



## JULY 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 installed and sampled according to [GSA's Remedial Investigation Work Plan](#) that Missouri Department of Natural Resources approved in March 2021.

In July 2021, 17 of the 19 monitoring wells were sampled. Monitoring wells MW-11 and MW-14 were 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. Copper and zinc 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 three more 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](mailto:r6environmental@gsa.gov), and GSA will provide responses from the appropriate experts.

Please note: The tables and figures in this over 450-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](mailto:r6environmental@gsa.gov).

**Goodfellow Federal Complex  
Quarterly Groundwater Sampling Report  
July 2021**



**General Services Administration  
Kansas City, Missouri**

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

**Project No. 128487**

**October 2021**

# **Goodfellow Federal Complex Quarterly Groundwater Sampling Report July 2021**

prepared for

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

**Project No. 128487**

**October 2021**

prepared by

**Burns & McDonnell  
Kansas City, Missouri**

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## LIST OF ABBREVIATIONS

<b><u>Abbreviation</u></b>	<b><u>Term/Phrase/Name</u></b>
DRO	diesel range organics
Etegra	Etegra, Inc.
FSP	<i>Final Field Sampling Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
GFC	Goodfellow Federal Complex
GRO	gasoline range organics
GSA	General Services Administration
HASP	<i>Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri</i>
IDW	Investigation-derived waste
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
ORO	oil range organics
PAH	polycyclic aromatic hydrocarbon
PAL	project action limit
PCB	polychlorinated biphenyl
QAPP	<i>Final Quality Assurance Project Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>
QC	quality control
RI	remedial investigation
SLOP	St. Louis Ordnance Plant
SSSP	<i>Final Site Specific Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis Missouri</i>
TekLab	TekLab, Inc.
TPH	total petroleum hydrocarbon
VOC	volatile organic compound
Work Plan	<i>Final Remedial Investigation Work Plan; Goodfellow Federal Complex, St. Louis, Missouri</i>

## 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 first 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 a combined stormwater and sanitary sewer collection system.

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

### 1.1 Project Documentation

The following planning documents provided general guidance for the groundwater sampling activities during July 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 July 2021 quarterly sampling event:

- Inspect the well integrity for the 19 newly installed monitoring wells (MW-01 through MW-19);
- Gauge the water levels and total depths for the 19 newly installed monitoring wells; and
- Sample the 19 newly installed 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 and MW-14 were completed as identified above. Monitoring Wells MW-11 and MW-14 were dry; 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 this Quarterly Groundwater Sampling Report sectional outline.
- Section 3.0, Field Activities, discusses the field activities that were conducted at the GFC during the July 2021 groundwater sampling event.
- Section 4.0, Laboratory Analytical Methods, presents the analytical methods that groundwater samples were analyzed for during the July 2021 groundwater sampling event.
- Section 5.0, Groundwater Analytical Results, discusses the groundwater analytical results for the July 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 the analytical laboratory reports, and Appendix C includes the data validation memorandum. The tables and figures in the appendices may not be accessible for people using screen reader technology. The information can be furnished upon request by contacting 816-223-6198 or [r6environmental@gsa.gov](mailto:r6environmental@gsa.gov).

### **3.0 FIELD ACTIVITIES**

Field activities were completed to meet the project objectives. Field activities were conducted in general accordance with the FSP. The field activities conducted at the GFC during 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 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 work attire 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 July 2021.

#### **3.2 Monitoring Well Inspections**

The 19 newly installed monitoring wells (MW-01 through MW-19) were inspected on July 6, 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 newly installed monitoring wells (MW-01 through MW-19) were gauged for water levels and well total depths on July 6, 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 504.88 feet above mean sea level (MW-19) to 555.70 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 and groundwater flow in the central and southern portions of the site is toward the east-southeast. As this is the first sampling event, groundwater hydrographs have not been developed.

A hydrograph plotting groundwater elevations will be developed in subsequent quarterly groundwater sampling reports.

### **3.4 Groundwater Sampling**

Seventeen of the 19 monitoring wells (MW-01 through MW-10, MW-12, MW-13, and MW-15 through MW-19) were purged and sampled using low-flow techniques on July 6 through 9, 2021 and July 29, 2021. Monitoring Wells MW-11 and MW-14 were dry; thus, no groundwater samples were 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 400 mL/min. Low-flow sampling included the use of polyethylene tubing, a non-dedicated QED<sup>®</sup> Sample Pro Portable MicroPurge<sup>®</sup> 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<sup>®</sup> 556 MPS water quality meter equipped to a flow-through cell. Turbidity was measured ex-situ using a LaMotte<sup>®</sup> 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<sup>®</sup> 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 potable or 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 52-gallons of liquid IDW was generated. IDW generated was added to existing IDW water totes that were used during monitoring well installation activities. The characterization and disposal of this IDW is documented in the *Goodfellow Federal Complex Monitoring Well Installation Summary Report; Goodfellow Federal Complex; St. Louis*,

*Missouri* (Burns & McDonnell, 2021c). 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, 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, total petroleum hydrocarbon (TPH), 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. 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).

Groundwater samples for TPH – gasoline range organics (GRO) by USEPA Method 8260B were inadvertently collected at Monitoring Wells MW-01, MW-02, MW-03, MW-04, MW-05, MW-06, MW-07, MW-09, MW-10, MW-13, MW-16, MW-17, and MW-18. Groundwater samples for TPH – diesel range organics (DRO) and TPH – oil range organics (ORO) by USEPA Method 8270C were inadvertently collected at all of the monitoring wells sampled. Table 3 details the analytical suite each sampled monitoring well was analyzed for.

## **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. Copies of the laboratory analytical reports are provided in Appendix B.

### **5.1 Total Metals**

The metals (total), copper and zinc were detected in groundwater samples collected from Monitoring Well MW-08 at trace-level concentrations. Copper and zinc concentrations were 0.0540 milligrams per liter (mg/L) and 0.0413 mg/L, respectively. Zinc was detected in the groundwater sample collected from Monitoring Well MW-12 at a concentration of 0.0206 mg/L. Copper was detected in the groundwater sample collected from Monitoring Well MW-13 at a concentration of 0.0129 mg/L. All detected metals (total) were reported below their respective PALs.

### **5.2 Dissolved Metals**

Dissolved metals were collected from 20% of the site monitoring wells (four wells) and included Monitoring Wells MW-02, MW-05, MW-13, and MW-18. The metals, copper and zinc were detected in groundwater sample collected from Monitoring Well MW-13 at trace-level concentrations. Copper and zinc concentrations were 0.0129 mg/L and 0.0196 mg/L, respectively. All dissolved metals that were detected were reported below their respective PALs.

### **5.3 Polychlorinated Biphenyls**

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

### **5.4 Polycyclic Aromatic Hydrocarbons**

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

### **5.5 Total Petroleum Hydrocarbons**

As discussed in Section 4.0, TPHs were inadvertently collected during groundwater sampling activities. However, since TPHs were sampled and analyzed, the results have been included in this Quarterly Groundwater Sampling Report and the results are discussed below.

### **5.5.1 Gasoline Range Organics**

TPH-GRO were not detected in any groundwater samples collected from site monitoring wells above their respective laboratory reporting limits. TPH-GRO was not analyzed at Monitoring Wells MW-08, MW-12, MW-15, and MW-19.

### **5.5.2 Diesel Range Organics**

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

### **5.5.3 Oil Range Organics**

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

## **5.6 Volatile Organic Compounds**

Acetone, a common laboratory contaminant, was detected in the groundwater sample collected from Monitoring Well MW-13 at a trace-level concentration of 0.0225 mg/L below its PAL. Other than the trace acetone detection, no other VOCs constituents were detected in the groundwater samples collected from site monitoring wells above their respective laboratory reporting limits.

## **5.7 Explosives**

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

## **5.8 Quality Control Samples**

QC 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, two equipment rinsate blank samples, and four trip blanks. Copies of the laboratory analytical reports are provided in Appendix B.

Two field duplicate samples (MW-02/DUP and MW-08/DUP) were collected during this sampling event from Monitoring Wells MW-02 and MW-08, respectively. Duplicate Sample MW-02/DUP was analyzed for total metals, dissolved metals, PCBs, PAHs, TPH-GRO, TPH-DRO, TPH-ORO, and VOCs. No analytes were detected above laboratory reporting limits in the parent and duplicate sample pair (MW-02 / MW-02/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-13. The MS/MSD sample pair were analyzed for total metals, dissolved metals, PCBs, and VOCs. TekLab does not analyze spike samples for PAH, TPH-GRO, TPH-DRO, or TPH-ORO.

Two equipment rinsate blank samples (Rinse-16 and Rinse 17) were collected during this sampling event. Rinse-16 was collected following decontaminating sampling equipment used at Monitoring Well MW-05. Rinse-17 was collected following decontaminating sampling equipment used at Monitoring Well MW-17. Both equipment rinsate samples were analyzed for total metals, dissolved metals, PCBs, PAHs, TPH-GRO, TPH-DRO, TPH-ORO, and VOCs. Trace detections of the VOCs, bromodichloromethane and chloroform were detected in Rinse-16 at concentrations of 0.0022 mg/L and 0.0092 mg/L, respectively. No other analytes were detected above laboratory reporting limits in Rinse-16. No analytes were detected above laboratory reporting limits in Rinse-17.

VOC concentrations above laboratory reporting limits were not detected in any of the trip blank samples (TB-07, TB-08, TB-09, and TB-10) submitted for this groundwater sampling event.

## **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 C.

## 7.0 REFERENCES

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

Burns & McDonnell, 2021a. *Final Health and Safety Plan for Remedial Investigation Activities at the Goodfellow Federal Complex; St. Louis, Missouri*, February.

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

Burns & McDonnell, 2021c. *Goodfellow Federal Complex Monitoring Well Installation Summary Report; Goodfellow Federal Complex; St. Louis, Missouri*, August.

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		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		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:**

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		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)
	Northing (feet)	Easting (feet)						
MW-01	1039540.01	886756.16	543.61	543.55	45.37	45.37	27.15	516.40
MW-02	1039740.05	886772.67	544.91	544.92	40.15	40.15	14.12	530.80
MW-03	1039766.08	887286.65	539.97	539.95	35.54	35.54	11.95	528.00
MW-04	1039867.83	886169.82	559.24	559.27	38.48	38.48	16.99	542.28
MW-05	1040193.91	886714.16	550.50	550.51	33.34	33.34	10.78	539.73
MW-06	1040587.21	886232.49	577.68	577.72	31.11	31.11	22.02	555.70
MW-07	1040354.90	887604.51	540.31	540.49	30.45	30.45	16.40	524.09
MW-08	1040246.30	887212.28	545.27	545.28	30.61	30.61	12.51	532.77
MW-09	1040523.22	886983.47	550.71	550.73	35.78	35.78	13.62	537.11
MW-10	1040781.41	886693.21	557.58	557.40	32.39	32.39	9.56	547.84
MW-11	1041164.57	886430.24	581.03	581.06	33.02	33.02	DRY	NM
MW-12	1040836.73	887502.43	545.58	545.57	45.80	45.80	15.67	529.90
MW-13	1041047.78	887235.78	551.17	551.20	21.16	21.16	3.20	548.00
MW-14	1041487.39	886782.39	563.77	563.86	21.16	21.16	DRY	NM
MW-15	1041098.45	887886.42	541.18	541.18	38.65	38.65	21.83	519.35
MW-16	1041247.61	887513.16	548.80	548.76	38.58	38.58	17.18	531.58
MW-17	1041488.73	887088.65	557.77	557.84	24.63	24.63	19.12	538.72
MW-18	1041681.76	886623.58	564.77	564.89	28.68	28.68	14.40	550.49
MW-19	1041423.95	888125.73	524.51	524.51	40.62	40.62	19.63	504.88

**Notes:**

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

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)	TPH-GRO <sup>1</sup> (8260B)	TPH-DRO <sup>1</sup> (8270C)	TPH-ORO <sup>1</sup> (8270C)	PCBs (8082)	Metals <sup>2</sup> (Totals) (6010B)	Metals <sup>2</sup> (Dissolved) (6010B)	Explosives (8330)	Temp	pH	Cond	ORP	DO	Turbidity	Field Duplicate	MS/MSD	
GFC	MW-01	07062021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X			
	MW-02	07072021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	X	--	X	X	X	X	X	X	X	X	
	MW-03	07072021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-04	07072021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-05	07072021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	X	--	X	X	X	X	X	X	X		
	MW-06	07072021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-07	07082021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-08	07092021	Overburden/ Weathered Bedrock	X	X	--	X	X	--	X	X	X	X	--	X	X	X	X	X	X	X	X	X <sup>3</sup>	
	MW-09	07092021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-10	07082021	Overburden/ Weathered Bedrock	X	X	--	X	X	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.									X	X	X	X	X	X			
	MW-12	07092021	Overburden/ Weathered Bedrock	X	X	--	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-13	07082021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	X	--	X	X	X	X	X	X	X		X <sup>4</sup>
	MW-14	--	Overburden/ Weathered Bedrock	X	DRY	--	No sample was collected. Monitoring well was dry.									X	X	X	X	X	X			
	MW-15	07092021	Overburden/ Weathered Bedrock	X	X	--	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-16	07082021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-17	07292021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	--	--	X	X	X	X	X	X	X		
	MW-18	07082021	Overburden/ Weathered Bedrock	X	X	--	X	X	X	X	X	X	X	X	--	X	X	X	X	X	X	X		
	MW-19	07092021	Overburden/ Weathered Bedrock	X	X	--	X	X	--	X	X	X	X	--	--	X	X	X	X	X	X	X		

**Notes:**

1. TPH-GRO, TPH-DRO, and TPH-ORO were inadvertently analyzed by the laboratory. These analyses were not required by the approved *Final Remedial Investigation Work Plan, Goodfellow Federal Complex, St. Louis Missouri (Etegra, 2001)*.
2. Metals analyzed for antimony, arsenic, copper, lead, and zinc.
3. Duplicate sample from MW-08 was only analyzed for explosives.
4. Laboratory did not analyze MS/MSD for PAHs, TPH-GRO, TPH-DRO, or TPH-ORO.

Cond = specific conductance  
DO = dissolved oxygen  
DRO = diesel range organics

GFC = Goodfellow Federal Complex  
GRO = Gasoline Range Organics  
ID = identification

MS = matrix spike  
MSD = matrix spike duplicate  
ORO = oil range organics

ORP = oxidation-reduction potential  
PAH = polycyclic aromatic hydrocarbon  
PCB = polychlorinated biphenyl

QA = quality assurance  
QC = quality control  
Temp = temperature

TPH = total petroleum hydrocarbon  
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-02/DUP	MW-03
			Sample Designator:	07062021	07072021	07072021	07072021
			Sample Date:	7/6/2021	7/7/2021	7/7/2021	7/7/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	Duplicate	-
Parameter	Units	PAL <sup>1</sup>					
<b>Metals, Total</b>							
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	
<b>Metals, Dissolved</b>							
Antimony	mg/L	6	NA	0.0500 U	0.0500 U	NA	
Arsenic	mg/L	10	NA	0.0250 U	0.0250 U	NA	
Copper	mg/L	1,300	NA	0.0050 U	0.0050 U	NA	
Lead	mg/L	15	NA	0.0150 U	0.0150 U	NA	
Zinc	mg/L	4.69	NA	0.0100 U	0.0100 U	NA	
<b>Polychlorinated Biphenyls</b>							
Aroclor 1016	mg/L	0.0172	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1221	mg/L	0.002	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1232	mg/L	0.002	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1242	mg/L	0.00101	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1248	mg/L	0.002	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1254	mg/L	0.00125	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
Aroclor 1260	mg/L	0.002	0.00100 U	0.00105 U	0.00100 U	0.00100 U	
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/L	1,610	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Acenaphthylene	mg/L	2,060	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Anthracene	mg/L	2,290	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Benzo(a)anthracene	mg/L	0.133	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Benzo(a)pyrene	mg/L	0.2	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Benzo(k)fluoranthene	mg/L	937	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Chrysene	mg/L	81.7	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Fluoranthene	mg/L	14,200	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Fluorene	mg/L	3,010	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Naphthalene	mg/L	0.1	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Phenanthrene	mg/L	1,190	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
Pyrene	mg/L	17,300	0.00100 U	0.00100 U	0.00400 U	0.00100 U	
<b>Total Petroleum Hydrocarbons</b>							
Gasoline Range Organics	mg/L	18.1	0.5 U	0.5 U	0.5 U	0.5 U	
Diesel Range Organics	mg/L	34.3	0.5 U	0.5 U	2 U	0.5 U	
Oil Range Organics	mg/L	31.8	0.7 U	0.7 U	2.8 U	0.7 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-02/DUP	MW-03
			Sample Designator:	07062021	07072021	07072021	07072021
			Sample Date:	7/6/2021	7/7/2021	7/7/2021	7/7/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	Duplicate	-
Parameter	Units	PAL <sup>1</sup>					
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 U	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U	0.005 U	
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U	0.0005 U	
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U	0.03 U	
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U	0.002 U	
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U	0.002 U	
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U	
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U	
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U	0.002 U	
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U	0.002 U	
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U	0.002 U	
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U	0.004 U	
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U	0.002 U	
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U	0.002 U	
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U	0.002 U	
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U	
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U	0.004 U	
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U	0.004 U	
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U	0.002 U	
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U	0.005 U	
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U	
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U	0.01 U	
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U	0.005 U	
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U	0.002 U	
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U	0.01 U	
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U	0.01 U	
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U	0.002 U	
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U	0.01 U	
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U	0.01 U	
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U	0.01 U	
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U	0.02 U	
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U	0.005 U	
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U	0.005 U	
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U	0.0005 U	
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U	0.002 U	
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U	0.002 U	

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

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-01	MW-02	MW-02/DUP	MW-03
			Sample Designator:	07062021	07072021	07072021	07072021
			Sample Date:	7/6/2021	7/7/2021	7/7/2021	7/7/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	Duplicate	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
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	0.001 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-02/DUP	MW-03
			Sample Designator:	07062021	07072021	07072021	07072021
			Sample Date:	7/6/2021	7/7/2021	7/7/2021	7/7/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	Duplicate	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
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	
<b>Explosives</b>							
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*

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-01</b>	<b>MW-02</b>	<b>MW-02/DUP</b>	<b>MW-03</b>
			<b>Sample Designator:</b>	<b>07062021</b>	<b>07072021</b>	<b>07072021</b>	<b>07072021</b>
			<b>Sample Date:</b>	<b>7/6/2021</b>	<b>7/7/2021</b>	<b>7/7/2021</b>	<b>7/7/2021</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>-</b>	<b>Duplicate</b>	<b>-</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>					

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

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-04	MW-05	MW-06	MW-07
			Sample Designator:	07072021	07072021	07072021	07082021
			Sample Date:	7/7/2021	7/7/2021	7/7/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Metals, Total</b>							
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	
<b>Metals, Dissolved</b>							
Antimony	mg/L	6	NA	0.0500 U	NA	NA	
Arsenic	mg/L	10	NA	0.0250 U	NA	NA	
Copper	mg/L	1,300	NA	0.0050 U	NA	NA	
Lead	mg/L	15	NA	0.0150 U	NA	NA	
Zinc	mg/L	4.69	NA	0.0100 U	NA	NA	
<b>Polychlorinated Biphenyls</b>							
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	
<b>Polycyclic Aromatic Hydrocarbons</b>							
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	
<b>Total Petroleum Hydrocarbons</b>							
Gasoline Range Organics	mg/L	18.1	0.5 U	0.5 U	0.5 U	0.5 U	
Diesel Range Organics	mg/L	34.3	0.5 U	0.5 U	0.5 U	0.5 U	
Oil Range Organics	mg/L	31.8	0.7 U	0.7 U	0.7 U	0.7 U	

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

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-04	MW-05	MW-06	MW-07
			Sample Designator:	07072021	07072021	07072021	07082021
			Sample Date:	7/7/2021	7/7/2021	7/7/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	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	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	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	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	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	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	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	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	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	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	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	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	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	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	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	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	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	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	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	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	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	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	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	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	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	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	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	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	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	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	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	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	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	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	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	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	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	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	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	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	0.002 U

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

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-04	MW-05	MW-06	MW-07
			Sample Designator:	07072021	07072021	07072021	07082021
			Sample Date:	7/7/2021	7/7/2021	7/7/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Bromodichloromethane	mg/L	0.004	0.002 U	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	0.002 U
Bromomethane	mg/L	0.01	0.005 U	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	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	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	0.002 U
Chloroethane	mg/L	3.13	0.002 U	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	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	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	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	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	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	0.002 U
Cyclohexanone	mg/L	404	0.02 U	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	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	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	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	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	0.01 U
Ethyl ether	mg/L	NE	0.005 U	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	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	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	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	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	0.005 U
Iodomethane	mg/L	NE	0.005 U	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	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	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	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	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	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	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	0.002 U
Naphthalene	mg/L	0.01	0.005 U	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	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	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	0.005 U
n-Hexane	mg/L	0.01	0.005 U	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	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	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	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	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	0.002 U



