1. (b) (6) Date/Time: 10/27

Received By (signature): (b) (6) Date/Time: 10/28/21 1314

Relinquished By (signature): 2. Date/Time:

Received By (signature): Date/Time:

Ice Present in Container: Yes ☐ No ☐

Temperature Upon Receipt:

Laboratory Comments:

ANALYTICAL REPORT

November 05, 2021

Revised Report

Burns & McDonnell - KS

Sample Delivery Group:	L1424438
Samples Received:	10/29/2021
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

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

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

WW-08 10272021 L1424438-01 GW

Collected by: BL
Collected date/time: 10/27/21 15:22
Received date/time: 10/29/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1767689	1	11/02/21 17:04	11/03/21 12:06	GKM	Mt. Juliet, TN

WW-08 10272021/DUP L1424438-02 GW

Collected by: BL
Collected date/time: 10/27/21 15:22
Received date/time: 10/29/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1767689	1	11/02/21 17:04	11/03/21 12:33	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

Report Revision History

Level II Report - Version 1: 11/04/21 06:41

Project Narrative

ESC Level 2 Data Package

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	11/03/2021 12:06	WG1767689
2,4-Dinitrotoluene	ND		0.00200	1	11/03/2021 12:06	WG1767689
4-Nitrotoluene (4-NT)	ND		0.00200	1	11/03/2021 12:06	WG1767689
RDX	ND		0.00200	1	11/03/2021 12:06	WG1767689
Nitrobenzene	ND		0.000500	1	11/03/2021 12:06	WG1767689
2,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
2-Nitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
3-Nitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
1,3,5-Trinitrobenzene	ND		0.000500	1	11/03/2021 12:06	WG1767689
1,3-Dinitrobenzene	ND		0.000500	1	11/03/2021 12:06	WG1767689
2,4,6-Trinitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:06	WG1767689
HMX	ND		0.00200	1	11/03/2021 12:06	WG1767689
PETN	ND		0.000500	1	11/03/2021 12:06	WG1767689
Nitroglycerine	ND		0.000500	1	11/03/2021 12:06	WG1767689
(S) 1,3-Dimethyl-2-NB	*91.7*		*57.0-120*		*11/03/2021 12:06*	WG1767689

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	11/03/2021 12:33	WG1767689
2,4-Dinitrotoluene	ND		0.00200	1	11/03/2021 12:33	WG1767689
4-Nitrotoluene (4-NT)	ND		0.00200	1	11/03/2021 12:33	WG1767689
RDX	ND		0.00200	1	11/03/2021 12:33	WG1767689
Nitrobenzene	ND		0.000500	1	11/03/2021 12:33	WG1767689
2,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
2-Nitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
3-Nitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
1,3,5-Trinitrobenzene	ND		0.000500	1	11/03/2021 12:33	WG1767689
1,3-Dinitrobenzene	ND		0.000500	1	11/03/2021 12:33	WG1767689
2,4,6-Trinitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	11/03/2021 12:33	WG1767689
HMX	ND		0.00200	1	11/03/2021 12:33	WG1767689
PETN	ND		0.000500	1	11/03/2021 12:33	WG1767689
Nitroglycerine	ND		0.000500	1	11/03/2021 12:33	WG1767689
(S) 1,3-Dimethyl-2-NB	*93.1*		*57.0-120*		*11/03/2021 12:33*	WG1767689

Method Blank (MB)

(MB) R3725066-1 11/03/21 10:19

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	*92.2*			*57.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3725066-2 11/03/21 10:46 • (LCSD) R3725066-3 11/03/21 11:13

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	0.0211	0.0205	106	103	80.0-120			2.88	20
2,4-Dinitrotoluene	0.0200	0.0201	0.0199	101	99.5	80.0-120			1.00	20
4-Nitrotoluene (4-NT)	0.0200	0.0195	0.0191	97.5	95.5	80.0-120			2.07	20
RDX	0.0200	0.0179	0.0184	89.5	92.0	79.0-120			2.75	20
Nitrobenzene	0.0200	0.0195	0.0193	97.5	96.5	80.0-120			1.03	20
2,6-Dinitrotoluene	0.0200	0.0201	0.0201	101	101	78.0-120			0.000	20
2-Nitrotoluene	0.0200	0.0190	0.0189	95.0	94.5	80.0-120			0.528	20
3-Nitrotoluene	0.0200	0.0189	0.0186	94.5	93.0	80.0-120			1.60	20
1,3,5-Trinitrobenzene	0.0200	0.0201	0.0203	101	102	80.0-120			0.990	20
1,3-Dinitrobenzene	0.0200	0.0189	0.0190	94.5	95.0	80.0-120			0.528	20
2,4,6-Trinitrotoluene	0.0200	0.0193	0.0193	96.5	96.5	80.0-120			0.000	20
4-Amino-2,6-Dinitrotoluene	0.0200	0.0190	0.0190	95.0	95.0	79.0-120			0.000	20
2-Amino-4,6-Dinitrotoluene	0.0200	0.0185	0.0185	92.5	92.5	80.0-122			0.000	20
HMX	0.0200	0.0177	0.0183	88.5	91.5	73.0-120			3.33	20
PETN	0.0200	0.0191	0.0186	95.5	93.0	80.0-120			2.65	20
Nitroglycerine	0.0200	0.0198	0.0194	99.0	97.0	70.0-120			2.04	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3725066-2 11/03/21 10:46 • (LCSD) R3725066-3 11/03/21 11:13