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

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-04	MW-05	MW-06	MW-07
			Sample Designator:	07072021	07072021	07072021	07082021
			Sample Date:	7/7/2021	7/7/2021	7/7/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Propionitrile	mg/L	NE	0.01 U	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	0.002 U
Styrene	mg/L	1.65	0.002 U	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	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	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	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	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	0.005 U
Toluene	mg/L	3.16	0.002 U	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	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	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	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	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	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	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	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
<b>Explosives</b>							
Tetryl	mg/L	0.154	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA	NA	NA

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

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-04</b>	<b>MW-05</b>	<b>MW-06</b>	<b>MW-07</b>
			<b>Sample Designator:</b>	<b>07072021</b>	<b>07072021</b>	<b>07072021</b>	<b>07082021</b>
			<b>Sample Date:</b>	<b>7/7/2021</b>	<b>7/7/2021</b>	<b>7/7/2021</b>	<b>7/8/2021</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>					

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

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:	07092021	07092021	07092021	07082021
			Sample Date:	7/9/2021	7/9/2021	7/9/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Duplicate	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Metals, Total</b>							
Antimony	mg/L	6	0.0500 U	NA	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	0.0250 U	NA	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	<b>0.0540</b>	NA	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	0.0150 U	NA	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	<b>0.0413</b>	NA	0.0100 U	0.0100 U	0.0100 U
<b>Metals, Dissolved</b>							
Antimony	mg/L	6	NA	NA	NA	NA	NA
Arsenic	mg/L	10	NA	NA	NA	NA	NA
Copper	mg/L	1,300	NA	NA	NA	NA	NA
Lead	mg/L	15	NA	NA	NA	NA	NA
Zinc	mg/L	4.69	NA	NA	NA	NA	NA
<b>Polychlorinated Biphenyls</b>							
Aroclor 1016	mg/L	0.0172	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1221	mg/L	0.002	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1242	mg/L	0.00101	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1254	mg/L	0.00125	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/L	1,610	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Acenaphthylene	mg/L	2,060	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Benzo(a)anthracene	mg/L	0.133	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Benzo(b)fluoranthene	mg/L	7.65	0.00100 U	NA	0.00100 U	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	0.00100 U
Benzo(k)fluoranthene	mg/L	937	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Dibenzo(a,h)anthracene	mg/L	985	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Fluorene	mg/L	3,010	0.00100 U	NA	0.00100 U	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	0.00100 U
Naphthalene	mg/L	0.1	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
Pyrene	mg/L	17,300	0.00100 U	NA	0.00100 U	0.00100 U	0.00100 U
<b>Total Petroleum Hydrocarbons</b>							
Gasoline Range Organics	mg/L	18.1	NA	NA	0.5 U	0.5 U	0.5 U
Diesel Range Organics	mg/L	34.3	0.5 U	NA	0.5 U	0.5 U	0.5 U
Oil Range Organics	mg/L	31.8	0.7 U	NA	0.7 U	0.7 U	0.7 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:	07092021	07092021	07092021	07082021
			Sample Date:	7/9/2021	7/9/2021	7/9/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Duplicate	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	NA	0.002 U	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	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	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	NA	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	NA	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	NA	0.002 U	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	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	NA	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	NA	0.004 U	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	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	NA	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	NA	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	NA	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	NA	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	NA	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	NA	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	NA	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	NA	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	NA	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	NA	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	NA	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	NA	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	NA	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	NA	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	NA	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	NA	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-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	07092021	07092021	07092021	07082021
			Sample Date:	7/9/2021	7/9/2021	7/9/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Duplicate	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Bromodichloromethane	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Bromoform	mg/L	0.214	0.002 U	NA	0.002 U	0.002 U	0.002 U
Bromomethane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
Carbon disulfide	mg/L	0.177	0.002 U	NA	0.002 U	0.002 U	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Chlorobenzene	mg/L	0.0702	0.002 U	NA	0.002 U	0.002 U	0.002 U
Chloroethane	mg/L	3.13	0.002 U	NA	0.002 U	0.002 U	0.002 U
Chloroform	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	NA	0.005 U	0.005 U	0.005 U
Chloroprene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	NA	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA	0.002 U	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	0.002 U
Cyclohexanone	mg/L	404	0.02 U	NA	0.02 U	0.02 U	0.02 U
Dibromochloromethane	mg/L	80	0.002 U	NA	0.002 U	0.002 U	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	NA	0.002 U	0.002 U	0.002 U
Dichlorodifluoromethane	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	NA	0.002 U	0.002 U	0.002 U
Ethyl acetate	mg/L	2.13	0.01 U	NA	0.01 U	0.01 U	0.01 U
Ethyl ether	mg/L	NE	0.005 U	NA	0.005 U	0.005 U	0.005 U
Ethyl methacrylate	mg/L	2.76	0.005 U	NA	0.005 U	0.005 U	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	NA	0.002 U	0.002 U	0.002 U
Ethyl-tert-butyl ether	mg/L	0.0144	0.002 U	NA	0.002 U	0.002 U	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
Hexachloroethane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
Iodomethane	mg/L	NE	0.005 U	NA	0.005 U	0.005 U	0.005 U
Isopropylbenzene	mg/L	0.1790	0.002 U	NA	0.002 U	0.002 U	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
Methacrylonitrile	mg/L	0.495	0.005 U	NA	0.005 U	0.005 U	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	NA	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether	mg/L	0.664	0.002 U	NA	0.002 U	0.002 U	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	NA	0.005 U	0.005 U	0.005 U
Methylene chloride	mg/L	0.685	0.002 U	NA	0.002 U	0.002 U	0.002 U
Naphthalene	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
n-Butyl acetate	mg/L	NE	0.002 U	NA	0.002 U	0.002 U	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	NA	0.002 U	0.002 U	0.002 U
n-Heptane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
n-Hexane	mg/L	0.01	0.005 U	NA	0.005 U	0.005 U	0.005 U
Nitrobenzene	mg/L	0.151	0.05 U	NA	0.05 U	0.05 U	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	NA	0.002 U	0.002 U	0.002 U
o-Xylene	mg/L	0.0873	0.002 U	NA	0.002 U	0.002 U	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	NA	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene	mg/L	98.5	0.002 U	NA	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-08	MW-08/DUP	MW-09	MW-10
			Sample Designator:	07092021	07092021	07092021	07082021
			Sample Date:	7/9/2021	7/9/2021	7/9/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Duplicate	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Propionitrile	mg/L	NE	0.01 U	NA	0.01 U	0.01 U	0.01 U
sec-Butylbenzene	mg/L	6.23	0.002 U	NA	0.002 U	0.002 U	0.002 U
Styrene	mg/L	1.65	0.002 U	NA	0.002 U	0.002 U	0.002 U
tert-Amyl methyl ether	mg/L	0.0828	0.002 U	NA	0.002 U	0.002 U	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	NA	0.01 U	0.01 U	0.01 U
tert-Butylbenzene	mg/L	9.43	0.002 U	NA	0.002 U	0.002 U	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	NA	0.0005 U	0.0005 U	0.0005 U
Tetrahydrofuran	mg/L	109	0.005 U	NA	0.005 U	0.005 U	0.005 U
Toluene	mg/L	3.16	0.002 U	NA	0.002 U	0.002 U	0.002 U
trans-1,2-Dichloroethene	mg/L	100	0.002 U	NA	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	NA	0.002 U	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	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane	mg/L	5.36	0.005 U	NA	0.005 U	0.005 U	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	NA	0.005 U	0.005 U	0.005 U
Vinyl chloride	mg/L	0.004	0.002 U	NA	0.002 U	0.002 U	0.002 U
Xylenes, Total	mg/L	10	0.004 U	NA	0.004 U	0.004 U	0.004 U
<b>Explosives</b>							
Tetryl	mg/L	0.154	0.000500 U	0.000500 U	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	0.00200 U	0.00200 U	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	0.00200 U	0.00200 U	NA	NA	NA
RDX	mg/L	0.0607	0.00200 U	0.00200 U	NA	NA	NA
Nitrobenzene	mg/L	0.00181	0.000500 U	0.000500 U	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	0.000500 U	0.000500 U	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	0.000500 U	0.000500 U	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	0.000500 U	0.000500 U	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	0.000500 U	0.000500 U	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	0.000500 U	0.000500 U	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	0.000500 U	0.000500 U	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	0.000500 U	0.000500 U	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	0.000500 U	0.000500 U	NA	NA	NA
HMX	mg/L	0.782	0.00200 U	0.00200 U	NA	NA	NA
PETN	mg/L	5.06	0.000500 U	0.000500 U	NA	NA	NA
Nitroglycerine	mg/L	0.00107	0.000500 U	0.000500 U	NA	NA	NA

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

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-08</b>	<b>MW-08/DUP</b>	<b>MW-09</b>	<b>MW-10</b>
			<b>Sample Designator:</b>	<b>07092021</b>	<b>07092021</b>	<b>07092021</b>	<b>07082021</b>
			<b>Sample Date:</b>	<b>7/9/2021</b>	<b>7/9/2021</b>	<b>7/9/2021</b>	<b>7/8/2021</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>Duplicate</b>	<b>-</b>	<b>-</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>					

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

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	0709/2021	07082021	NS
			Sample Date:	NS	7/9/2021	7/8/2021	NS
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Metals, Total</b>							
Antimony	mg/L	6	NS	0.0500 U	0.0500 U	NS	
Arsenic	mg/L	10	NS	0.0250 U	0.0250 U	NS	
Copper	mg/L	1,300	NS	0.0050 U	<b>0.0129</b>	NS	
Lead	mg/L	15	NS	0.0150 U	0.0150 U	NS	
Zinc	mg/L	4.69	NS	<b>0.0206</b>	0.0100 U	NS	
<b>Metals, Dissolved</b>							
Antimony	mg/L	6	NS	NA	0.0500 U	NS	
Arsenic	mg/L	10	NS	NA	0.0250 U	NS	
Copper	mg/L	1,300	NS	NA	<b>0.0129</b>	NS	
Lead	mg/L	15	NS	NA	0.0150 U	NS	
Zinc	mg/L	4.69	NS	NA	<b>0.0196</b>	NS	
<b>Polychlorinated Biphenyls</b>							
Aroclor 1016	mg/L	0.0172	NS	0.00100 U	0.00100 U	NS	
Aroclor 1221	mg/L	0.002	NS	0.00100 U	0.00100 U	NS	
Aroclor 1232	mg/L	0.002	NS	0.00100 U	0.00100 U	NS	
Aroclor 1242	mg/L	0.00101	NS	0.00100 U	0.00100 U	NS	
Aroclor 1248	mg/L	0.002	NS	0.00100 U	0.00100 U	NS	
Aroclor 1254	mg/L	0.00125	NS	0.00100 U	0.00100 U	NS	
Aroclor 1260	mg/L	0.002	NS	0.00100 U	0.00100 U	NS	
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/L	1,610	NS	0.00100 U	0.00400 U	NS	
Acenaphthylene	mg/L	2,060	NS	0.00100 U	0.00400 U	NS	
Anthracene	mg/L	2,290	NS	0.00100 U	0.00400 U	NS	
Benzo(a)anthracene	mg/L	0.133	NS	0.00100 U	0.00400 U	NS	
Benzo(a)pyrene	mg/L	0.2	NS	0.00100 U	0.00400 U	NS	
Benzo(b)fluoranthene	mg/L	7.65	NS	0.00100 U	0.00400 U	NS	
Benzo(g,h,i)perylene	mg/L	218,000	NS	0.00100 U	0.00400 U	NS	
Benzo(k)fluoranthene	mg/L	937	NS	0.00100 U	0.00400 U	NS	
Chrysene	mg/L	81.7	NS	0.00100 U	0.00400 U	NS	
Dibenzo(a,h)anthracene	mg/L	985	NS	0.00100 U	0.00400 U	NS	
Fluoranthene	mg/L	14,200	NS	0.00100 U	0.00400 U	NS	
Fluorene	mg/L	3,010	NS	0.00100 U	0.00400 U	NS	
Indeno(1,2,3-cd)pyrene	mg/L	596	NS	0.00100 U	0.00400 U	NS	
Naphthalene	mg/L	0.1	NS	0.00100 U	0.00400 U	NS	
Phenanthrene	mg/L	1,190	NS	0.00100 U	0.00400 U	NS	
Pyrene	mg/L	17,300	NS	0.00100 U	0.00400 U	NS	
<b>Total Petroleum Hydrocarbons</b>							
Gasoline Range Organics	mg/L	18.1	NS	NA	0.5 U	NS	
Diesel Range Organics	mg/L	34.3	NS	0.5 U	2 U	NS	
Oil Range Organics	mg/L	31.8	NS	0.7 U	2.8 U	NS	



**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	0709/2021	07082021	NS
			Sample Date:	NS	7/9/2021	7/8/2021	NS
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	mg/L	0.00699	NS	0.002 U	0.002 U	NS	NS
1,1,1-Trichloroethane	mg/L	1.13	NS	0.002 U	0.002 U	NS	NS
1,1,2,2-Tetrachloroethane	mg/L	0.00582	NS	0.002 U	0.002 U	NS	NS
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	NS	0.005 U	0.005 U	NS	NS
1,1,2-Trichloroethane	mg/L	0.00105	NS	0.0005 U	0.0005 U	NS	NS
1,1-Dichloro-2-propanone	mg/L	NE	NS	0.03 U	0.03 U	NS	NS
1,1-Dichloroethane	mg/L	0.0114	NS	0.002 U	0.002 U	NS	NS
1,1-Dichloroethene	mg/L	0.0276	NS	0.002 U	0.002 U	NS	NS
1,1-Dichloropropene	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
1,2,3-Trichlorobenzene	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
1,2,3-Trichloropropane	mg/L	0.00411	NS	0.002 U	0.002 U	NS	NS
1,2,3-Trimethylbenzene	mg/L	0.0794	NS	0.002 U	0.002 U	NS	NS
1,2,4-Trichlorobenzene	mg/L	0.00752	NS	0.002 U	0.002 U	NS	NS
1,2,4-Trimethylbenzene	mg/L	0.0475	NS	0.002 U	0.002 U	NS	NS
1,2-Dibromo-3-chloropropane	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
1,2-Dibromoethane	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
1,2-Dichlorobenzene	mg/L	0.5	NS	0.002 U	0.002 U	NS	NS
1,2-Dichloroethane	mg/L	0.00355	NS	0.002 U	0.002 U	NS	NS
1,2-Dichloroethene, Total	mg/L	70	NS	0.004 U	0.004 U	NS	NS
1,2-Dichloropropane	mg/L	0.00577	NS	0.002 U	0.002 U	NS	NS
1,3,5-Trimethylbenzene	mg/L	0.0333	NS	0.002 U	0.002 U	NS	NS
1,3-Dichlorobenzene	mg/L	43.6	NS	0.002 U	0.002 U	NS	NS
1,3-Dichloropropane	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
1,3-Dichloropropene, Total	mg/L	0.00431	NS	0.004 U	0.004 U	NS	NS
1,4-Dichloro-2-butene, Total	mg/L	0.00192	NS	0.004 U	0.004 U	NS	NS
1,4-Dichlorobenzene	mg/L	0.00488	NS	0.002 U	0.002 U	NS	NS
1-Chlorobutane	mg/L	NE	NS	0.005 U	0.005 U	NS	NS
2,2-Dichloropropane	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
2-Butanone	mg/L	354	NS	0.01 U	0.01 U	NS	NS
2-Chloroethyl vinyl ether	mg/L	NE	NS	0.005 U	0.005 U	NS	NS
2-Chlorotoluene	mg/L	17.1	NS	0.002 U	0.002 U	NS	NS
2-Hexanone	mg/L	1.46	NS	0.01 U	0.01 U	NS	NS
2-Nitropropane	mg/L	0.02	NS	0.01 U	0.01 U	NS	NS
4-Chlorotoluene	mg/L	0.0666	NS	0.002 U	0.002 U	NS	NS
4-Methyl-2-pentanone	mg/L	94.9	NS	0.01 U	0.01 U	NS	NS
Acetone	mg/L	3370	NS	0.01 U	<b>0.0225</b>	NS	NS
Acetonitrile	mg/L	6.82	NS	0.01 U	0.01 U	NS	NS
Acrolein	mg/L	0.04	NS	0.02 U	0.02 U	NS	NS
Acrylonitrile	mg/L	0.0117	NS	0.005 U	0.005 U	NS	NS
Allyl chloride	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
Benzene	mg/L	0.00246	NS	0.0005 U	0.0005 U	NS	NS
Bromobenzene	mg/L	0.125	NS	0.002 U	0.002 U	NS	NS
Bromochloromethane	mg/L	0.106	NS	0.002 U	0.002 U	NS	NS

**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	0709/2021	07082021	NS
			Sample Date:	NS	7/9/2021	7/8/2021	NS
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Bromodichloromethane	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
Bromoform	mg/L	0.214	NS	0.002 U	0.002 U	NS	NS
Bromomethane	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
Carbon disulfide	mg/L	0.177	NS	0.002 U	0.002 U	NS	NS
Carbon tetrachloride	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
Chlorobenzene	mg/L	0.0702	NS	0.002 U	0.002 U	NS	NS
Chloroethane	mg/L	3.13	NS	0.002 U	0.002 U	NS	NS
Chloroform	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
Chloromethane	mg/L	0.0331	NS	0.005 U	0.005 U	NS	NS
Chloroprene	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
cis-1,2-Dichloroethene	mg/L	70	NS	0.002 U	0.002 U	NS	NS
cis-1,3-Dichloropropene	mg/L	0.596	NS	0.002 U	0.002 U	NS	NS
cis-1,4-Dichloro-2-butene	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
Cyclohexanone	mg/L	404	NS	0.02 U	0.02 U	NS	NS
Dibromochloromethane	mg/L	80	NS	0.002 U	0.002 U	NS	NS
Dibromomethane	mg/L	0.0199	NS	0.002 U	0.002 U	NS	NS
Dichlorodifluoromethane	mg/L	0.004	NS	0.002 U	0.002 U	NS	NS
Diisopropyl ether	mg/L	0.0697	NS	0.002 U	0.002 U	NS	NS
Ethyl acetate	mg/L	2.13	NS	0.01 U	0.01 U	NS	NS
Ethyl ether	mg/L	NE	NS	0.005 U	0.005 U	NS	NS
Ethyl methacrylate	mg/L	2.76	NS	0.005 U	0.005 U	NS	NS
Ethylbenzene	mg/L	0.00609	NS	0.002 U	0.002 U	NS	NS
Ethyl-tert-butyl ether	mg/L	0.0144	NS	0.002 U	0.002 U	NS	NS
Hexachlorobutadiene	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
Hexachloroethane	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
Iodomethane	mg/L	NE	NS	0.005 U	0.005 U	NS	NS
Isopropylbenzene	mg/L	0.1790	NS	0.002 U	0.002 U	NS	NS
m,p-Xylenes	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
Methacrylonitrile	mg/L	0.495	NS	0.005 U	0.005 U	NS	NS
Methyl Methacrylate	mg/L	10.1	NS	0.005 U	0.005 U	NS	NS
Methyl tert-butyl ether	mg/L	0.664	NS	0.002 U	0.002 U	NS	NS
Methylacrylate	mg/L	0.417	NS	0.005 U	0.005 U	NS	NS
Methylene chloride	mg/L	0.685	NS	0.002 U	0.002 U	NS	NS
Naphthalene	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
n-Butyl acetate	mg/L	NE	NS	0.002 U	0.002 U	NS	NS
n-Butylbenzene	mg/L	8.76	NS	0.002 U	0.002 U	NS	NS
n-Heptane	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
n-Hexane	mg/L	0.01	NS	0.005 U	0.005 U	NS	NS
Nitrobenzene	mg/L	0.151	NS	0.05 U	0.05 U	NS	NS
n-Propylbenzene	mg/L	0.452	NS	0.002 U	0.002 U	NS	NS
o-Xylene	mg/L	0.0873	NS	0.002 U	0.002 U	NS	NS
Pentachloroethane	mg/L	NE	NS	0.005 U	0.005 U	NS	NS
p-Isopropyltoluene	mg/L	98.5	NS	0.002 U	0.002 U	NS	NS

**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	0709/2021	07082021	NS
			Sample Date:	NS	7/9/2021	7/8/2021	NS
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Propionitrile	mg/L	NE	NS	0.01 U	0.01 U	NS	
sec-Butylbenzene	mg/L	6.23	NS	0.002 U	0.002 U	NS	
Styrene	mg/L	1.65	NS	0.002 U	0.002 U	NS	
tert-Amyl methyl ether	mg/L	0.0828	NS	0.002 U	0.002 U	NS	
tert-Butyl alcohol	mg/L	0.286	NS	0.01 U	0.01 U	NS	
tert-Butylbenzene	mg/L	9.43	NS	0.002 U	0.002 U	NS	
Tetrachloroethene	mg/L	0.00972	NS	0.0005 U	0.0005 U	NS	
Tetrahydrofuran	mg/L	109	NS	0.005 U	0.005 U	NS	
Toluene	mg/L	3.16	NS	0.002 U	0.002 U	NS	
trans-1,2-Dichloroethene	mg/L	100	NS	0.002 U	0.002 U	NS	
trans-1,3-Dichloropropene	mg/L	0.596	NS	0.002 U	0.002 U	NS	
trans-1,4-Dichloro-2-butene	mg/L	0.004	NS	0.002 U	0.002 U	NS	
Trichloroethene	mg/L	0.004	NS	0.002 U	0.002 U	NS	
Trichlorofluoromethane	mg/L	5.36	NS	0.005 U	0.005 U	NS	
Vinyl acetate	mg/L	1.61	NS	0.005 U	0.005 U	NS	
Vinyl chloride	mg/L	0.004	NS	0.002 U	0.002 U	NS	
Xylenes, Total	mg/L	10	NS	0.004 U	0.004 U	NS	
<b>Explosives</b>							
Tetryl	mg/L	0.154	NS	NA	NA	NS	
2,4-Dinitrotoluene	mg/L	0.00209	NS	NA	NA	NS	
4-Nitrotoluene (4-NT)	mg/L	0.00818	NS	NA	NA	NS	
RDX	mg/L	0.0607	NS	NA	NA	NS	
Nitrobenzene	mg/L	0.00181	NS	NA	NA	NS	
2,6-Dinitrotoluene	mg/L	0.000964	NS	NA	NA	NS	
2-Nitrotoluene	mg/L	0.000604	NS	NA	NA	NS	
3-Nitrotoluene	mg/L	0.0649	NS	NA	NA	NS	
1,3,5-Trinitrobenzene	mg/L	0.464	NS	NA	NA	NS	
1,3-Dinitrobenzene	mg/L	0.00153	NS	NA	NA	NS	
2,4,6-Trinitrotoluene	mg/L	0.00763	NS	NA	NA	NS	
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NS	NA	NA	NS	
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NS	NA	NA	NS	
HMX	mg/L	0.782	NS	NA	NA	NS	
PETN	mg/L	5.06	NS	NA	NA	NS	
Nitroglycerine	mg/L	0.00107	NS	NA	NA	NS	

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

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-11</b>	<b>MW-12</b>	<b>MW-13</b>	<b>MW-14</b>
			<b>Sample Designator:</b>	<b>NS</b>	<b>0709/2021</b>	<b>07082021</b>	<b>NS</b>
			<b>Sample Date:</b>	<b>NS</b>	<b>7/9/2021</b>	<b>7/8/2021</b>	<b>NS</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>					

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

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-16	MW-17	MW-18
			Sample Designator:	07092021	07082021	07292021	07082021
			Sample Date:	7/9/2021	7/8/2021	7/29/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Metals, Total</b>							
Antimony	mg/L	6	0.0500 U	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	0.0250 U
Copper	mg/L	1,300	0.0050 U	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	0.0150 U
Zinc	mg/L	4.69	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U
<b>Metals, Dissolved</b>							
Antimony	mg/L	6	NA	NA	NA	0.0500 U	0.0500 U
Arsenic	mg/L	10	NA	NA	NA	0.0250 U	0.0250 U
Copper	mg/L	1,300	NA	NA	NA	0.0050 U	0.0050 U
Lead	mg/L	15	NA	NA	NA	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NA	NA	NA	0.0100 U	0.0100 U
<b>Polychlorinated Biphenyls</b>							
Aroclor 1016	mg/L	0.0172	0.00100 U	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	0.00100 U
Aroclor 1232	mg/L	0.002	0.00100 U	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	0.00100 U
Aroclor 1248	mg/L	0.002	0.00100 U	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	0.00100 U
Aroclor 1260	mg/L	0.002	0.00100 U	0.00100 U	0.00100 U	0.00100 U	0.00100 U
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/L	1,610	0.00100 U	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	0.00100 U
Anthracene	mg/L	2,290	0.00100 U	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	0.00100 U
Benzo(a)pyrene	mg/L	0.2	0.00100 U	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	0.00100 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00100 U	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	0.00100 U
Chrysene	mg/L	81.7	0.00100 U	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	0.00100 U
Fluoranthene	mg/L	14,200	0.00100 U	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	0.00100 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00100 U	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	0.00100 U
Phenanthrene	mg/L	1,190	0.00100 U	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	0.00100 U
<b>Total Petroleum Hydrocarbons</b>							
Gasoline Range Organics	mg/L	18.1	NA	0.5 U	0.5 U	0.5 U	0.5 U
Diesel Range Organics	mg/L	34.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Oil Range Organics	mg/L	31.8	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U

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

			Group Name:	GFC	GFC	GFC	GFC
			Sample Point:	MW-15	MW-16	MW-17	MW-18
			Sample Designator:	07092021	07082021	07292021	07082021
			Sample Date:	7/9/2021	7/8/2021	7/29/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	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	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	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	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	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	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	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	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	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	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	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	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	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	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	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	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	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	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	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	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	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	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	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	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	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	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	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	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	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	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	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	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	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	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	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	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	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	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	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	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	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-16	MW-17	MW-18
			Sample Designator:	07092021	07082021	07292021	07082021
			Sample Date:	7/9/2021	7/8/2021	7/29/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Bromodichloromethane	mg/L	0.004	0.002 U	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	0.002 U
Bromomethane	mg/L	0.01	0.005 U	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	0.002 U
Carbon tetrachloride	mg/L	0.004	0.002 U	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	0.002 U
Chloroethane	mg/L	3.13	0.002 U	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	0.002 U
Chloromethane	mg/L	0.0331	0.005 U	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	0.005 U
cis-1,2-Dichloroethene	mg/L	70	0.002 U	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	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	0.002 U
Cyclohexanone	mg/L	404	0.02 U	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	0.002 U
Dibromomethane	mg/L	0.0199	0.002 U	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	0.002 U
Diisopropyl ether	mg/L	0.0697	0.002 U	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	0.01 U
Ethyl ether	mg/L	NE	0.005 U	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	0.005 U
Ethylbenzene	mg/L	0.00609	0.002 U	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	0.002 U
Hexachlorobutadiene	mg/L	0.01	0.005 U	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	0.005 U
Iodomethane	mg/L	NE	0.005 U	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	0.002 U
m,p-Xylenes	mg/L	NE	0.002 U	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	0.005 U
Methyl Methacrylate	mg/L	10.1	0.005 U	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	0.002 U
Methylacrylate	mg/L	0.417	0.005 U	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	0.002 U
Naphthalene	mg/L	0.01	0.005 U	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	0.002 U
n-Butylbenzene	mg/L	8.76	0.002 U	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	0.005 U
n-Hexane	mg/L	0.01	0.005 U	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	0.05 U
n-Propylbenzene	mg/L	0.452	0.002 U	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	0.002 U
Pentachloroethane	mg/L	NE	0.005 U	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	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-16	MW-17	MW-18
			Sample Designator:	07092021	07082021	07292021	07082021
			Sample Date:	7/9/2021	7/8/2021	7/29/2021	7/8/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	-	-	-
Parameter	Units	PAL <sup>1</sup>					
<b>Volatile Organic Compounds (continued)</b>							
Propionitrile	mg/L	NE	0.01 U	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	0.002 U
Styrene	mg/L	1.65	0.002 U	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	0.002 U
tert-Butyl alcohol	mg/L	0.286	0.01 U	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	0.002 U
Tetrachloroethene	mg/L	0.00972	0.0005 U	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	0.005 U
Toluene	mg/L	3.16	0.002 U	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	0.002 U
trans-1,3-Dichloropropene	mg/L	0.596	0.002 U	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	0.002 U
Trichloroethene	mg/L	0.004	0.002 U	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	0.005 U
Vinyl acetate	mg/L	1.61	0.005 U	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	0.002 U
Xylenes, Total	mg/L	10	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
<b>Explosives</b>							
Tetryl	mg/L	0.154	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	mg/L	0.00209	NA	NA	NA	NA	NA
4-Nitrotoluene (4-NT)	mg/L	0.00818	NA	NA	NA	NA	NA
RDX	mg/L	0.0607	NA	NA	NA	NA	NA
Nitrobenzene	mg/L	0.00181	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	mg/L	0.000964	NA	NA	NA	NA	NA
2-Nitrotoluene	mg/L	0.000604	NA	NA	NA	NA	NA
3-Nitrotoluene	mg/L	0.0649	NA	NA	NA	NA	NA
1,3,5-Trinitrobenzene	mg/L	0.464	NA	NA	NA	NA	NA
1,3-Dinitrobenzene	mg/L	0.00153	NA	NA	NA	NA	NA
2,4,6-Trinitrotoluene	mg/L	0.00763	NA	NA	NA	NA	NA
4-Amino-2,6-Dinitrotoluene	mg/L	0.00247	NA	NA	NA	NA	NA
2-Amino-4,6-Dinitrotoluene	mg/L	0.00241	NA	NA	NA	NA	NA
HMX	mg/L	0.782	NA	NA	NA	NA	NA
PETN	mg/L	5.06	NA	NA	NA	NA	NA
Nitroglycerine	mg/L	0.00107	NA	NA	NA	NA	NA



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

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-15</b>	<b>MW-16</b>	<b>MW-17</b>	<b>MW-18</b>
			<b>Sample Designator:</b>	<b>07092021</b>	<b>07082021</b>	<b>07292021</b>	<b>07082021</b>
			<b>Sample Date:</b>	<b>7/9/2021</b>	<b>7/8/2021</b>	<b>7/29/2021</b>	<b>7/8/2021</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>					

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

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-19	Rinse-16 <sup>2</sup>	Rinse-17 <sup>2</sup>
			Sample Designator:	07092021	--	--
			Sample Date:	7/9/2021	7/7/2021	7/29/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Rinsate	Rinsate
Parameter	Units	PAL <sup>1</sup>				
<b>Metals, Total</b>						
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
<b>Metals, Dissolved</b>						
Antimony	mg/L	6	NA	0.0500 U	0.0500 U	0.0500 U
Arsenic	mg/L	10	NA	0.0250 U	0.0250 U	0.0250 U
Copper	mg/L	1,300	NA	0.0050 U	0.0050 U	0.0050 U
Lead	mg/L	15	NA	0.0150 U	0.0150 U	0.0150 U
Zinc	mg/L	4.69	NA	0.0100 U	0.0100 U	0.0100 U
<b>Polychlorinated Biphenyls</b>						
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
<b>Polycyclic Aromatic Hydrocarbons</b>						
Acenaphthene	mg/L	1,610	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Acenaphthylene	mg/L	2,060	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Anthracene	mg/L	2,290	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Benzo(a)anthracene	mg/L	0.133	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Benzo(a)pyrene	mg/L	0.2	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Benzo(b)fluoranthene	mg/L	7.65	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Benzo(g,h,i)perylene	mg/L	218,000	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Benzo(k)fluoranthene	mg/L	937	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Chrysene	mg/L	81.7	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Dibenzo(a,h)anthracene	mg/L	985	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Fluoranthene	mg/L	14,200	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Fluorene	mg/L	3,010	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Indeno(1,2,3-cd)pyrene	mg/L	596	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Naphthalene	mg/L	0.1	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Phenanthrene	mg/L	1,190	0.00400 U	0.00100 U	0.00400 U	0.00400 U
Pyrene	mg/L	17,300	0.00400 U	0.00100 U	0.00400 U	0.00400 U
<b>Total Petroleum Hydrocarbons</b>						
Gasoline Range Organics	mg/L	18.1	NA	0.5 U	0.5 U	0.5 U
Diesel Range Organics	mg/L	34.3	2 U	0.5 U	2 U	2 U
Oil Range Organics	mg/L	31.8	2.8 U	0.7 U	2.8 U	2.8 U

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

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-19	Rinse-16 <sup>2</sup>	Rinse-17 <sup>2</sup>
			Sample Designator:	07092021	--	--
			Sample Date:	7/9/2021	7/7/2021	7/29/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Rinsate	Rinsate
Parameter	Units	PAL <sup>1</sup>				
<b>Volatile Organic Compounds</b>						
1,1,1,2-Tetrachloroethane	mg/L	0.00699	0.002 U	0.002 U	0.002 U	0.002 U
1,1,1-Trichloroethane	mg/L	1.13	0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	mg/L	0.00582	0.002 U	0.002 U	0.002 U	0.002 U
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/L	0.0351	0.005 U	0.005 U	0.005 U	0.005 U
1,1,2-Trichloroethane	mg/L	0.00105	0.0005 U	0.0005 U	0.0005 U	0.0005 U
1,1-Dichloro-2-propanone	mg/L	NE	0.03 U	0.03 U	0.03 U	0.03 U
1,1-Dichloroethane	mg/L	0.0114	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	mg/L	0.0276	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichlorobenzene	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trichloropropane	mg/L	0.00411	0.002 U	0.002 U	0.002 U	0.002 U
1,2,3-Trimethylbenzene	mg/L	0.0794	0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trichlorobenzene	mg/L	0.00752	0.002 U	0.002 U	0.002 U	0.002 U
1,2,4-Trimethylbenzene	mg/L	0.0475	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromo-3-chloropropane	mg/L	0.004	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dibromoethane	mg/L	0.004	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichlorobenzene	mg/L	0.5	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethane	mg/L	0.00355	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloroethene, Total	mg/L	70	0.004 U	0.004 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.00577	0.002 U	0.002 U	0.002 U	0.002 U
1,3,5-Trimethylbenzene	mg/L	0.0333	0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichlorobenzene	mg/L	43.6	0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U
1,3-Dichloropropene, Total	mg/L	0.00431	0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichloro-2-butene, Total	mg/L	0.00192	0.004 U	0.004 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.00488	0.002 U	0.002 U	0.002 U	0.002 U
1-Chlorobutane	mg/L	NE	0.005 U	0.005 U	0.005 U	0.005 U
2,2-Dichloropropane	mg/L	NE	0.002 U	0.002 U	0.002 U	0.002 U
2-Butanone	mg/L	354	0.01 U	0.01 U	0.01 U	0.01 U
2-Chloroethyl vinyl ether	mg/L	NE	0.005 U	0.005 U	0.005 U	0.005 U
2-Chlorotoluene	mg/L	17.1	0.002 U	0.002 U	0.002 U	0.002 U
2-Hexanone	mg/L	1.46	0.01 U	0.01 U	0.01 U	0.01 U
2-Nitropropane	mg/L	0.02	0.01 U	0.01 U	0.01 U	0.01 U
4-Chlorotoluene	mg/L	0.0666	0.002 U	0.002 U	0.002 U	0.002 U
4-Methyl-2-pentanone	mg/L	94.9	0.01 U	0.01 U	0.01 U	0.01 U
Acetone	mg/L	3370	0.01 U	0.01 U	0.01 U	0.01 U
Acetonitrile	mg/L	6.82	0.01 U	0.01 U	0.01 U	0.01 U
Acrolein	mg/L	0.04	0.02 U	0.02 U	0.02 U	0.02 U
Acrylonitrile	mg/L	0.0117	0.005 U	0.005 U	0.005 U	0.005 U
Allyl chloride	mg/L	0.01	0.005 U	0.005 U	0.005 U	0.005 U
Benzene	mg/L	0.00246	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Bromobenzene	mg/L	0.125	0.002 U	0.002 U	0.002 U	0.002 U
Bromochloromethane	mg/L	0.106	0.002 U	0.002 U	0.002 U	0.002 U

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

			Group Name:	GFC	GFC	GFC
			Sample Point:	MW-19	Rinse-16 <sup>2</sup>	Rinse-17 <sup>2</sup>
			Sample Designator:	07092021	--	--
			Sample Date:	7/9/2021	7/7/2021	7/29/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Rinsate	Rinsate
Parameter	Units	PAL <sup>1</sup>				
<b>Volatile Organic Compounds (continued)</b>						
Bromodichloromethane	mg/L	0.004	0.002 U	<b>0.0022</b>	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	<b>0.0092</b>	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
			Sample Point:	MW-19	Rinse-16 <sup>2</sup>	Rinse-17 <sup>2</sup>
			Sample Designator:	07092021	--	--
			Sample Date:	7/9/2021	7/7/2021	7/29/2021
			Quarterly Event:	1st Quarter	1st Quarter	1st Quarter
			Notes:	-	Rinsate	Rinsate
Parameter	Units	PAL <sup>1</sup>				
<b>Volatile Organic Compounds (continued)</b>						
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
<b>Explosives</b>						
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*

			<b>Group Name:</b>	<b>GFC</b>	<b>GFC</b>	<b>GFC</b>
			<b>Sample Point:</b>	<b>MW-19</b>	<b>Rinse-16<sup>2</sup></b>	<b>Rinse-17<sup>2</sup></b>
			<b>Sample Designator:</b>	<b>07092021</b>	<b>--</b>	<b>--</b>
			<b>Sample Date:</b>	<b>7/9/2021</b>	<b>7/7/2021</b>	<b>7/29/2021</b>
			<b>Quarterly Event:</b>	<b>1st Quarter</b>	<b>1st Quarter</b>	<b>1st Quarter</b>
			<b>Notes:</b>	<b>-</b>	<b>Rinsate</b>	<b>Rinsate</b>
<b>Parameter</b>	<b>Units</b>	<b>PAL<sup>1</sup></b>				

**Notes:**

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

<sup>2</sup> Rinse-16 and Rinse-17 were collected following decontamination of sampling equipment used for Monitoring Wells MW-05 and MW-17, respectively.

**Bold - compound was detected**

Highlighted - concentration exceeds screening level

GFC = Goodfellow Federal Complex

J = estimated value

mg/L = milligrams per liter

NA = not analyzed

NE = not established

NS = not sampled

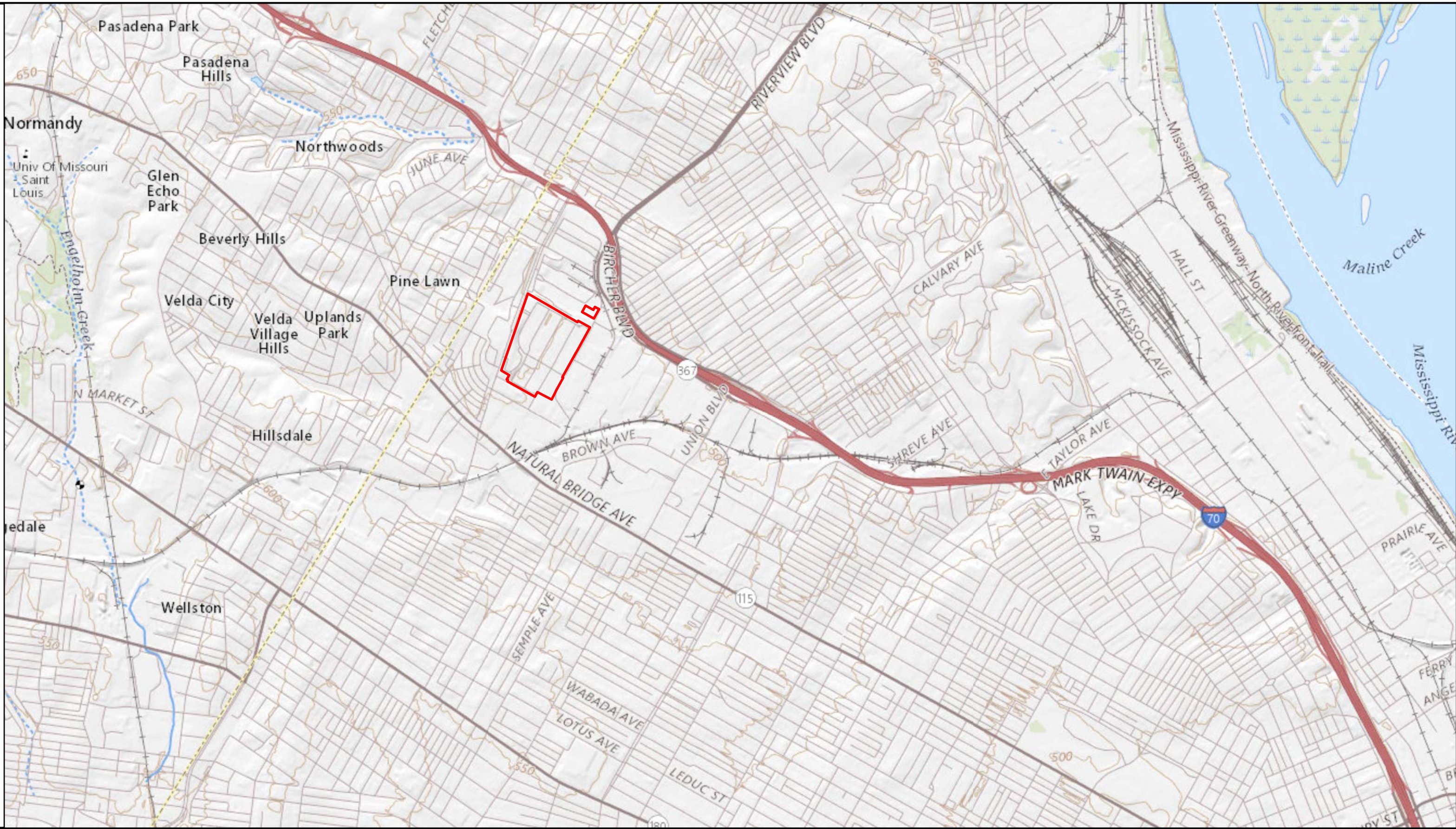
PAL = Project Action Limit


U = compound was not detected

## FIGURES



Path: Z:\clients\USGS\128487\_Goodfellow\MM\Studies\Geospatial\DataFiles\ArcDoc\figures\figures.aprx 8/16/2021  
Service Layer Credits: USGS The National Map; National Boundaries Dataset; 3DEP Elevation Program; Geographic Names Information System; National Hydrography Dataset; National Land Cover Database; National Structures Dataset; and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau Tiger Line data; USFS Road Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information; U.S. Coastal Relief Model. Data refreshed June, 2020.