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				*95.7*	*92.2*	*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	Analysis / Container / Preservative
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	Site/Facility ID # GSA Goodfellow FC	P.O. # 183149	
Collected by (signature): (b) (6) [redacted]	*Rush?* (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day	Quote #	
Packed on Ice N ___ Y X		Date Results Needed: STD TAT	No. of Cntrs

Chain of Custody Page ___ of ___

Pace Analytical®

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

L1448438

B063

Table #

Acctnum: **BURNMCKC**
Template: **T190414**
Prelogin: **P878683**
PM: **206 - Jeff Carr**
PB:
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8330 1L-Amb NoPres	Remarks	Sample # (lab only)
MW-08 10272021	GRAB	GW		10/27	1522	3	X		01
MW-08 10272021/DUP	GRAB	GW		10/27	1522	3	X		02
~~ ~~		~~GW~~				~~2~~	~~X~~		

* 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 X

Tracking #

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	
(b) (6) [redacted]	10/28/21	15:31	(b) (6) [redacted]		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: ALO °C 2.1+0=2.1	Bottles Received: 6	If preservation required by Login: Date/Time
(b) (6) [redacted]					
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-29-21 Time: 0900	Hold:	Condition: NCF / OK
			(b) (6) [redacted]		

APPENDIX D – DATA VALIDATION MEMORANDUM

December 10, 2021

Review of Analytical Data

Quarterly Groundwater Sampling Event - October 2021
GSA Goodfellow Federal Complex
Bannister
Kansas City, Missouri

SDG(s): 21101719 and L1424438

Groundwater samples were collected at the Goodfellow Federal Complex, Bannister in Kansas City, Missouri during October 2021 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)* (Etegra, Inc., 2021), the *U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic and Organic Data Review*, and *Test Methods for Evaluating Solid Waste-Physical Chemical Methods* (*SW846*) (USEPA, 2020a and 2020b) 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 ID	Lab ID	Sample Date	6010B Total	6010B Diss	8082	8260B	8270C	8330
21101729	MW-09 10272021	21101729-001	10/27/21	X	X	X	X	X	
21101729	MW-13 10272021	21101729-002	10/27/21	X		X	X	X	
21101729	MW-16 10272021	21101729-003	10/27/21	X		X	X	X	
21101729	MW-12 10272021	21101729-004	10/27/21	X		X	X	X	
21101729	MW-08 10272021	21101729-005	10/27/21	X		X	X	X	
21101729	TB-02	21101729-006	10/28/21				X		
21101729	MW-15 10282021	21101729-007	10/28/21	X	X	X	X	X	
21101729	RINSE- 10282021	21101729-008	10/28/21	X		X	X	X	
21101729	MW-07 10282021	21101729-009	10/28/21	X		X	X	X	
21101729	MW-15 10282021/DUP	21101729-010	10/28/21	X	X	X	X	X	
21101729	MW-19 10282021	21101729-011	10/28/21	X		X	X	X	
21101729	MW-01 10252021	21101729-012	10/25/21	X	X	X	X	X	

SDG	Sample ID	Lab ID	Sample Date	6010B Total	6010B Diss	8082	8260B	8270C	8330
21101729	MW-02 10252021	21101729-013	10/25/21	X		X	X	X	
21101729	MW-03 10252021	21101729-014	10/25/21	X		X	X	X	
21101729	MW-05 10252021	21101729-015	10/25/21	X		X	X	X	
21101729	TB-01	21101729-016	10/28/21				X		
21101729	MW-04 10262021	21101729-017	10/26/21	X	X	X	X	X	
21101729	MW-06 10262021	21101729-018	10/26/21	X	O	X	X	X	
21101729	MW-14 10262021	21101729-019	10/26/21	X	O	X	X	X	
21101729	MW-18 10262021	21101729-020	10/26/21	X	O	X	X	X	
21101729	MW-17 10262021	21101729-021	10/26/21	X	O	X	X	X	
21101729	MW-10 10262021	21101729-022	10/26/21	X	O	X	X	X	
L1424438	WW-08 10272021	L1424438-01	10/27/21						X
L1424438	WW-08 10272021/DUP	L1424438-02	10/27/21						X

X – Analysis requested and performed.
O – Analysis requested on the Chain-of-Custody, but no samples were provided to the laboratory (see Item 2.0).

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 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.