 Site Boundary

Notes:  
Site is approximately 66 acres.

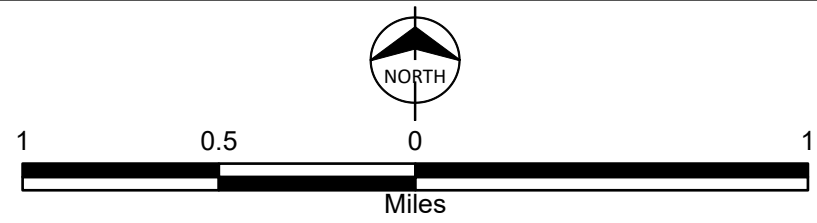
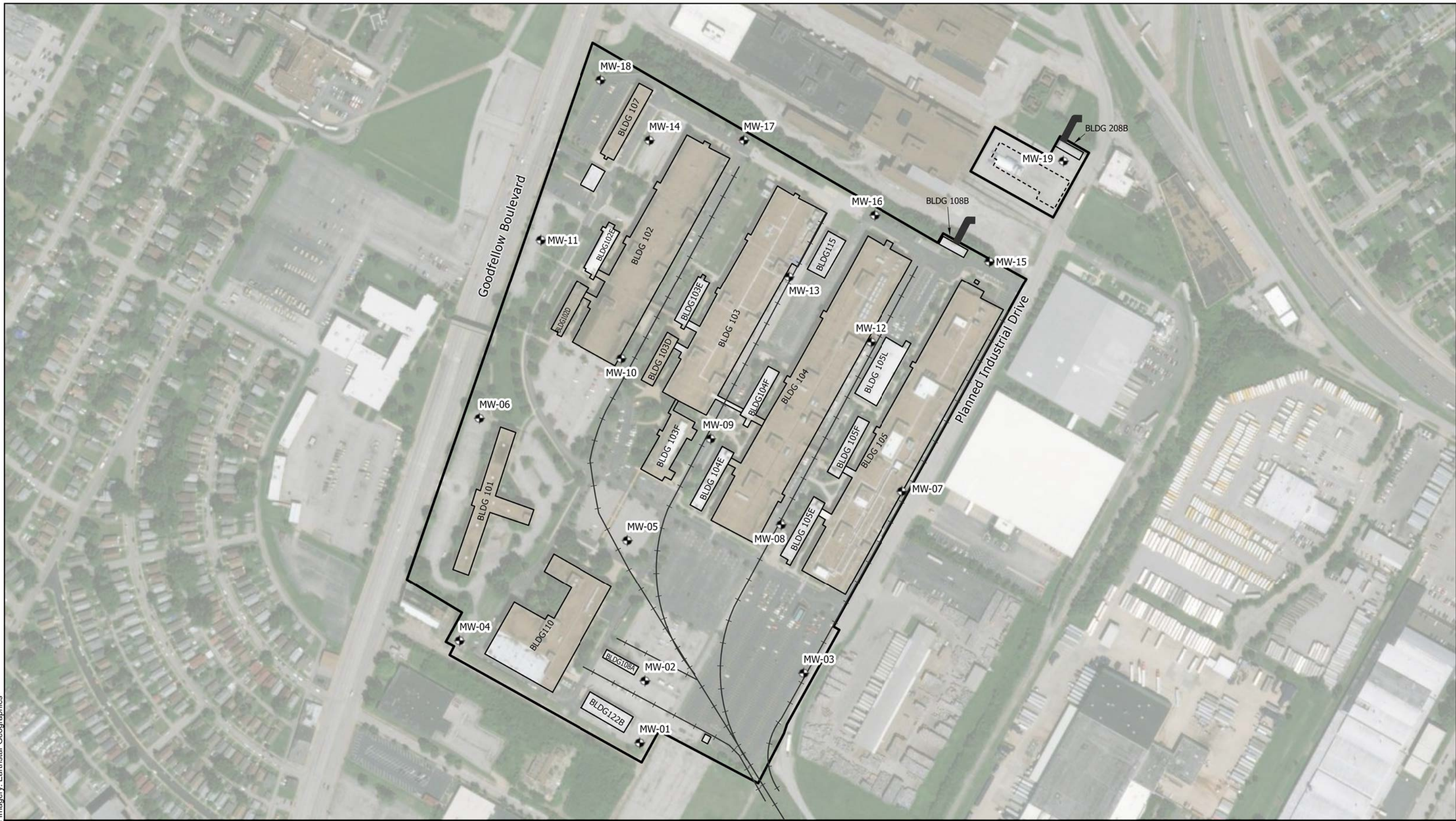


Figure 1  
Area Location Map  
Goodfellow Federal Complex  
St. Louis, Missouri



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Service Layer Credits: World Imagery: Earthstar Geographics



- Monitoring Well
- Former Railroad Track
- Site Boundary

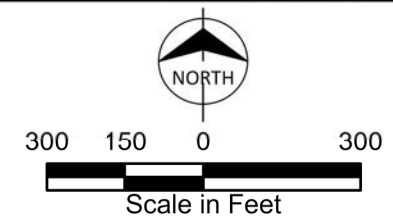
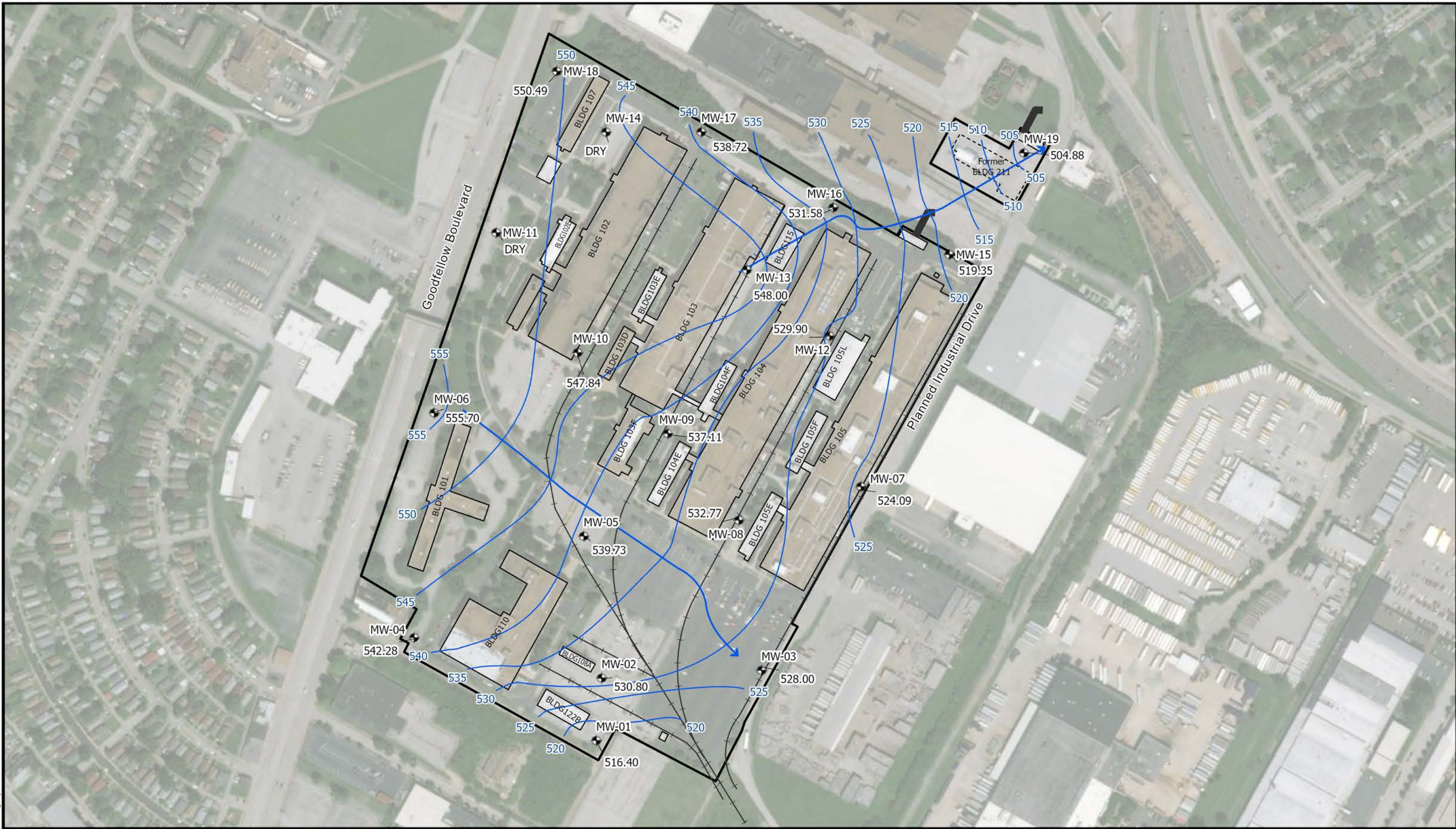


Figure 2  
Site Location Map  
Goodfellow Federal Complex  
St. Louis, Missouri



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Service Layer Credits: World Imagery, Maxar



- Monitoring Well
- Former Railroad Track
- Site Boundary
- Approximate Groundwater Flow Direction
- Piezometric Surface Countour

528.00 Groundwater Elevation

Notes:  
1. Site monitoring wells were gauged on July 6, 2021.  
2. Elevations presented in feet above mean sea level.

NORTH

0 250 500 1,000

Scale in Feet



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



## **APPENDIX A – SUPPORTING FIELD DOCUMENTATION**

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

**Monitoring Well Inspection Checklist**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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**  
**Goodfellow 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?	7/6/2021	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

Acceptance Criteria: Units: Standard Used:	Time	DO	pH	Specific Conductivity	Turbidity	ORP	Notes
		+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	
		mg/L	Standard Units	mS/cm	NTU	mV	
		in Air	4.00 / 7.00 / 10.00	1409	10 / 100 / 800	220	
7/6/2021	1410	10.01	4.00 / 7.00 / 10.01	1425	10.2 / 102 / 803	220.5	
7/7/2021	0712	10.05	4.00 / 7.00 / 10.01	1433	10.1 / 104 / 803	220.9	
7/8/2021	0805	9.96	4.00 / 7.00 / 10.02	1444	10.0 / 101 / 801	220.6	
7/9/2021	0738	9.99	4.00 / 7.00 / 10.01	1425	10.3 / 103 / 805	220.6	
7/29/2021	0745	1.04	4.00 / 7.01 / 10.01	1436	10.6 / 104 / 804	221.4	

**EQUIPMENT TYPE (Manufacturer, Model No. Version)**

Mult-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: 7/6/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-02

DATE: 7/7/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-03

DATE: 7/7/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-04

DATE: 7/7/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021





# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-05

DATE: 7/7/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-06  
DATE: 7/7/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

	<u>NAME</u>	<u>SIGNATURE</u>	<u>DATE</u>
PREPARED:	Benjamin Lockwood	(b) (6)	8/6/2021
REVIEWED:	Justin Carter	(b) (6)	8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-07

DATE: 7/8/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

**WELL NO.:** MW-08  
**DATE:** 7/9/2021 **SITE NAME:** GOODFELLOW FEDERAL COMPLEX **PROJECT NO.:** 128487

COMMENTS: DUPLICATE SAMPLED FOR EXPLOSIVES ONLY (PACE ANALYTICAL)

	<u>NAME</u>	<u>SIGNATURE</u>	<u>DATE</u>
PREPARED:	Benjamin Lockwood	(b) (6)	8/6/2021
REVIEWED:	Justin Carter	(b) (6)	8/10/2021





# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-09

DATE: 7/9/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-10

DATE: 1/0/1900 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# 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)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-12

DATE: 7/9/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021





# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-13

DATE: 7/8/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-14

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

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-15

DATE: 7/9/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-16  
DATE: 7/8/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

	<u>NAME</u>	<u>SIGNATURE</u>	<u>DATE</u>
PREPARED:	Benjamin Lockwood	(b) (6)	8/6/2021
REVIEWED:	Justin Carter	(b) (6)	8/10/2021





# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-17

DATE: 7/29/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-18

DATE: 7/8/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS: DISSOLVED METALS FIELD FILTERED IN FIELD

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6) 

8/6/2021

REVIEWED: Justin Carter

(b) (6) 

8/10/2021



# FIELD GROUNDWATER SAMPLING REPORT

WELL NO.: MW-19

DATE: 7/9/2021 SITE NAME: GOODFELLOW FEDERAL COMPLEX PROJECT NO.: 128487

COMMENTS:

NAME

SIGNATURE

DATE

PREPARED: Benjamin Lockwood

(b) (6)

8/6/2021

REVIEWED: Justin Carter

(b) (6)

8/10/2021



7/7/21

128487

B. Lalano

8/7/21

128487

B. Lalano

TRAIL: W/ Development & Sampling.

Weather: 90s, clear, sunny, humid.

- 710 Lockwood onsite
- 712 Set up for MW-17 TO SURFACE WELL  
MW-17: 18.57 (DTW) 24.45 (TD)
- 726 Begin Sampling
- 732 Finish Sampling MW-17
- 734 Begin Sampling MW-17
- 739 Finish Sampling MW-17. Lockwood onsite
- 6hr
- 815 Set up on MW-02
- 840 Begin pumping MW-02
- 909 Parameters stable; set up samples.
- 914 Collect MW-02 07072021 & MW-02 07072021  
Set up with FRICT FILTERED JAR. (Dissolved metals)  
Post sample DTW 19.4
- 1008 Finish cleanup. Ride down; over to MW-03.
- 1040 Begin pumping MW-03
- 1103 Parameters stable; set up samples.
- 1105 Collect MW-03 07072021. Begin cleanup
- 1112 Finish cleanup. over to MW-04: H2O Pump.
- 1200 Begin pumping MW-04
- 1214 Parameters stable; set up sample.
- 1318 Collect MW-04 07072021 w/ Dissolved metals Bottle.

1345 Collect FWISS-16 from Pump Room (INTERMEDIATE)  
with Dissolved metals bottle

1409 Finish Cleanup. Pump for GSAT. Cleanup table  
-17. Flow set up on MW-04

1500 Lockwood... opposite room

1515 Lockwood onsite to MW-04

1524 Begin pumping MW-04

1614 Parameters stable. Post Sample.

1616 Collect MW-04 07072021.

Final DTW: 17.04

1655 Finish cleanup, over to MW-06

1656 Lock out <sup>from</sup> Ben of Baker Peterson utilities to

Discuss next weeks utility work.

1750 Parameters stable. Set up samples

1755 Collect MW-06 07072021

1809 Finish sampling, Begin

Final DTW: 22.92'

1855 Cleanup complete. Lockwood opposite area.

Dumping water. over to

(b) (6)

7/8/21

128487

B. Lockwood

Final: with development - sampling

Weather: 80s, part sun, humid

720 Lockwood onsite

725 Gauge MW-17

DTW 22.31 TD: 24.65

800 COC-022 calibration instruments calibrated. Set

up on MW-18

802 Begin pumping MW-18

805 Parameters stable, set up sample.

807 Collect MW-18 07082021 w/ Dissolved Solids

811 Cleanup complete. MOB to MW-18

848 Begin setup on MW-10

1007 Begin pumping MW-10

1020 076 Probe/Water level meter not functioning

collected, Ashby to Begin out sample in  
water

1117 Parameters stable. set up sample

1118 Collect MW-10 07082021

1131 Finish Sampling. Begin cleanup.

DTW 17.02 EST.

1145 Ashby onsite with new water probe.

1200 Lockwood onsite for lunch: 100.

1230 Lockwood onsite

1355 Setup on MW-13

7/8/21

128487

B. Lockwood

1312 Begin pumping.

1400 Parameters stable. set up sample.

1410 Collect MW-13 07082021 w/ Diss. Metals.

→ MW-13 07082021/MSD w/ Diss. Metals

MW-13 07082021/MSD w/ Diss. Metals.

1510 Finish sampling. Final DTW: 5.96

1537 Finish cleanup. MOB to MW-16

1600 Begin pumping MW-16.

1625 Parameters stable. Begin sample setup.

1628 Collect MW-16 07082021

Final DTW: 21.69

1658 Finish cleanup. Begin setup on MW-07

1725 Begin pumping MW-07

1755 Parameters stable. set up samples

1758 Collect MW-07 07082021.

Final DTW: 18.98.

1728 Cleanup complete, collected OFFSITE.

(b) (6)



7/9/21

128487

B. Lockwood

These for sampling

Weather: Sunny, 70s, Humid

715 Lockwood arrives

725 Begins MW-17

DTW: 21.80 TD: 24.60

730 Stop &amp; reposition. complete. move to MW-09

755 Begin pumping MW-09

850 Parameters stable, set up samples

880 Collect MW-09 07092021

Final DTW: 19.00

919 Finish cleanup, move to MW-08 after spec

Done

950 Begin pumping MW-08

1017 Parameters stable, set up samples

1019 Collect MW-08 07092021 for TELLAD & PACE

(Explosives) with DOP (for PACE)

Final DTW:

1115 Finish cleanup. Dig sample DOP off with corner

for PACE &amp; TELLAD

1130 Lockwood arrives for lunch

1210 TELLAD samples handed to TELLAD corner

128487 - 0.7 to 0.0 (4 corners)

1230 Break with the ju. see 205 notes

1245 Begin setup on MW-19

7/9/21

128487

B. Lockwood

1255 Samples handed off to PACE corner

1305 Set up start pumping MW-19

1410 Parameters stable, set up samples

1412 Collect MW-19 07092021

Final DTW: 23.62

1450 Finish cleanup, move to MW-15

1520 Begin start pumping MW-15

1630 Parameters stable except for corner. set

sample log. See collect MW-15 07092021

1650 Finish cleanup, move to MW-12

1720 Begin pumping MW-12

1751 Parameters stable, set up samples

Final DTW: 15.08

1755 Collect MW-12 07092021

1830 cleanup complete

1835 collect W-IDW-001 & W-IDW-001/DOP

1912 Lockwood arrives

(b) (6)

## **APPENDIX B – ANALYTICAL LABORATORY REPORTS**

August 02, 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:** 128487 GSA

**WorkOrder:** 21070532

Dear Justin Carter:

TEKLAB, INC received 5 samples on 7/9/2021 12:30:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

---

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

---

**This reporting package includes the following:**

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Chain of Custody	Appended

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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.

LCS D 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:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

### Qualifiers

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



# Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Cooler Receipt Temp:** 0.6 °C

This report was revised on 8/2/2021 per Justin Carter's request. The reason for the revision is to report DRO/ORO. Please replace report dated 7/16/2021 with this report. EEP 8/2/2021

## Locations

### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**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

### Springfield

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

### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

### Kansas City

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



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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	8/31/2021	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





# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-001

Client Sample ID: TB-07

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/12/2021 13:00	179680
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:00	179680
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:00	179680
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:00	179680
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
2-Butanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
Acetone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
Acrolein	NELAP	20.0		ND	µg/L	1	07/12/2021 13:00	179680
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Benzene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:00	179680
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Bromoform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Bromomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-001

Client Sample ID: TB-07

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Chloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Chloroform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Chloromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Chloroprene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Cyclohexanone	*	20.0		ND	µg/L	1	07/12/2021 13:00	179680
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Diisopropyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Iodomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Naphthalene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
n-Butyl acetate	*	2.0		ND	µg/L	1	07/12/2021 13:00	179680
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
n-Heptane	*	5.0		ND	µg/L	1	07/12/2021 13:00	179680
n-Hexane	*	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/12/2021 13:00	179680
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
o-Xylene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Propionitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Styrene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:00	179680
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/12/2021 13:00	179680
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:00	179680
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-001

**Client Sample ID:** TB-07

**Matrix:** TRIP BLANK

**Collection Date:** 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Toluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:00	179680
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:00	179680
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/12/2021 13:00	179680
Surr: 1,2-Dichloroethane-d4	*	80-120		96.5	%REC	1	07/12/2021 13:00	179680
Surr: 4-Bromofluorobenzene	*	80-120		103.4	%REC	1	07/12/2021 13:00	179680
Surr: Toluene-d8	*	80-120		92.6	%REC	1	07/12/2021 13:00	179680

*Allowable Marginal Exceedance of tert-Amyl methyl ether in the laboratory control sample is verified per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-002

**Client Sample ID:** MW-01 07062021

**Matrix:** GROUNDWATER

**Collection Date:** 07/06/2021 16:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 15:34	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 15:34	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 15:34	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 15:34	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 15:34	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 13:01	179682
Surr: Decachlorobiphenyl	*	10-152		86.9	%REC	1	07/14/2021 13:01	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		108.0	%REC	1	07/14/2021 13:01	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Chrysene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Fluorene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
Pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 13:35	179621
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/12/2021 13:35	179621
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/12/2021 13:35	179621
Surr: 2-Fluorobiphenyl	*	1.39-137		59.5	%REC	1	07/12/2021 13:35	179621
Surr: Nitrobenzene-d5	*	29.1-125		75.4	%REC	1	07/12/2021 13:35	179621
Surr: p-Terphenyl-d14	*	35.2-164		93.5	%REC	1	07/12/2021 13:35	179621
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 13:23	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-002

Client Sample ID: MW-01 07062021

Matrix: GROUNDWATER

Collection Date: 07/06/2021 16:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:23	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:23	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:23	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 13:23	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 13:23	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-002

Client Sample ID: MW-01 07062021

Matrix: GROUNDWATER

Collection Date: 07/06/2021 16:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 13:23	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 13:23	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 13:23	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 13:23	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 13:23	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:23	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 13:23	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 13:23	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 13:23	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:23	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:23	179692





# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-002

**Client Sample ID:** MW-01 07062021

**Matrix:** GROUNDWATER

**Collection Date:** 07/06/2021 16:35

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 13:23	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		95.5	%REC	1	07/13/2021 13:23	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.7	%REC	1	07/13/2021 13:23	179692
Surr: Toluene-d8	*	80-120		91.5	%REC	1	07/13/2021 13:23	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-003

Client Sample ID: MW-02 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 17:06	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 17:06	179606
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2021 17:06	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 17:06	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 17:06	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 14:22	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 14:22	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 14:22	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 14:22	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 14:22	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1221	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1232	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1242	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1248	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1254	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Aroclor 1260	NELAP	1.05		ND	µg/L	1	07/14/2021 13:18	179682
Surr: Decachlorobiphenyl	*	10-152		81.8	%REC	1	07/14/2021 13:18	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		116.5	%REC	1	07/14/2021 13:18	179682
<i>Elevated reporting limits due to limited sample.</i>								
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Chrysene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Fluorene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
Pyrene	NELAP	0.00100		ND	mg/L	1	07/12/2021 14:12	179621
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/12/2021 14:12	179621
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/12/2021 14:12	179621
Surr: 2-Fluorobiphenyl	*	1.39-137		59.7	%REC	1	07/12/2021 14:12	179621
Surr: Nitrobenzene-d5	*	29.1-125		74.7	%REC	1	07/12/2021 14:12	179621
Surr: p-Terphenyl-d14	*	35.2-164		102.4	%REC	1	07/12/2021 14:12	179621
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692





# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-003

Client Sample ID: MW-02 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 13:49	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:49	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:49	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 13:49	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 13:49	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 13:49	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-003

Client Sample ID: MW-02 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 13:49	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 13:49	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 13:49	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 13:49	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 13:49	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 13:49	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 13:49	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 13:49	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 13:49	179692



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-003

**Client Sample ID:** MW-02 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 13:49	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 13:49	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 13:49	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		94.8	%REC	1	07/13/2021 13:49	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.7	%REC	1	07/13/2021 13:49	179692
Surr: Toluene-d8	*	80-120		91.8	%REC	1	07/13/2021 13:49	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-004

**Client Sample ID:** MW-02 07072021/DUP

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 17:17	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 17:17	179606
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2021 17:17	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 17:17	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 17:17	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 15:45	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 15:45	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 15:45	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 15:45	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 15:45	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 13:36	179682
Surr: Decachlorobiphenyl	*	10-152		96.2	%REC	1	07/14/2021 13:36	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		123.2	%REC	1	07/14/2021 13:36	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Acenaphthylene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Anthracene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Benzo(a)anthracene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Benzo(a)pyrene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Benzo(b)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Benzo(g,h,i)perylene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Benzo(k)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Chrysene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Dibenzo(a,h)anthracene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Fluoranthene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Fluorene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Naphthalene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Phenanthrene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
Pyrene	NELAP	0.00400		ND	mg/L	1	07/12/2021 14:48	179621
TPH-DRO (C10 - C21)	*	2.00		ND	mg/L	1	07/12/2021 14:48	179621
TPH-ORO (C21 - C35)	*	2.80		ND	mg/L	1	07/12/2021 14:48	179621
Surr: 2-Fluorobiphenyl	*	1.39-137		73.5	%REC	1	07/12/2021 14:48	179621
Surr: Nitrobenzene-d5	*	29.1-125		79.8	%REC	1	07/12/2021 14:48	179621
Surr: p-Terphenyl-d14	*	35.2-164		111.4	%REC	1	07/12/2021 14:48	179621
<i>Elevated reporting limit due to sample composition.</i>								
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-004

Client Sample ID: MW-02 07072021/DUP

Matrix: GROUNDWATER

Collection Date: 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 14:14	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:14	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:14	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:14	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 14:14	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 14:14	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-004

**Client Sample ID:** MW-02 07072021/DUP

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 14:14	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 14:14	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 14:14	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 14:14	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 14:14	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:14	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 14:14	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 14:14	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 14:14	179692





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-004

**Client Sample ID:** MW-02 07072021/DUP

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 9:15

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:14	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:14	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 14:14	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		95.4	%REC	1	07/13/2021 14:14	179692
Surr: 4-Bromofluorobenzene	*	80-120		95.3	%REC	1	07/13/2021 14:14	179692
Surr: Toluene-d8	*	80-120		91.5	%REC	1	07/13/2021 14:14	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-005

Client Sample ID: MW-03 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 11:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 15:49	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 15:49	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 15:49	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 15:49	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 15:49	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 13:53	179682
Surr: Decachlorobiphenyl	*	10-152		101.1	%REC	1	07/14/2021 13:53	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		115.0	%REC	1	07/14/2021 13:53	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 13:34	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 13:34	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 13:34	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		72.2	%REC	1	07/14/2021 13:34	179663
Surr: Nitrobenzene-d5	*	29.1-125		93.7	%REC	1	07/14/2021 13:34	179663
Surr: p-Terphenyl-d14	*	35.2-164		124.9	%REC	1	07/14/2021 13:34	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 14:40	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692



Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-005

Client Sample ID: MW-03 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 11:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:40	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:40	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 14:40	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 14:40	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 14:40	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070532-005

Client Sample ID: MW-03 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 11:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 14:40	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 14:40	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 14:40	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 14:40	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 14:40	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 14:40	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 14:40	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 14:40	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 14:40	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 14:40	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 14:40	179692



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070532-005

**Client Sample ID:** MW-03 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 11:05

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 14:40	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		95.4	%REC	1	07/13/2021 14:40	179692
Surr: 4-Bromofluorobenzene	*	80-120		93.5	%REC	1	07/13/2021 14:40	179692
Surr: Toluene-d8	*	80-120		91.5	%REC	1	07/13/2021 14:40	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Sample Summary

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21070532-001	TB-07	Trip Blank	1	07/09/2021 12:30
21070532-002	MW-01 07062021	Groundwater	4	07/06/2021 16:35
21070532-003	MW-02 07072021	Groundwater	5	07/07/2021 9:15
21070532-004	MW-02 07072021/DUP	Groundwater	5	07/07/2021 9:15
21070532-005	MW-03 07072021	Groundwater	4	07/07/2021 11:05



## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21070532-001A	TB-07	07/09/2021 12:30	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/12/2021 13:00			
21070532-002A	MW-01 07062021	07/06/2021 16:35	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 12:27 07/14/2021 13:01			
21070532-002B	MW-01 07062021	07/06/2021 16:35	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/12/2021 9:46 07/12/2021 13:35			
21070532-002C	MW-01 07062021	07/06/2021 16:35	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 11:32 07/13/2021 15:34			
21070532-002D	MW-01 07062021	07/06/2021 16:35	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 13:23			
21070532-003A	MW-02 07072021	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 12:27 07/14/2021 13:18			
21070532-003B	MW-02 07072021	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/12/2021 9:46 07/12/2021 14:12			
21070532-003C	MW-02 07072021	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 11:32 07/13/2021 14:22			
21070532-003D	MW-02 07072021	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)		07/09/2021 17:22 07/12/2021 17:06			
21070532-003E	MW-02 07072021	07/07/2021 9:15	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 13:49			
21070532-004A	MW-02 07072021/DUP	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 14:41 07/14/2021 13:36			
21070532-004B	MW-02 07072021/DUP	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/12/2021 9:46 07/12/2021 14:48			
21070532-004C	MW-02 07072021/DUP	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 11:32 07/13/2021 15:45			
21070532-004D	MW-02 07072021/DUP	07/07/2021 9:15	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)		07/09/2021 17:22 07/12/2021 17:17			
21070532-004E	MW-02 07072021/DUP	07/07/2021 9:15	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 14:14			
21070532-005A	MW-03 07072021	07/07/2021 11:05	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 14:41 07/14/2021 13:53			
21070532-005B	MW-03 07072021	07/07/2021 11:05	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 13:34			
21070532-005C	MW-03 07072021	07/07/2021 11:05	07/09/2021 12:30		



## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	Test Name				
	SW-846 3005A, 6010B, Metals by ICP (Total)			07/12/2021 11:32	07/13/2021 15:49
21070532-005D	MW-03 07072021	07/07/2021 11:05	07/09/2021 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				07/13/2021 14:40



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

**Batch 179606**    **SampType: MBLK**    Units mg/L  
 SampID: MBLK-179606

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	07/12/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/12/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/12/2021
Lead		0.0150		< 0.0150	0.0014	0	0	-100	100	07/12/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/12/2021

**Batch 179606**    **SampType: LCS**    Units mg/L  
 SampID: LCS-179606

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.455	0.5000	0	91.1	85	115	07/12/2021
Arsenic		0.0250		0.496	0.5000	0	99.1	85	115	07/12/2021
Copper		0.0050		0.242	0.2500	0	96.9	85	115	07/12/2021
Lead		0.0150		0.468	0.5000	0	93.6	85	115	07/12/2021
Zinc		0.0100		0.483	0.5000	0	96.5	85	115	07/12/2021

**Batch 179606**    **SampType: MS**    Units mg/L  
 SampID: 21070532-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.466	0.5000	0	93.3	75	125	07/12/2021
Arsenic		0.0250		0.505	0.5000	0	101.1	75	125	07/12/2021
Copper		0.0050		0.241	0.2500	0	96.2	75	125	07/12/2021
Lead		0.0150		0.453	0.5000	0	90.6	75	125	07/12/2021
Zinc		0.0100		0.474	0.5000	0.005000	93.9	75	125	07/12/2021

**Batch 179606**    **SampType: MSD**    Units mg/L  
 SampID: 21070532-003DMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.471	0.5000	0	94.2	0.4663	0.96	07/12/2021
Arsenic		0.0250		0.512	0.5000	0	102.5	0.5054	1.36	07/12/2021
Copper		0.0050		0.244	0.2500	0	97.6	0.2406	1.36	07/12/2021
Lead		0.0150		0.459	0.5000	0	91.8	0.4531	1.29	07/12/2021
Zinc		0.0100		0.481	0.5000	0.005000	95.2	0.4745	1.36	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

**Batch 179625**      **SampType: MBLK**      Units mg/L

SampID: MBLK-179625

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	07/13/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/13/2021

**Batch 179625**      **SampType: LCS**      Units mg/L

SampID: LCS-179625

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.527	0.5000	0	105.5	85	115	07/13/2021
Arsenic		0.0250		0.551	0.5000	0	110.2	85	115	07/13/2021
Copper		0.0050		0.268	0.2500	0	107.2	85	115	07/13/2021
Lead		0.0150		0.523	0.5000	0	104.6	85	115	07/13/2021
Zinc		0.0100		0.540	0.5000	0	108.0	85	115	07/13/2021

**Batch 179625**      **SampType: MS**      Units mg/L

SampID: 21070532-002CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.517	0.5000	0	103.4	75	125	07/13/2021
Arsenic		0.0250		0.546	0.5000	0	109.3	75	125	07/13/2021
Copper		0.0050		0.264	0.2500	0	105.7	75	125	07/13/2021
Lead		0.0150		0.501	0.5000	0	100.1	75	125	07/13/2021
Zinc		0.0100		0.520	0.5000	0.005500	103.0	75	125	07/13/2021

**Batch 179625**      **SampType: MSD**      Units mg/L

SampID: 21070532-002CMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.521	0.5000	0	104.2	0.5170	0.73	07/13/2021
Arsenic		0.0250		0.549	0.5000	0	109.9	0.5465	0.53	07/13/2021
Copper		0.0050		0.268	0.2500	0	107.2	0.2643	1.39	07/13/2021
Lead		0.0150		0.510	0.5000	0	102.1	0.5007	1.92	07/13/2021
Zinc		0.0100		0.527	0.5000	0.005500	104.4	0.5203	1.34	07/13/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD**
**Batch 179682**      **SampType: MBLK**      Units µg/L

SampID: MBLK-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		ND						07/14/2021
Aroclor 1016		1.00		ND						07/14/2021
Aroclor 1221		1.00		ND						07/14/2021
Aroclor 1221		0.095		ND						07/14/2021
Aroclor 1232		0.095		ND						07/14/2021
Aroclor 1232		1.00		ND						07/14/2021
Aroclor 1242		1.00		ND						07/14/2021
Aroclor 1242		0.095		ND						07/14/2021
Aroclor 1248		1.00		ND						07/14/2021
Aroclor 1248		0.095		ND						07/14/2021
Aroclor 1254		0.095		ND						07/14/2021
Aroclor 1254		1.00		ND						07/14/2021
Aroclor 1260		0.095		ND						07/14/2021
Aroclor 1260		1.00		ND						07/14/2021
Surr: Decachlorobiphenyl	*			0.11	0.1250		88.1	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.110	0.1250		88.1	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.104	0.1250		83.0	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.5	35.2	135	07/14/2021

**Batch 179682**      **SampType: LCS**      Units µg/L

SampID: LCSPCB-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		2.67	2.500	0	106.9	56.2	136	07/14/2021
Aroclor 1016		0.095		2.67	2.500	0	106.9	50	140	07/14/2021
Aroclor 1260		1.00		2.68	2.500	0	107.4	42.1	125	07/14/2021
Aroclor 1260		0.095		2.68	2.500	0	107.4	8	140	07/14/2021
Surr: Decachlorobiphenyl	*			0.13	0.1250		102.2	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.128	0.1250		102.2	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.3	35.2	135	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179682		SampType: LCSD		Units µg/L				RPD Limit 40			
SampID: LCSPCBD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		1.00		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1016		0.095		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1260		0.095		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Aroclor 1260		1.00		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.12</b>	0.1250		96.4			07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.1			07/14/2021	

Batch 179682		SampType: LCS		Units %REC						
SampID: LCSPST-179682										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			<b>0.099</b>	0.1250		79.1	31.2	141	07/14/2021

Batch 179682		SampType: LCSD		Units %REC				RPD Limit 0			
SampID: LCSPSTD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179621		SampType: MBLK		Units mg/L							
SampID: MBLK-179621											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		ND						07/12/2021	
Acenaphthylene		0.00100		ND						07/12/2021	
Anthracene		0.00100		ND						07/12/2021	
Benzo(a)anthracene		0.00100		ND						07/12/2021	
Benzo(a)pyrene		0.00100		ND						07/12/2021	
Benzo(b)fluoranthene		0.00100		ND						07/12/2021	
Benzo(g,h,i)perylene		0.00100		ND						07/12/2021	
Benzo(k)fluoranthene		0.00100		ND						07/12/2021	
Chrysene		0.00100		ND						07/12/2021	
Dibenzo(a,h)anthracene		0.00100		ND						07/12/2021	
Fluoranthene		0.00100		ND						07/12/2021	
Fluorene		0.00100		ND						07/12/2021	
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/12/2021	
Naphthalene		0.00100		ND						07/12/2021	
Phenanthrene		0.00100		ND						07/12/2021	
Pyrene		0.00100		ND						07/12/2021	
TPH-DRO (C10 - C21)	*	0.500		ND						07/12/2021	
TPH-ORO (C21 - C35)	*	0.700		ND						07/12/2021	
Surr: 2-Fluorobiphenyl	*			0.00829	0.0125		66.3	1.09	175	07/12/2021	
Surr: Nitrobenzene-d5	*			0.0103	0.0125		82.3	35.5	156	07/12/2021	
Surr: p-Terphenyl-d14	*			0.0144	0.0125		115.3	35	222	07/12/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179621      **SampType:** LCS      **Units** mg/L  
**SampID:** LCS-179621

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		<b>0.00778</b>	0.0100	0	77.8	39.6	145	07/12/2021
Acenaphthylene		0.00100		<b>0.00768</b>	0.0100	0	76.8	38.3	147	07/12/2021
Anthracene		0.00100		<b>0.00825</b>	0.0100	0	82.5	47.7	153	07/12/2021
Benzo(a)anthracene		0.00100		<b>0.00825</b>	0.0100	0	82.5	45	136	07/12/2021
Benzo(a)pyrene		0.00100		<b>0.00751</b>	0.0100	0	75.1	49.8	164	07/12/2021
Benzo(b)fluoranthene		0.00100		<b>0.00840</b>	0.0100	0	84.0	45.7	167	07/12/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00838</b>	0.0100	0	83.8	41	157	07/12/2021
Benzo(k)fluoranthene		0.00100		<b>0.00876</b>	0.0100	0	87.6	46.7	166	07/12/2021
Chrysene		0.00100		<b>0.00853</b>	0.0100	0	85.3	45.5	162	07/12/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00843</b>	0.0100	0	84.3	40.4	154	07/12/2021
Fluoranthene		0.00100		<b>0.00877</b>	0.0100	0	87.7	47.3	168	07/12/2021
Fluorene		0.00100		<b>0.00834</b>	0.0100	0	83.4	45.2	153	07/12/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00854</b>	0.0100	0	85.4	44.6	166	07/12/2021
Naphthalene		0.00100		<b>0.00734</b>	0.0100	0	73.4	16.6	137	07/12/2021
Phenanthrene		0.00100		<b>0.00837</b>	0.0100	0	83.7	50.8	149	07/12/2021
Pyrene		0.00100		<b>0.00866</b>	0.0100	0	86.6	44.9	163	07/12/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00894</b>	0.0125		71.5	1.09	175	07/12/2021
Surr: Nitrobenzene-d5	*			<b>0.00974</b>	0.0125		77.9	35.5	156	07/12/2021
Surr: p-Terphenyl-d14	*			<b>0.0127</b>	0.0125		101.4	35	222	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179621		SampType: LCSD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSD-179621											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Acenaphthene		0.00100		<b>0.00847</b>	0.0100	0	84.7	0.007780	8.52	07/12/2021	
Acenaphthylene		0.00100		<b>0.00836</b>	0.0100	0	83.6	0.007682	8.42	07/12/2021	
Anthracene		0.00100		<b>0.00852</b>	0.0100	0	85.2	0.008252	3.15	07/12/2021	
Benzo(a)anthracene		0.00100		<b>0.00856</b>	0.0100	0	85.6	0.008249	3.69	07/12/2021	
Benzo(a)pyrene		0.00100		<b>0.00749</b>	0.0100	0	74.9	0.007514	0.26	07/12/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00841</b>	0.0100	0	84.1	0.008398	0.17	07/12/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00839</b>	0.0100	0	83.9	0.008380	0.08	07/12/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00890</b>	0.0100	0	89.0	0.008760	1.61	07/12/2021	
Chrysene		0.00100		<b>0.00863</b>	0.0100	0	86.3	0.008526	1.20	07/12/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00850</b>	0.0100	0	85.0	0.008429	0.79	07/12/2021	
Fluoranthene		0.00100		<b>0.00904</b>	0.0100	0	90.4	0.008772	3.01	07/12/2021	
Fluorene		0.00100		<b>0.00879</b>	0.0100	0	87.9	0.008340	5.30	07/12/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00866</b>	0.0100	0	86.6	0.008543	1.40	07/12/2021	
Naphthalene		0.00100		<b>0.00826</b>	0.0100	0	82.6	0.007342	11.81	07/12/2021	
Phenanthrene		0.00100		<b>0.00866</b>	0.0100	0	86.6	0.008370	3.44	07/12/2021	
Pyrene		0.00100		<b>0.00891</b>	0.0100	0	89.1	0.008658	2.93	07/12/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00891</b>	0.0125		71.3			07/12/2021	
Surr: Nitrobenzene-d5	*			<b>0.00997</b>	0.0125		79.8			07/12/2021	
Surr: p-Terphenyl-d14	*			<b>0.0129</b>	0.0125		102.9			07/12/2021	