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 except for samples MW-06, MW-14, MW-18, MW-17, and MW-10. Bottles for dissolved metals analyses were not provided with the samples, therefore, these analyses could not be performed.
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 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 (except explosives) as the investigative groundwater samples. No target analytes were detected at or above the RL in the rinsate blank, with the following exceptions:

- Rinse-10282021 (SDG 21101729):
  - Acetone = 26.0 ug/L: Because the acetone results in the investigative samples were qualified based on the acetone detects in the trip blanks, TB-01 and TB-02 (see item 6., below, for details), no further qualifiers were required based on the acetone detect in the rinsate blank.
  - Copper = 0.0205 mg/L: Because copper was not detected in the client samples, and therefore, not affected by any potential cross-contamination, no qualifiers were required.

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. Two trip blanks were analyzed for this sampling event. No target analytes were detected at the RL in the trip blanks, with the following exceptions:

   - TB-01 (SDG 21101729): Acetone = 10.4 ug/L.
   - TB-02 (SDG 21101729):
     - Acetone = 31.0 ug/L.
     - Tetrahydrofuran = 5.7 ug/L.

   Because both trip blanks, TB-01 and TB-02, were placed in the same cooler as the investigative VOC samples, both trip blanks are associated with the investigative samples. Therefore, the highest concentration for each detected analyte in the trip blanks were used to evaluate trip blank contamination in accordance with the *National Functional Guidelines for Organic Data Review* (USEPA, 2020). The acetone results for samples MW-01, MW-02, MW-04, MW-07, MW-08, MW-10, MW-13, MW-14, MW-17, and MW-18 were qualified as non-detect (U) at the sample concentration. The tetrahydrofuran result for sample MW-13 was qualified as estimated (J+).

   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.

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 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 VOC LCS/LCSD in Batch 184486 associated with samples, Lab IDs, 21101719-001 through 21101719-013, the following %Rs did not meet criteria:
     - The LCS and LCSD %Rs for methyl acrylate (125.0% and 131.3%) and tert-butyl alcohol (120.6% and 127.1%) were above the 75.2-124% and 64.9-118% laboratory limits, respectively. However, because these analytes were not detected in the associated

samples, and therefore, not affected by the high bias indicated by the LCS and LCSD %Rs, no data qualifiers were applied.

- The LCSD %Rs for 1,1-dichloro-2-propanone (119.4%), ethyl acetate (119%), and propionitrile (127.5%) were above the 74.9-117%, 70.3-115%, and 76.2-127% laboratory limits, respectively. However, because these analytes were not detected in the associated samples, and therefore, not affected by the high bias indicated by the LCSD %Rs, no data qualifiers were applied.

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 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 MS/MSD %Rs and RPDs were compared to laboratory control limits. The MS/MSD analyses met criteria.

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*. Two FDs were collected for this sampling event. Sample MW-15 10282021/DUP is the FD for parent sample MW-15 10282021 (SDG 21101729) for all methods except explosives; and WW-08 10272021/DUP is the FD for parent sample WW-08 10272021 (SDG L1424438) for explosives.

    No target analytes were detected at or above the RL in the parent samples and associated field duplicate samples, therefore, the FD RPDs met criteria.

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 reporting limit (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.

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** – The data were acceptable with the following qualifications:

- Due to contamination in the trip blanks, the acetone results for samples MW-01, MW-02, MW-04, MW-07, MW-08, MW-10, MW-13, MW-14, MW-17, and MW-18 (SDG 21101729) were qualified as non-detect (U) at the sample concentration.
- Due to contamination in one of the trip blanks, TB-02 (SDG 21101729), the tetrahydrofuran result for sample MW-13 was qualified as estimated (J+).

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.

Summary of Qualified Data:

SDG	Lab Sample ID	Client Sample ID	Matrix	Parameter	Lab Result	Lab Flag	Units	DV Qual	Reason
21101729	21101729-002	MW-13 10272021	WG	Tetrahydrofuran	5.9		ug/L	J+	TB Detect
21101729	21101729-002	MW-13 10272021	WG	Acetone	33.2		ug/L	U	TB Detect
21101729	21101729-005	MW-08 10272021	WG	Acetone	10.3		ug/L	U	TB Detect
21101729	21101729-009	MW-07 10282021	WG	Acetone	14.4		ug/L	U	TB Detect
21101729	21101729-012	MW-01 10252021	WG	Acetone	18.2		ug/L	U	TB Detect
21101729	21101729-013	MW-02 10252021	WG	Acetone	13.5		ug/L	U	TB Detect
21101729	21101729-017	MW-04 10262021	WG	Acetone	18.0		ug/L	U	TB Detect
21101729	21101729-019	MW-14 10262021	WG	Acetone	18.0		ug/L	U	TB Detect
21101729	21101729-020	MW-18 10262021	WG	Acetone	21.9		ug/L	U	TB Detect
21101729	21101729-021	MW-17 10262021	WG	Acetone	10.3		ug/L	U	TB Detect
21101729	21101729-022	MW-10 10262021	WG	Acetone	20.7		ug/L	U	TB Detect

DV Qual (Validation Qualifier):
U = The analyte was qualified as not detected due to non-conformances discovered during data validation.
J+ = The analyte was qualified as estimated due to non-conformances discovered during data validation.

REFERENCES

Etegra, Inc., 2021. *Final Quality Assurance Project Plan, Goodfellow Federal Complex*. February.

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