Batch 179621		SampType: LCSG		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSG-179621											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.84</b>	2.000	0	92.2	17.1	195	07/12/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0104</b>	0.0125		83.3	1.09	175	07/12/2021	
Surr: Nitrobenzene-d5	*			<b>0.0108</b>	0.0125		86.6	35.5	156	07/12/2021	
Surr: p-Terphenyl-d14	*			<b>0.0142</b>	0.0125		113.3	35	222	07/12/2021	

Batch 179621		SampType: LCSGD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSGD-179621											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.83</b>	2.000	0	91.5	1.844	0.76	07/12/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0101</b>	0.0125		81.1			07/12/2021	
Surr: Nitrobenzene-d5	*			<b>0.0109</b>	0.0125		86.9			07/12/2021	
Surr: p-Terphenyl-d14	*			<b>0.0137</b>	0.0125		109.8			07/12/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179621		SampType: MS		Units mg/L							
SampID: 21070532-004BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>7.76</b>	8.000	0	97.0	50	175	07/12/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0383</b>	0.0500		76.6	1.39	137	07/12/2021	
Surr: Nitrobenzene-d5	*			<b>0.0406</b>	0.0500		81.1	29.1	125	07/12/2021	
Surr: p-Terphenyl-d14	*			<b>0.0563</b>	0.0500		112.6	35.2	164	07/12/2021	

Batch 179621		SampType: MSD		Units mg/L							RPD Limit 40
SampID: 21070532-004BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>7.61</b>	8.000	0	95.2	7.758	1.90	07/12/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0354</b>	0.0500		70.9			07/12/2021	
Surr: Nitrobenzene-d5	*			<b>0.0393</b>	0.0500		78.6			07/12/2021	
Surr: p-Terphenyl-d14	*			<b>0.0547</b>	0.0500		109.3			07/12/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179663      **SampType:** MBLK      **Units** mg/L

SampID: MBLK-179663

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		ND						07/14/2021
Acenaphthylene		0.00100		ND						07/14/2021
Anthracene		0.00100		ND						07/14/2021
Benzo(a)anthracene		0.00100		ND						07/14/2021
Benzo(a)pyrene		0.00100		ND						07/14/2021
Benzo(b)fluoranthene		0.00100		ND						07/14/2021
Benzo(g,h,i)perylene		0.00100		ND						07/14/2021
Benzo(k)fluoranthene		0.00100		ND						07/14/2021
Chrysene		0.00100		ND						07/14/2021
Dibenzo(a,h)anthracene		0.00100		ND						07/14/2021
Fluoranthene		0.00100		ND						07/14/2021
Fluorene		0.00100		ND						07/14/2021
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/14/2021
Naphthalene		0.00100		ND						07/14/2021
Phenanthrene		0.00100		ND						07/14/2021
Pyrene		0.00100		ND						07/14/2021
TPH-DRO (C10 - C21)	*	0.500		ND						07/14/2021
TPH-ORO (C21 - C35)	*	0.700		ND						07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00620</b>	0.0125		49.6	1.09	175	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.00932</b>	0.0125		74.6	35.5	156	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0128</b>	0.0125		102.7	35	222	07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCS		Units mg/L							
SampID: LCS-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		<b>0.00843</b>	0.0100	0	84.3	39.6	145	07/14/2021	
Acenaphthylene		0.00100		<b>0.00836</b>	0.0100	0	83.6	38.3	147	07/14/2021	
Anthracene		0.00100		<b>0.00897</b>	0.0100	0	89.7	47.7	153	07/14/2021	
Benzo(a)anthracene		0.00100		<b>0.00936</b>	0.0100	0	93.6	45	136	07/14/2021	
Benzo(a)pyrene		0.00100		<b>0.00848</b>	0.0100	0	84.8	49.8	164	07/14/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00948</b>	0.0100	0	94.8	45.7	167	07/14/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00928</b>	0.0100	0	92.8	41	157	07/14/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00974</b>	0.0100	0	97.4	46.7	166	07/14/2021	
Chrysene		0.00100		<b>0.00935</b>	0.0100	0	93.5	45.5	162	07/14/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00942</b>	0.0100	0	94.2	40.4	154	07/14/2021	
Fluoranthene		0.00100		<b>0.00975</b>	0.0100	0	97.5	47.3	168	07/14/2021	
Fluorene		0.00100		<b>0.00927</b>	0.0100	0	92.7	45.2	153	07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00945</b>	0.0100	0	94.5	44.6	166	07/14/2021	
Naphthalene		0.00100		<b>0.00603</b>	0.0100	0	60.3	16.6	137	07/14/2021	
Phenanthrene		0.00100		<b>0.00915</b>	0.0100	0	91.5	50.8	149	07/14/2021	
Pyrene		0.00100		<b>0.00943</b>	0.0100	0	94.3	44.9	163	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00980</b>	0.0125		78.4	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0106</b>	0.0125		85.0	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0146</b>	0.0125		117.1	35	222	07/14/2021	





## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCSD		Units mg/L				RPD Limit 40		
SampID: LCSD-179663										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		<b>0.00850</b>	0.0100	0	85.0	0.008426	0.90	07/14/2021
Acenaphthylene		0.00100		<b>0.00826</b>	0.0100	0	82.6	0.008358	1.20	07/14/2021
Anthracene		0.00100		<b>0.00891</b>	0.0100	0	89.1	0.008968	0.67	07/14/2021
Benzo(a)anthracene		0.00100		<b>0.00927</b>	0.0100	0	92.7	0.009363	0.98	07/14/2021
Benzo(a)pyrene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.008482	3.69	07/14/2021
Benzo(b)fluoranthene		0.00100		<b>0.00934</b>	0.0100	0	93.4	0.009480	1.45	07/14/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00912</b>	0.0100	0	91.2	0.009279	1.78	07/14/2021
Benzo(k)fluoranthene		0.00100		<b>0.00969</b>	0.0100	0	96.9	0.009742	0.54	07/14/2021
Chrysene		0.00100		<b>0.00926</b>	0.0100	0	92.6	0.009354	1.05	07/14/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00929</b>	0.0100	0	92.9	0.009424	1.38	07/14/2021
Fluoranthene		0.00100		<b>0.00952</b>	0.0100	0	95.2	0.009751	2.36	07/14/2021
Fluorene		0.00100		<b>0.00897</b>	0.0100	0	89.7	0.009270	3.31	07/14/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00940</b>	0.0100	0	94.0	0.009454	0.57	07/14/2021
Naphthalene		0.00100		<b>0.00785</b>	0.0100	0	78.5	0.006030	26.26	07/14/2021
Phenanthrene		0.00100		<b>0.00924</b>	0.0100	0	92.4	0.009147	1.05	07/14/2021
Pyrene		0.00100		<b>0.00930</b>	0.0100	0	93.0	0.009428	1.39	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.0103</b>	0.0125		82.6			07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0105</b>	0.0125		83.9			07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0140</b>	0.0125		111.8			07/14/2021

Batch 179663		SampType: LCSG		Units mg/L						
SampID: LCSG-179663										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH-DRO (C10 - C21)	*	0.500		<b>1.93</b>	2.000	0	96.6	17.1	195	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.0129</b>	0.0125		103.0	1.09	175	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0115</b>	0.0125		92.4	35.5	156	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0154</b>	0.0125		122.9	35	222	07/14/2021

Batch 179663		SampType: LCSGD		Units mg/L				RPD Limit 40		
SampID: LCSGD-179663										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH-DRO (C10 - C21)	*	0.500		<b>1.92</b>	2.000	0	96.0	1.932	0.60	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.0122</b>	0.0125		97.8			07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0113</b>	0.0125		90.4			07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0144</b>	0.0125		115.5			07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210712A-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						07/12/2021
1,1,1-Trichloroethane	*	2.0		ND						07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/12/2021
1,1,2-Trichloroethane	*	0.5		ND						07/12/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/12/2021
1,1-Dichloroethane	*	2.0		ND						07/12/2021
1,1-Dichloroethene	*	2.0		ND						07/12/2021
1,1-Dichloropropene	*	2.0		ND						07/12/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,3-Trichloropropane	*	2.0		ND						07/12/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/12/2021
1,2-Dibromoethane	*	2.0		ND						07/12/2021
1,2-Dichlorobenzene	*	2.0		ND						07/12/2021
1,2-Dichloroethane	*	2.0		ND						07/12/2021
1,2-Dichloropropane	*	2.0		ND						07/12/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/12/2021
1,3-Dichlorobenzene	*	2.0		ND						07/12/2021
1,3-Dichloropropane	*	2.0		ND						07/12/2021
1,4-Dichlorobenzene	*	2.0		ND						07/12/2021
1-Chlorobutane	*	5.0		ND						07/12/2021
2,2-Dichloropropane	*	2.0		ND						07/12/2021
2-Butanone	*	10.0		ND						07/12/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/12/2021
2-Chlorotoluene	*	2.0		ND						07/12/2021
2-Hexanone	*	10.0		ND						07/12/2021
2-Nitropropane	*	10.0		ND						07/12/2021
4-Chlorotoluene	*	2.0		ND						07/12/2021
4-Methyl-2-pentanone	*	10.0		ND						07/12/2021
Acetone	*	10.0		ND						07/12/2021
Acetonitrile	*	10.0		ND						07/12/2021
Acrolein	*	20.0		ND						07/12/2021
Acrylonitrile	*	5.0		ND						07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/12/2021
Benzene	*	0.5		ND						07/12/2021
Bromobenzene	*	2.0		ND						07/12/2021
Bromochloromethane	*	2.0		ND						07/12/2021
Bromodichloromethane	*	2.0		ND						07/12/2021
Bromoform	*	2.0		ND						07/12/2021
Bromomethane	*	5.0		ND						07/12/2021
Carbon disulfide	*	2.0		ND						07/12/2021
Carbon tetrachloride	*	2.0		ND						07/12/2021
Chlorobenzene	*	2.0		ND						07/12/2021
Chloroethane	*	2.0		ND						07/12/2021
Chloroform	*	2.0		ND						07/12/2021
Chloromethane	*	5.0		ND						07/12/2021
Chloroprene	*	5.0		ND						07/12/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/12/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Cyclohexanone	*	20.0		ND						07/12/2021
Dibromochloromethane	*	2.0		ND						07/12/2021
Dibromomethane	*	2.0		ND						07/12/2021
Dichlorodifluoromethane	*	2.0		ND						07/12/2021
Diisopropyl ether	*	2.0		ND						07/12/2021
Ethyl acetate	*	10.0		ND						07/12/2021
Ethyl ether	*	5.0		ND						07/12/2021
Ethyl methacrylate	*	5.0		ND						07/12/2021
Ethylbenzene	*	2.0		ND						07/12/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/12/2021
Hexachlorobutadiene	*	5.0		ND						07/12/2021
Hexachloroethane	*	5.0		ND						07/12/2021
Iodomethane	*	5.0		ND						07/12/2021
Isopropylbenzene	*	2.0		ND						07/12/2021
m,p-Xylenes	*	2.0		ND						07/12/2021
Methacrylonitrile	*	5.0		ND						07/12/2021
Methyl Methacrylate	*	5.0		ND						07/12/2021
Methyl tert-butyl ether	*	2.0		ND						07/12/2021
Methylacrylate	*	5.0		ND						07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/12/2021
Naphthalene	*	5.0		ND						07/12/2021
n-Butyl acetate	*	2.0		ND						07/12/2021
n-Butylbenzene	*	2.0		ND						07/12/2021
n-Heptane	*	5.0		ND						07/12/2021
n-Hexane	*	5.0		ND						07/12/2021
Nitrobenzene	*	50.0		ND						07/12/2021
n-Propylbenzene	*	2.0		ND						07/12/2021
o-Xylene	*	2.0		ND						07/12/2021
Pentachloroethane	*	5.0		ND						07/12/2021
p-Isopropyltoluene	*	2.0		ND						07/12/2021
Propionitrile	*	10.0		ND						07/12/2021
sec-Butylbenzene	*	2.0		ND						07/12/2021
Styrene	*	2.0		ND						07/12/2021
tert-Amyl methyl ether	*	2.0		ND						07/12/2021
tert-Butyl alcohol	*	10.0		ND						07/12/2021
tert-Butylbenzene	*	2.0		ND						07/12/2021
Tetrachloroethene	*	0.5		ND						07/12/2021
Tetrahydrofuran	*	5.0		ND						07/12/2021
Toluene	*	2.0		ND						07/12/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/12/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Trichloroethene	*	2.0		ND						07/12/2021
Trichlorofluoromethane	*	5.0		ND						07/12/2021
Vinyl acetate	*	5.0		ND						07/12/2021
Vinyl chloride	*	2.0		ND						07/12/2021
Xylenes, Total	*	4.0		ND						07/12/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/12/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/12/2021
TPH - GRO (C6 - C10)	*	500		ND						07/12/2021
Surr: 1,2-Dichloroethane-d4	*			49.4	50.00		98.8	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			51.6	50.00		103.3	80	120	07/12/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>50.4</b>	50.00	0	100.7	82	113	07/12/2021
1,1,1-Trichloroethane	*	2.0		<b>50.8</b>	50.00	0	101.7	76.9	128	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>41.2</b>	50.00	0	82.3	76.7	113	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>49.1</b>	50.00	0	98.1	69.5	127	07/12/2021
1,1,2-Trichloroethane	*	0.5		<b>47.3</b>	50.00	0	94.5	83.8	111	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		<b>119</b>	125.0	0	95.3	74.9	117	07/12/2021
1,1-Dichloroethane	*	2.0		<b>50.2</b>	50.00	0	100.5	77	129	07/12/2021
1,1-Dichloroethene	*	2.0		<b>47.6</b>	50.00	0	95.3	69.4	127	07/12/2021
1,1-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.9	75.1	123	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	77.3	121	07/12/2021
1,2,3-Trichloropropane	*	2.0		<b>39.9</b>	50.00	0	79.7	75.3	109	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	77	115	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		<b>51.0</b>	50.00	0	102.1	76.8	124	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		<b>49.0</b>	50.00	0	97.9	75	115	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>43.2</b>	50.00	0	86.5	71.9	119	07/12/2021
1,2-Dibromoethane	*	2.0		<b>48.0</b>	50.00	0	96.0	83.6	110	07/12/2021
1,2-Dichlorobenzene	*	2.0		<b>46.6</b>	50.00	0	93.2	72.1	113	07/12/2021
1,2-Dichloroethane	*	2.0		<b>47.5</b>	50.00	0	95.0	72.3	117	07/12/2021
1,2-Dichloropropane	*	2.0		<b>49.1</b>	50.00	0	98.2	76.5	119	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		<b>46.7</b>	50.00	0	93.4	75.2	117	07/12/2021
1,3-Dichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	75.2	115	07/12/2021
1,3-Dichloropropane	*	2.0		<b>46.4</b>	50.00	0	92.8	80.9	110	07/12/2021
1,4-Dichlorobenzene	*	2.0		<b>49.4</b>	50.00	0	98.7	73.9	112	07/12/2021
1-Chlorobutane	*	5.0		<b>54.2</b>	50.00	0	108.3	74.9	130	07/12/2021
2,2-Dichloropropane	*	2.0		<b>53.1</b>	50.00	0	106.2	66.5	138	07/12/2021
2-Butanone	*	10.0		<b>127</b>	125.0	0	101.6	68.8	134	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		<b>48.1</b>	50.00	0	96.2	17.8	163	07/12/2021
2-Chlorotoluene	*	2.0		<b>45.4</b>	50.00	0	90.7	74.9	115	07/12/2021
2-Hexanone	*	10.0		<b>126</b>	125.0	0	101.1	73.2	117	07/12/2021
2-Nitropropane	*	10.0		<b>451</b>	500.0	0	90.2	67.1	140	07/12/2021
4-Chlorotoluene	*	2.0		<b>47.0</b>	50.00	0	93.9	75.7	113	07/12/2021
4-Methyl-2-pentanone	*	10.0		<b>123</b>	125.0	0	98.7	77	113	07/12/2021
Acetone	*	10.0		<b>109</b>	125.0	0	87.2	61.4	130	07/12/2021
Acetonitrile	*	10.0		<b>557</b>	500.0	0	111.5	68.8	136	07/12/2021
Acrolein	*	20.0		<b>411</b>	500.0	0	82.2	28.4	168	07/12/2021
Acrylonitrile	*	5.0		<b>49.4</b>	50.00	0	98.9	77.9	124	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>51.6</b>	50.00	0	103.2	75.8	130	07/12/2021
Benzene	*	0.5		<b>49.9</b>	50.00	0	99.8	78.5	119	07/12/2021
Bromobenzene	*	2.0		<b>47.6</b>	50.00	0	95.1	77.5	113	07/12/2021
Bromochloromethane	*	2.0		<b>46.4</b>	50.00	0	92.8	71.5	123	07/12/2021
Bromodichloromethane	*	2.0		<b>50.3</b>	50.00	0	100.6	75.7	123	07/12/2021
Bromoform	*	2.0		<b>49.0</b>	50.00	0	97.9	78.9	121	07/12/2021
Bromomethane	*	5.0		<b>59.0</b>	50.00	0	118.0	30.5	192	07/12/2021
Carbon disulfide	*	2.0		<b>47.4</b>	50.00	0	94.7	66.7	121	07/12/2021
Carbon tetrachloride	*	2.0		<b>50.5</b>	50.00	0	101.0	70.9	127	07/12/2021
Chlorobenzene	*	2.0		<b>49.1</b>	50.00	0	98.2	80	111	07/12/2021
Chloroethane	*	2.0		<b>46.0</b>	50.00	0	92.0	69.6	135	07/12/2021
Chloroform	*	2.0		<b>48.5</b>	50.00	0	97.1	76.2	120	07/12/2021
Chloromethane	*	5.0		<b>42.0</b>	50.00	0	84.0	50.9	138	07/12/2021
Chloroprene	*	5.0		<b>52.3</b>	50.00	0	104.6	68.4	127	07/12/2021
cis-1,2-Dichloroethene	*	2.0		<b>50.7</b>	50.00	0	101.3	79.5	121	07/12/2021
cis-1,3-Dichloropropene	*	2.0		<b>53.4</b>	50.00	0	106.9	79.8	123	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>41.2</b>	50.00	0	82.3	64.6	130	07/12/2021
Cyclohexanone	*	20.0		<b>432</b>	500.0	0	86.4	70.5	114	07/12/2021
Dibromochloromethane	*	2.0		<b>50.1</b>	50.00	0	100.2	84.5	114	07/12/2021
Dibromomethane	*	2.0		<b>47.4</b>	50.00	0	94.8	76	119	07/12/2021
Dichlorodifluoromethane	*	2.0		<b>39.5</b>	50.00	0	79.1	46.6	142	07/12/2021
Diisopropyl ether	*	2.0		<b>52.0</b>	50.00	0	103.9	72	128	07/12/2021
Ethyl acetate	*	10.0		<b>46.7</b>	50.00	0	93.4	70.3	115	07/12/2021
Ethyl ether	*	5.0		<b>52.3</b>	50.00	0	104.6	74.6	120	07/12/2021
Ethyl methacrylate	*	5.0		<b>47.8</b>	50.00	0	95.6	81.4	116	07/12/2021
Ethylbenzene	*	2.0		<b>51.3</b>	50.00	0	102.5	78.2	114	07/12/2021
Ethyl-tert-butyl ether	*	2.0		<b>51.4</b>	50.00	0	102.9	74.6	124	07/12/2021
Hexachlorobutadiene	*	5.0		<b>51.5</b>	50.00	0	103.0	73.9	129	07/12/2021
Hexachloroethane	*	5.0		<b>48.8</b>	50.00	0	97.6	78.3	123	07/12/2021
Iodomethane	*	5.0		<b>43.5</b>	50.00	0	87.0	50	151	07/12/2021
Isopropylbenzene	*	2.0		<b>52.2</b>	50.00	0	104.5	79.3	115	07/12/2021
m,p-Xylenes	*	2.0		<b>109</b>	100.0	0	109.2	77.2	116	07/12/2021
Methacrylonitrile	*	5.0		<b>47.1</b>	50.00	0	94.2	73.9	127	07/12/2021
Methyl Methacrylate	*	5.0		<b>52.3</b>	50.00	0	104.6	70.7	129	07/12/2021
Methyl tert-butyl ether	*	2.0		<b>48.7</b>	50.00	0	97.3	80.3	122	07/12/2021
Methylacrylate	*	5.0		<b>47.0</b>	50.00	0	93.9	75.2	124	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		48.2	50.00	0	96.5	71.8	115	07/12/2021
Naphthalene	*	5.0		51.9	50.00	0	103.8	75.6	121	07/12/2021
n-Butyl acetate	*	2.0		48.5	50.00	0	97.0	72.4	118	07/12/2021
n-Butylbenzene	*	2.0		46.6	50.00	0	93.3	70.8	118	07/12/2021
n-Heptane	*	5.0		42.0	50.00	0	83.9	50.4	143	07/12/2021
n-Hexane	*	5.0		43.0	50.00	0	85.9	60.6	139	07/12/2021
Nitrobenzene	*	50.0		500	500.0	0	99.9	49.4	129	07/12/2021
n-Propylbenzene	*	2.0		48.2	50.00	0	96.5	74	119	07/12/2021
o-Xylene	*	2.0		51.2	50.00	0	102.4	79.2	112	07/12/2021
Pentachloroethane	*	5.0		48.4	50.00	0	96.8	71.8	124	07/12/2021
p-Isopropyltoluene	*	2.0		46.5	50.00	0	93.0	74.4	119	07/12/2021
Propionitrile	*	10.0		504	500.0	0	100.8	76.2	127	07/12/2021
sec-Butylbenzene	*	2.0		47.7	50.00	0	95.4	74.4	119	07/12/2021
Styrene	*	2.0		56.0	50.00	0	111.9	80.4	117	07/12/2021
tert-Amyl methyl ether	*	2.0		43.1	50.00	0	86.2	80.8	125	07/12/2021
tert-Butyl alcohol	*	10.0		251	250.0	0	100.2	64.9	118	07/12/2021
tert-Butylbenzene	*	2.0		45.7	50.00	0	91.5	74	115	07/12/2021
Tetrachloroethene	*	0.5		51.2	50.00	0	102.3	70.1	120	07/12/2021
Tetrahydrofuran	*	5.0		45.6	50.00	0	91.3	63.5	122	07/12/2021
Toluene	*	2.0		48.7	50.00	0	97.4	78.6	112	07/12/2021
trans-1,2-Dichloroethene	*	2.0		51.5	50.00	0	103.1	75.7	130	07/12/2021
trans-1,3-Dichloropropene	*	2.0		47.3	50.00	0	94.6	80.3	116	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		34.3	50.00	0	68.6	65.5	124	07/12/2021
Trichloroethene	*	2.0		50.5	50.00	0	100.9	76.2	121	07/12/2021
Trichlorofluoromethane	*	5.0		43.8	50.00	0	87.6	71.1	131	07/12/2021
Vinyl acetate	*	5.0		46.0	50.00	0	92.1	79.8	129	07/12/2021
Vinyl chloride	*	2.0		42.4	50.00	0	84.8	58.6	141	07/12/2021
Xylenes, Total	*	4.0		160	150.0	0	107.0	78.3	114	07/12/2021
1,2-Dichloroethene, Total	*	4.0		102	100.0	0	102.2	78.5	125	07/12/2021
1,3-Dichloropropene, Total	*	4.0		101	100.0	0	100.7	82.3	117	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		75.5	100.0	0	75.5	65.9	126	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			48.2	50.00		96.4	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			46.4	50.00		92.9	80	120	07/12/2021
Surr: Toluene-d8	*			48.5	50.00		97.0	80	120	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units µg/L			RPD Limit 15.4					
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		45.1	50.00	0	90.2	50.36	10.98	07/12/2021
1,1,1-Trichloroethane	*	2.0		43.8	50.00	0	87.7	50.83	14.79	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		39.3	50.00	0	78.6	41.17	4.65	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		42.0	50.00	0	84.0	49.06	15.55	07/12/2021
1,1,2-Trichloroethane	*	0.5		44.6	50.00	0	89.2	47.26	5.81	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.9	119.2	6.94	07/12/2021
1,1-Dichloroethane	*	2.0		44.4	50.00	0	88.8	50.25	12.41	07/12/2021
1,1-Dichloroethene	*	2.0		40.0	50.00	0	80.0	47.64	17.41	07/12/2021
1,1-Dichloropropene	*	2.0		42.7	50.00	0	85.3	50.45	16.73	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		48.4	50.00	0	96.9	51.16	5.46	07/12/2021
1,2,3-Trichloropropane	*	2.0		39.3	50.00	0	78.6	39.86	1.41	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		42.7	50.00	0	85.4	48.18	12.11	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		48.4	50.00	0	96.8	51.03	5.33	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		43.3	50.00	0	86.6	48.95	12.30	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		42.3	50.00	0	84.6	43.24	2.22	07/12/2021
1,2-Dibromoethane	*	2.0		46.6	50.00	0	93.1	47.98	3.03	07/12/2021
1,2-Dichlorobenzene	*	2.0		42.4	50.00	0	84.9	46.61	9.34	07/12/2021
1,2-Dichloroethane	*	2.0		44.7	50.00	0	89.3	47.50	6.16	07/12/2021
1,2-Dichloropropane	*	2.0		45.1	50.00	0	90.1	49.10	8.58	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		41.5	50.00	0	83.0	46.72	11.79	07/12/2021
1,3-Dichlorobenzene	*	2.0		46.6	50.00	0	93.1	51.16	9.44	07/12/2021
1,3-Dichloropropane	*	2.0		43.8	50.00	0	87.7	46.38	5.63	07/12/2021
1,4-Dichlorobenzene	*	2.0		45.1	50.00	0	90.1	49.35	9.09	07/12/2021
1-Chlorobutane	*	5.0		46.2	50.00	0	92.4	54.16	15.82	07/12/2021
2,2-Dichloropropane	*	2.0		47.6	50.00	0	95.3	53.11	10.86	07/12/2021
2-Butanone	*	10.0		131	125.0	0	104.5	127.0	2.83	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		50.4	50.00	0	100.9	48.08	4.81	07/12/2021
2-Chlorotoluene	*	2.0		40.3	50.00	0	80.6	45.35	11.79	07/12/2021
2-Hexanone	*	10.0		127	125.0	0	101.2	126.4	0.13	07/12/2021
2-Nitropropane	*	10.0		445	500.0	0	89.1	451.0	1.23	07/12/2021
4-Chlorotoluene	*	2.0		47.3	50.00	0	94.5	46.95	0.68	07/12/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.5	123.4	0.17	07/12/2021
Acetone	*	10.0		117	125.0	0	93.6	109.0	7.04	07/12/2021
Acetonitrile	*	10.0		554	500.0	0	110.7	557.4	0.70	07/12/2021
Acrolein	*	20.0		490	500.0	0	97.9	410.8	17.52	07/12/2021
Acrylonitrile	*	5.0		48.5	50.00	0	97.0	49.44	1.96	07/12/2021





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		46.6	50.00	0	93.3	51.59	10.06	07/12/2021
Benzene	*	0.5		44.1	50.00	0	88.2	49.92	12.34	07/12/2021
Bromobenzene	*	2.0		44.1	50.00	0	88.1	47.57	7.66	07/12/2021
Bromochloromethane	*	2.0		42.7	50.00	0	85.3	46.39	8.38	07/12/2021
Bromodichloromethane	*	2.0		46.1	50.00	0	92.2	50.31	8.73	07/12/2021
Bromoform	*	2.0		46.3	50.00	0	92.6	48.95	5.61	07/12/2021
Bromomethane	*	5.0		48.6	50.00	0	97.2	59.02	19.32	07/12/2021
Carbon disulfide	*	2.0		40.1	50.00	0	80.2	47.35	16.56	07/12/2021
Carbon tetrachloride	*	2.0		43.1	50.00	0	86.2	50.49	15.79	07/12/2021
Chlorobenzene	*	2.0		44.1	50.00	0	88.2	49.09	10.66	07/12/2021
Chloroethane	*	2.0		39.1	50.00	0	78.2	45.99	16.19	07/12/2021
Chloroform	*	2.0		44.0	50.00	0	88.0	48.53	9.75	07/12/2021
Chloromethane	*	5.0		35.0	50.00	0	70.0	42.00	18.21	07/12/2021
Chloroprene	*	5.0		42.6	50.00	0	85.2	52.28	20.36	07/12/2021
cis-1,2-Dichloroethene	*	2.0		43.8	50.00	0	87.7	50.66	14.46	07/12/2021
cis-1,3-Dichloropropene	*	2.0		49.8	50.00	0	99.6	53.45	7.09	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		42.5	50.00	0	85.1	41.17	3.25	07/12/2021
Cyclohexanone	*	20.0		463	500.0	0	92.7	432.0	7.02	07/12/2021
Dibromochloromethane	*	2.0		46.2	50.00	0	92.5	50.09	7.99	07/12/2021
Dibromomethane	*	2.0		44.8	50.00	0	89.7	47.41	5.55	07/12/2021
Dichlorodifluoromethane	*	2.0		31.4	50.00	0	62.7	39.54	23.07	07/12/2021
Diisopropyl ether	*	2.0		48.2	50.00	0	96.4	51.95	7.45	07/12/2021
Ethyl acetate	*	10.0		46.4	50.00	0	92.8	46.72	0.73	07/12/2021
Ethyl ether	*	5.0		49.0	50.00	0	98.1	52.29	6.41	07/12/2021
Ethyl methacrylate	*	5.0		45.8	50.00	0	91.5	47.80	4.36	07/12/2021
Ethylbenzene	*	2.0		45.7	50.00	0	91.4	51.26	11.49	07/12/2021
Ethyl-tert-butyl ether	*	2.0		48.1	50.00	0	96.3	51.45	6.67	07/12/2021
Hexachlorobutadiene	*	5.0		47.0	50.00	0	94.1	51.51	9.07	07/12/2021
Hexachloroethane	*	5.0		41.5	50.00	0	83.0	48.78	16.18	07/12/2021
Iodomethane	*	5.0		36.8	50.00	0	73.6	43.49	16.64	07/12/2021
Isopropylbenzene	*	2.0		46.2	50.00	0	92.3	52.23	12.34	07/12/2021
m,p-Xylenes	*	2.0		98.0	100.0	0	98.0	109.2	10.84	07/12/2021
Methacrylonitrile	*	5.0		47.7	50.00	0	95.3	47.10	1.20	07/12/2021
Methyl Methacrylate	*	5.0		51.8	50.00	0	103.5	52.30	1.06	07/12/2021
Methyl tert-butyl ether	*	2.0		46.6	50.00	0	93.2	48.66	4.33	07/12/2021
Methylacrylate	*	5.0		48.7	50.00	0	97.3	46.95	3.58	07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		44.2	50.00	0	88.4	48.23	8.77	07/12/2021
Naphthalene	*	5.0		48.6	50.00	0	97.2	51.92	6.59	07/12/2021
n-Butyl acetate	*	2.0		47.2	50.00	0	94.5	48.50	2.65	07/12/2021
n-Butylbenzene	*	2.0		41.5	50.00	0	83.0	46.65	11.64	07/12/2021
n-Heptane	*	5.0		47.0	50.00	0	93.9	41.95	11.25	07/12/2021
n-Hexane	*	5.0		42.0	50.00	0	83.9	42.96	2.33	07/12/2021
Nitrobenzene	*	50.0		473	500.0	0	94.5	499.7	5.59	07/12/2021
n-Propylbenzene	*	2.0		42.4	50.00	0	84.8	48.25	12.86	07/12/2021
o-Xylene	*	2.0		46.4	50.00	0	92.7	51.21	9.96	07/12/2021
Pentachloroethane	*	5.0		42.7	50.00	0	85.4	48.39	12.47	07/12/2021
p-Isopropyltoluene	*	2.0		40.5	50.00	0	81.0	46.48	13.80	07/12/2021
Propionitrile	*	10.0		511	500.0	0	102.2	504.0	1.35	07/12/2021
sec-Butylbenzene	*	2.0		41.2	50.00	0	82.4	47.68	14.58	07/12/2021
Styrene	*	2.0		51.0	50.00	0	101.9	55.97	9.35	07/12/2021
tert-Amyl methyl ether	*	2.0	S	40.3	50.00	0	80.6	43.12	6.74	07/12/2021
tert-Butyl alcohol	*	10.0		256	250.0	0	102.5	250.5	2.28	07/12/2021
tert-Butylbenzene	*	2.0		39.9	50.00	0	79.8	45.73	13.57	07/12/2021
Tetrachloroethene	*	0.5		44.8	50.00	0	89.6	51.16	13.30	07/12/2021
Tetrahydrofuran	*	5.0		45.8	50.00	0	91.6	45.64	0.37	07/12/2021
Toluene	*	2.0		43.0	50.00	0	86.1	48.69	12.32	07/12/2021
trans-1,2-Dichloroethene	*	2.0		43.7	50.00	0	87.3	51.54	16.53	07/12/2021
trans-1,3-Dichloropropene	*	2.0		44.1	50.00	0	88.3	47.28	6.87	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		33.6	50.00	0	67.2	34.31	2.09	07/12/2021
Trichloroethene	*	2.0		45.0	50.00	0	90.0	50.47	11.44	07/12/2021
Trichlorofluoromethane	*	5.0		43.3	50.00	0	86.6	43.79	1.10	07/12/2021
Vinyl acetate	*	5.0		48.9	50.00	0	97.8	46.05	6.04	07/12/2021
Vinyl chloride	*	2.0		33.9	50.00	0	67.7	42.42	22.44	07/12/2021
Xylenes, Total	*	4.0		144	150.0	0	96.2	160.4	10.56	07/12/2021
1,2-Dichloroethene, Total	*	4.0		87.5	100.0	0	87.5	102.2	15.50	07/12/2021
1,3-Dichloropropene, Total	*	4.0		93.9	100.0	0	93.9	100.7	6.99	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		76.1	100.0	0	76.1	75.48	0.86	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			48.2	50.00		96.3			07/12/2021
Surr: 4-Bromofluorobenzene	*			46.7	50.00		93.4			07/12/2021
Surr: Toluene-d8	*			48.6	50.00		97.2			07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179680		SampType: LCSG		Units µg/L							
SampID: LCSG-AM210712A-1										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
TPH - GRO (C6 - C10)	*	500		<b>1940</b>	2000	0	96.8	70	130	07/12/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>49.2</b>	50.00		98.4	80	120	07/12/2021	
Surr: 4-Bromofluorobenzene	*			<b>48.4</b>	50.00		96.8	80	120	07/12/2021	
Surr: Toluene-d8	*			<b>48.5</b>	50.00		97.0	80	120	07/12/2021	

Batch 179680		SampType: LCSGD		Units µg/L						RPD Limit 20		Date Analyzed
SampID: LCSGD-AM210712A-1												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
TPH - GRO (C6 - C10)	*	500		<b>1830</b>	2000	0	91.6	1935	5.53	07/12/2021		
Surr: 1,2-Dichloroethane-d4	*			<b>48.8</b>	50.00		97.6			07/12/2021		
Surr: 4-Bromofluorobenzene	*			<b>48.6</b>	50.00		97.1			07/12/2021		
Surr: Toluene-d8	*			<b>48.8</b>	50.00		97.6			07/12/2021		



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AK210713A-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						07/13/2021
1,1,1-Trichloroethane	*	2.0		ND						07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/13/2021
1,1,2-Trichloroethane	*	0.5		ND						07/13/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/13/2021
1,1-Dichloroethane	*	2.0		ND						07/13/2021
1,1-Dichloroethene	*	2.0		ND						07/13/2021
1,1-Dichloropropene	*	2.0		ND						07/13/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,3-Trichloropropane	*	2.0		ND						07/13/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/13/2021
1,2-Dibromoethane	*	2.0		ND						07/13/2021
1,2-Dichlorobenzene	*	2.0		ND						07/13/2021
1,2-Dichloroethane	*	2.0		ND						07/13/2021
1,2-Dichloropropane	*	2.0		ND						07/13/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/13/2021
1,3-Dichlorobenzene	*	2.0		ND						07/13/2021
1,3-Dichloropropane	*	2.0		ND						07/13/2021
1,4-Dichlorobenzene	*	2.0		ND						07/13/2021
1-Chlorobutane	*	5.0		ND						07/13/2021
2,2-Dichloropropane	*	2.0		ND						07/13/2021
2-Butanone	*	10.0		ND						07/13/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/13/2021
2-Chlorotoluene	*	2.0		ND						07/13/2021
2-Hexanone	*	10.0		ND						07/13/2021
2-Nitropropane	*	10.0		ND						07/13/2021
4-Chlorotoluene	*	2.0		ND						07/13/2021
4-Methyl-2-pentanone	*	10.0		ND						07/13/2021
Acetone	*	10.0		ND						07/13/2021
Acetonitrile	*	10.0		ND						07/13/2021
Acrolein	*	20.0		ND						07/13/2021
Acrylonitrile	*	5.0		ND						07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/13/2021
Benzene	*	0.5		ND						07/13/2021
Bromobenzene	*	2.0		ND						07/13/2021
Bromochloromethane	*	2.0		ND						07/13/2021
Bromodichloromethane	*	2.0		ND						07/13/2021
Bromoform	*	2.0		ND						07/13/2021
Bromomethane	*	5.0		ND						07/13/2021
Carbon disulfide	*	2.0		ND						07/13/2021
Carbon tetrachloride	*	2.0		ND						07/13/2021
Chlorobenzene	*	2.0		ND						07/13/2021
Chloroethane	*	2.0		ND						07/13/2021
Chloroform	*	2.0		ND						07/13/2021
Chloromethane	*	5.0		ND						07/13/2021
Chloroprene	*	5.0		ND						07/13/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/13/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Cyclohexanone	*	20.0		ND						07/13/2021
Dibromochloromethane	*	2.0		ND						07/13/2021
Dibromomethane	*	2.0		ND						07/13/2021
Dichlorodifluoromethane	*	2.0		ND						07/13/2021
Diisopropyl ether	*	2.0		ND						07/13/2021
Ethyl acetate	*	10.0		ND						07/13/2021
Ethyl ether	*	5.0		ND						07/13/2021
Ethyl methacrylate	*	5.0		ND						07/13/2021
Ethylbenzene	*	2.0		ND						07/13/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/13/2021
Hexachlorobutadiene	*	5.0		ND						07/13/2021
Hexachloroethane	*	5.0		ND						07/13/2021
Iodomethane	*	5.0		ND						07/13/2021
Isopropylbenzene	*	2.0		ND						07/13/2021
m,p-Xylenes	*	2.0		ND						07/13/2021
Methacrylonitrile	*	5.0		ND						07/13/2021
Methyl Methacrylate	*	5.0		ND						07/13/2021
Methyl tert-butyl ether	*	2.0		ND						07/13/2021
Methylacrylate	*	5.0		ND						07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/13/2021
Naphthalene	*	5.0		ND						07/13/2021
n-Butyl acetate	*	2.0		ND						07/13/2021
n-Butylbenzene	*	2.0		ND						07/13/2021
n-Heptane	*	5.0		ND						07/13/2021
n-Hexane	*	5.0		ND						07/13/2021
Nitrobenzene	*	50.0		ND						07/13/2021
n-Propylbenzene	*	2.0		ND						07/13/2021
o-Xylene	*	2.0		ND						07/13/2021
Pentachloroethane	*	5.0		ND						07/13/2021
p-Isopropyltoluene	*	2.0		ND						07/13/2021
Propionitrile	*	10.0		ND						07/13/2021
sec-Butylbenzene	*	2.0		ND						07/13/2021
Styrene	*	2.0		ND						07/13/2021
tert-Amyl methyl ether	*	2.0		ND						07/13/2021
tert-Butyl alcohol	*	10.0		ND						07/13/2021
tert-Butylbenzene	*	2.0		ND						07/13/2021
Tetrachloroethene	*	0.5		ND						07/13/2021
Tetrahydrofuran	*	5.0		ND						07/13/2021
Toluene	*	2.0		ND						07/13/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/13/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Trichloroethene	*	2.0		ND						07/13/2021
Trichlorofluoromethane	*	5.0		ND						07/13/2021
Vinyl acetate	*	5.0		ND						07/13/2021
Vinyl chloride	*	2.0		ND						07/13/2021
Xylenes, Total	*	4.0		ND						07/13/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/13/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/13/2021
TPH - GRO (C6 - C10)	*	500		ND						07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.8	50.00		95.7	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.4	50.00		94.7	80	120	07/13/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>49.3</b>	50.00	0	98.6	82	113	07/13/2021
1,1,1-Trichloroethane	*	2.0		<b>53.6</b>	50.00	0	107.3	76.9	128	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>44.9</b>	50.00	0	89.8	76.7	113	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>50.5</b>	50.00	0	101.0	69.5	127	07/13/2021
1,1,2-Trichloroethane	*	0.5		<b>49.1</b>	50.00	0	98.2	83.8	111	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		<b>108</b>	125.0	0	86.4	74.9	117	07/13/2021
1,1-Dichloroethane	*	2.0		<b>54.2</b>	50.00	0	108.4	77	129	07/13/2021
1,1-Dichloroethene	*	2.0		<b>50.0</b>	50.00	0	100.0	69.4	127	07/13/2021
1,1-Dichloropropene	*	2.0		<b>53.6</b>	50.00	0	107.2	75.1	123	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		<b>52.7</b>	50.00	0	105.4	77.3	121	07/13/2021
1,2,3-Trichloropropane	*	2.0		<b>44.8</b>	50.00	0	89.6	75.3	109	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		<b>46.6</b>	50.00	0	93.1	77	115	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		<b>53.3</b>	50.00	0	106.6	76.8	124	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.4	75	115	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>45.8</b>	50.00	0	91.6	71.9	119	07/13/2021
1,2-Dibromoethane	*	2.0		<b>51.4</b>	50.00	0	102.7	83.6	110	07/13/2021
1,2-Dichlorobenzene	*	2.0		<b>45.2</b>	50.00	0	90.3	72.1	113	07/13/2021
1,2-Dichloroethane	*	2.0		<b>49.4</b>	50.00	0	98.7	72.3	117	07/13/2021
1,2-Dichloropropane	*	2.0		<b>55.5</b>	50.00	0	111.0	76.5	119	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		<b>47.6</b>	50.00	0	95.3	75.2	117	07/13/2021
1,3-Dichlorobenzene	*	2.0		<b>47.3</b>	50.00	0	94.5	75.2	115	07/13/2021
1,3-Dichloropropane	*	2.0		<b>48.6</b>	50.00	0	97.2	80.9	110	07/13/2021
1,4-Dichlorobenzene	*	2.0		<b>44.8</b>	50.00	0	89.6	73.9	112	07/13/2021
1-Chlorobutane	*	5.0		<b>53.3</b>	50.00	0	106.6	74.9	130	07/13/2021
2,2-Dichloropropane	*	2.0		<b>60.2</b>	50.00	0	120.4	66.5	138	07/13/2021
2-Butanone	*	10.0		<b>134</b>	125.0	0	106.9	68.8	134	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		<b>55.5</b>	50.00	0	111.0	17.8	163	07/13/2021
2-Chlorotoluene	*	2.0		<b>45.7</b>	50.00	0	91.4	74.9	115	07/13/2021
2-Hexanone	*	10.0		<b>120</b>	125.0	0	95.8	73.2	117	07/13/2021
2-Nitropropane	*	10.0		<b>518</b>	500.0	0	103.5	67.1	140	07/13/2021
4-Chlorotoluene	*	2.0		<b>47.3</b>	50.00	0	94.6	75.7	113	07/13/2021
4-Methyl-2-pentanone	*	10.0		<b>122</b>	125.0	0	97.7	77	113	07/13/2021
Acetone	*	10.0		<b>121</b>	125.0	0	97.0	61.4	130	07/13/2021
Acetonitrile	*	10.0		<b>512</b>	500.0	0	102.3	68.8	136	07/13/2021
Acrolein	*	20.0		<b>514</b>	500.0	0	102.7	28.4	168	07/13/2021
Acrylonitrile	*	5.0		<b>55.7</b>	50.00	0	111.5	77.9	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>58.7</b>	50.00	0	117.3	75.8	130	07/13/2021
Benzene	*	0.5		<b>52.5</b>	50.00	0	105.0	78.5	119	07/13/2021
Bromobenzene	*	2.0		<b>46.6</b>	50.00	0	93.3	77.5	113	07/13/2021
Bromochloromethane	*	2.0		<b>50.4</b>	50.00	0	100.8	71.5	123	07/13/2021
Bromodichloromethane	*	2.0		<b>57.8</b>	50.00	0	115.6	75.7	123	07/13/2021
Bromoform	*	2.0		<b>44.4</b>	50.00	0	88.9	78.9	121	07/13/2021
Bromomethane	*	5.0		<b>80.7</b>	50.00	0	161.4	30.5	192	07/13/2021
Carbon disulfide	*	2.0		<b>47.7</b>	50.00	0	95.3	66.7	121	07/13/2021
Carbon tetrachloride	*	2.0		<b>54.3</b>	50.00	0	108.5	70.9	127	07/13/2021
Chlorobenzene	*	2.0		<b>48.1</b>	50.00	0	96.1	80	111	07/13/2021
Chloroethane	*	2.0		<b>46.0</b>	50.00	0	92.1	69.6	135	07/13/2021
Chloroform	*	2.0		<b>57.0</b>	50.00	0	113.9	76.2	120	07/13/2021
Chloromethane	*	5.0		<b>29.9</b>	50.00	0	59.7	50.9	138	07/13/2021
Chloroprene	*	5.0		<b>54.6</b>	50.00	0	109.1	68.4	127	07/13/2021
cis-1,2-Dichloroethene	*	2.0		<b>56.4</b>	50.00	0	112.8	79.5	121	07/13/2021
cis-1,3-Dichloropropene	*	2.0		<b>58.7</b>	50.00	0	117.4	79.8	123	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>46.6</b>	50.00	0	93.2	64.6	130	07/13/2021
Cyclohexanone	*	20.0		<b>521</b>	500.0	0	104.3	70.5	114	07/13/2021
Dibromochloromethane	*	2.0		<b>52.3</b>	50.00	0	104.6	84.5	114	07/13/2021
Dibromomethane	*	2.0		<b>54.8</b>	50.00	0	109.6	76	119	07/13/2021
Dichlorodifluoromethane	*	2.0		<b>35.7</b>	50.00	0	71.4	46.6	142	07/13/2021
Diisopropyl ether	*	2.0		<b>55.0</b>	50.00	0	110.0	72	128	07/13/2021
Ethyl acetate	*	10.0		<b>50.4</b>	50.00	0	100.8	70.3	115	07/13/2021
Ethyl ether	*	5.0		<b>55.8</b>	50.00	0	111.5	74.6	120	07/13/2021
Ethyl methacrylate	*	5.0		<b>47.5</b>	50.00	0	95.1	81.4	116	07/13/2021
Ethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.3	78.2	114	07/13/2021
Ethyl-tert-butyl ether	*	2.0		<b>57.2</b>	50.00	0	114.5	74.6	124	07/13/2021
Hexachlorobutadiene	*	5.0		<b>53.5</b>	50.00	0	107.0	73.9	129	07/13/2021
Hexachloroethane	*	5.0		<b>39.3</b>	50.00	0	78.6	78.3	123	07/13/2021
Iodomethane	*	5.0		<b>35.1</b>	50.00	0	70.3	50	151	07/13/2021
Isopropylbenzene	*	2.0		<b>51.1</b>	50.00	0	102.2	79.3	115	07/13/2021
m,p-Xylenes	*	2.0		<b>93.9</b>	100.0	0	93.9	77.2	116	07/13/2021
Methacrylonitrile	*	5.0		<b>57.9</b>	50.00	0	115.8	73.9	127	07/13/2021
Methyl Methacrylate	*	5.0		<b>54.5</b>	50.00	0	108.9	70.7	129	07/13/2021
Methyl tert-butyl ether	*	2.0		<b>55.4</b>	50.00	0	110.8	80.3	122	07/13/2021
Methylacrylate	*	5.0		<b>57.5</b>	50.00	0	115.0	75.2	124	07/13/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		46.4	50.00	0	92.8	71.8	115	07/13/2021
Naphthalene	*	5.0	B	46.4	50.00	0	92.7	75.6	121	07/13/2021
n-Butyl acetate	*	2.0		49.5	50.00	0	99.0	72.4	118	07/13/2021
n-Butylbenzene	*	2.0		48.2	50.00	0	96.5	70.8	118	07/13/2021
n-Heptane	*	5.0		56.1	50.00	0	112.2	50.4	143	07/13/2021
n-Hexane	*	5.0		51.2	50.00	0	102.4	60.6	139	07/13/2021
Nitrobenzene	*	50.0		441	500.0	0	88.2	49.4	129	07/13/2021
n-Propylbenzene	*	2.0		47.1	50.00	0	94.2	74	119	07/13/2021
o-Xylene	*	2.0		47.5	50.00	0	95.1	79.2	112	07/13/2021
Pentachloroethane	*	5.0		37.9	50.00	0	75.8	71.8	124	07/13/2021
p-Isopropyltoluene	*	2.0		49.0	50.00	0	98.0	74.4	119	07/13/2021
Propionitrile	*	10.0		551	500.0	0	110.3	76.2	127	07/13/2021
sec-Butylbenzene	*	2.0		48.2	50.00	0	96.4	74.4	119	07/13/2021
Styrene	*	2.0		50.3	50.00	0	100.6	80.4	117	07/13/2021
tert-Amyl methyl ether	*	2.0		55.4	50.00	0	110.9	80.8	125	07/13/2021
tert-Butyl alcohol	*	10.0		273	250.0	0	109.1	64.9	118	07/13/2021
tert-Butylbenzene	*	2.0		48.2	50.00	0	96.5	74	115	07/13/2021
Tetrachloroethene	*	0.5		52.9	50.00	0	105.9	70.1	120	07/13/2021
Tetrahydrofuran	*	5.0		46.2	50.00	0	92.4	63.5	122	07/13/2021
Toluene	*	2.0		46.5	50.00	0	93.0	78.6	112	07/13/2021
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.6	75.7	130	07/13/2021
trans-1,3-Dichloropropene	*	2.0		50.4	50.00	0	100.8	80.3	116	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		45.1	50.00	0	90.1	65.5	124	07/13/2021
Trichloroethene	*	2.0		55.0	50.00	0	110.1	76.2	121	07/13/2021
Trichlorofluoromethane	*	5.0		46.4	50.00	0	92.7	71.1	131	07/13/2021
Vinyl acetate	*	5.0		53.9	50.00	0	107.8	79.8	129	07/13/2021
Vinyl chloride	*	2.0		41.7	50.00	0	83.3	58.6	141	07/13/2021
Xylenes, Total	*	4.0		141	150.0	0	94.3	78.3	114	07/13/2021
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	78.5	125	07/13/2021
1,3-Dichloropropene, Total	*	4.0		109	100.0	0	109.1	82.3	117	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		91.7	100.0	0	91.7	65.9	126	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.2	50.00		94.4	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.8	50.00		95.5	80	120	07/13/2021
Surr: Toluene-d8	*			46.2	50.00		92.5	80	120	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.8	50.00	0	99.5	49.31	0.89	07/13/2021
1,1,1-Trichloroethane	*	2.0		54.0	50.00	0	107.9	53.63	0.61	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		45.4	50.00	0	90.8	44.88	1.15	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.2	50.00	0	100.5	50.50	0.54	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.8	50.00	0	99.6	49.12	1.39	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.5	108.0	2.41	07/13/2021
1,1-Dichloroethane	*	2.0		54.7	50.00	0	109.4	54.20	0.88	07/13/2021
1,1-Dichloroethene	*	2.0		49.9	50.00	0	99.8	50.00	0.20	07/13/2021
1,1-Dichloropropene	*	2.0		53.4	50.00	0	106.9	53.58	0.26	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		53.1	50.00	0	106.2	52.72	0.70	07/13/2021
1,2,3-Trichloropropane	*	2.0		45.2	50.00	0	90.4	44.81	0.91	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		47.0	50.00	0	94.1	46.56	1.00	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		54.0	50.00	0	108.1	53.30	1.40	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		48.2	50.00	0	96.5	47.72	1.08	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		47.1	50.00	0	94.3	45.78	2.93	07/13/2021
1,2-Dibromoethane	*	2.0		52.1	50.00	0	104.2	51.37	1.43	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.4	50.00	0	90.9	45.17	0.62	07/13/2021
1,2-Dichloroethane	*	2.0		50.0	50.00	0	99.9	49.37	1.21	07/13/2021
1,2-Dichloropropane	*	2.0		55.8	50.00	0	111.6	55.51	0.56	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		48.0	50.00	0	96.0	47.63	0.79	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.6	50.00	0	95.2	47.27	0.65	07/13/2021
1,3-Dichloropropane	*	2.0		49.4	50.00	0	98.7	48.58	1.59	07/13/2021
1,4-Dichlorobenzene	*	2.0		45.4	50.00	0	90.7	44.78	1.29	07/13/2021
1-Chlorobutane	*	5.0		53.7	50.00	0	107.4	53.30	0.77	07/13/2021
2,2-Dichloropropane	*	2.0		59.9	50.00	0	119.8	60.19	0.52	07/13/2021
2-Butanone	*	10.0		135	125.0	0	108.3	133.6	1.33	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		56.4	50.00	0	112.9	55.50	1.70	07/13/2021
2-Chlorotoluene	*	2.0		46.0	50.00	0	92.1	45.71	0.70	07/13/2021
2-Hexanone	*	10.0		122	125.0	0	97.3	119.8	1.52	07/13/2021
2-Nitropropane	*	10.0		528	500.0	0	105.5	517.6	1.94	07/13/2021
4-Chlorotoluene	*	2.0		47.5	50.00	0	95.1	47.31	0.46	07/13/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.4	122.1	0.76	07/13/2021
Acetone	*	10.0		122	125.0	0	97.8	121.3	0.76	07/13/2021
Acetonitrile	*	10.0		519	500.0	0	103.8	511.5	1.47	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.8	513.6	0.04	07/13/2021
Acrylonitrile	*	5.0		56.2	50.00	0	112.3	55.74	0.77	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		59.6	50.00	0	119.2	58.67	1.59	07/13/2021
Benzene	*	0.5		52.5	50.00	0	104.9	52.49	0.06	07/13/2021
Bromobenzene	*	2.0		47.1	50.00	0	94.3	46.65	1.04	07/13/2021
Bromochloromethane	*	2.0		51.2	50.00	0	102.5	50.40	1.67	07/13/2021
Bromodichloromethane	*	2.0		58.3	50.00	0	116.5	57.78	0.83	07/13/2021
Bromoform	*	2.0		45.4	50.00	0	90.8	44.43	2.16	07/13/2021
Bromomethane	*	5.0		81.5	50.00	0	163.1	80.72	1.01	07/13/2021
Carbon disulfide	*	2.0		47.9	50.00	0	95.8	47.66	0.54	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.6	54.27	0.02	07/13/2021
Chlorobenzene	*	2.0		48.4	50.00	0	96.9	48.06	0.81	07/13/2021
Chloroethane	*	2.0		46.4	50.00	0	92.9	46.03	0.87	07/13/2021
Chloroform	*	2.0		57.6	50.00	0	115.2	56.95	1.17	07/13/2021
Chloromethane	*	5.0		30.2	50.00	0	60.3	29.86	1.03	07/13/2021
Chloroprene	*	5.0		54.3	50.00	0	108.7	54.57	0.42	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.5	50.00	0	112.9	56.39	0.12	07/13/2021
cis-1,3-Dichloropropene	*	2.0		59.2	50.00	0	118.4	58.70	0.83	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		47.9	50.00	0	95.9	46.60	2.81	07/13/2021
Cyclohexanone	*	20.0		518	500.0	0	103.7	521.3	0.58	07/13/2021
Dibromochloromethane	*	2.0		52.9	50.00	0	105.9	52.29	1.22	07/13/2021
Dibromomethane	*	2.0		55.2	50.00	0	110.4	54.82	0.71	07/13/2021
Dichlorodifluoromethane	*	2.0		36.0	50.00	0	71.9	35.68	0.81	07/13/2021
Diisopropyl ether	*	2.0		56.1	50.00	0	112.1	55.02	1.89	07/13/2021
Ethyl acetate	*	10.0		50.0	50.00	0	100.0	50.42	0.80	07/13/2021
Ethyl ether	*	5.0		56.8	50.00	0	113.6	55.75	1.83	07/13/2021
Ethyl methacrylate	*	5.0		48.1	50.00	0	96.1	47.53	1.13	07/13/2021
Ethylbenzene	*	2.0		48.5	50.00	0	96.9	48.15	0.64	07/13/2021
Ethyl-tert-butyl ether	*	2.0		59.2	50.00	0	118.3	57.25	3.30	07/13/2021
Hexachlorobutadiene	*	5.0		54.2	50.00	0	108.3	53.49	1.24	07/13/2021
Hexachloroethane	*	5.0		39.7	50.00	0	79.4	39.30	1.04	07/13/2021
Iodomethane	*	5.0		36.4	50.00	0	72.8	35.14	3.50	07/13/2021
Isopropylbenzene	*	2.0		51.5	50.00	0	103.1	51.11	0.84	07/13/2021
m,p-Xylenes	*	2.0		94.7	100.0	0	94.7	93.88	0.84	07/13/2021
Methacrylonitrile	*	5.0		58.5	50.00	0	116.9	57.91	0.96	07/13/2021
Methyl Methacrylate	*	5.0		55.0	50.00	0	110.0	54.47	0.97	07/13/2021
Methyl tert-butyl ether	*	2.0		56.8	50.00	0	113.6	55.41	2.50	07/13/2021
Methylacrylate	*	5.0		58.8	50.00	0	117.7	57.48	2.34	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	179692	SampType:	LCSD	Units µg/L				RPD Limit 15.4			
SampID: LCSD-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Methylene chloride	*	2.0		<b>46.7</b>	50.00	0	93.5	46.40	0.71	07/13/2021	
Naphthalene	*	5.0	B	<b>47.2</b>	50.00	0	94.4	46.36	1.75	07/13/2021	
n-Butyl acetate	*	2.0		<b>49.9</b>	50.00	0	99.7	49.48	0.79	07/13/2021	
n-Butylbenzene	*	2.0		<b>48.8</b>	50.00	0	97.6	48.25	1.11	07/13/2021	
n-Heptane	*	5.0		<b>57.4</b>	50.00	0	114.7	56.08	2.26	07/13/2021	
n-Hexane	*	5.0		<b>50.8</b>	50.00	0	101.5	51.18	0.80	07/13/2021	
Nitrobenzene	*	50.0		<b>455</b>	500.0	0	91.0	440.9	3.12	07/13/2021	
n-Propylbenzene	*	2.0		<b>47.4</b>	50.00	0	94.8	47.08	0.70	07/13/2021	
o-Xylene	*	2.0		<b>48.1</b>	50.00	0	96.1	47.54	1.11	07/13/2021	
Pentachloroethane	*	5.0		<b>38.3</b>	50.00	0	76.5	37.89	1.00	07/13/2021	
p-Isopropyltoluene	*	2.0		<b>49.4</b>	50.00	0	98.8	48.99	0.83	07/13/2021	
Propionitrile	*	10.0		<b>558</b>	500.0	0	111.6	551.4	1.20	07/13/2021	
sec-Butylbenzene	*	2.0		<b>48.5</b>	50.00	0	97.0	48.18	0.66	07/13/2021	
Styrene	*	2.0		<b>50.9</b>	50.00	0	101.9	50.28	1.30	07/13/2021	
tert-Amyl methyl ether	*	2.0		<b>57.0</b>	50.00	0	114.0	55.43	2.79	07/13/2021	
tert-Butyl alcohol	*	10.0		<b>280</b>	250.0	0	111.9	272.7	2.53	07/13/2021	
tert-Butylbenzene	*	2.0		<b>48.5</b>	50.00	0	97.1	48.25	0.58	07/13/2021	
Tetrachloroethene	*	0.5		<b>53.0</b>	50.00	0	106.1	52.94	0.19	07/13/2021	
Tetrahydrofuran	*	5.0		<b>46.8</b>	50.00	0	93.6	46.22	1.29	07/13/2021	
Toluene	*	2.0		<b>46.9</b>	50.00	0	93.8	46.51	0.81	07/13/2021	
trans-1,2-Dichloroethene	*	2.0		<b>51.8</b>	50.00	0	103.5	51.79	0.08	07/13/2021	
trans-1,3-Dichloropropene	*	2.0		<b>51.1</b>	50.00	0	102.3	50.40	1.46	07/13/2021	
trans-1,4-Dichloro-2-butene	*	2.0		<b>46.1</b>	50.00	0	92.2	45.07	2.28	07/13/2021	
Trichloroethene	*	2.0		<b>55.3</b>	50.00	0	110.6	55.04	0.44	07/13/2021	
Trichlorofluoromethane	*	5.0		<b>47.2</b>	50.00	0	94.3	46.36	1.69	07/13/2021	
Vinyl acetate	*	5.0		<b>54.7</b>	50.00	0	109.4	53.90	1.49	07/13/2021	
Vinyl chloride	*	2.0		<b>42.3</b>	50.00	0	84.7	41.66	1.62	07/13/2021	
Xylenes, Total	*	4.0		<b>143</b>	150.0	0	95.2	141.4	0.93	07/13/2021	
1,2-Dichloroethene, Total	*	4.0		<b>108</b>	100.0	0	108.2	108.2	0.03	07/13/2021	
1,3-Dichloropropene, Total	*	4.0		<b>110</b>	100.0	0	110.3	109.1	1.12	07/13/2021	
1,4-Dichloro-2-butene, Total	*	4.0		<b>94.0</b>	100.0	0	94.0	91.67	2.55	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>47.1</b>	50.00		94.2			07/13/2021	
Surr: 4-Bromofluorobenzene	*			<b>47.6</b>	50.00		95.3			07/13/2021	
Surr: Toluene-d8	*			<b>46.0</b>	50.00		92.1			07/13/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070532

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch 179692**      **SampType: LCSG**      Units  $\mu\text{g/L}$

SampID: LCSG-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1730</b>	2000	0	86.6	70	130	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.0	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.3</b>	50.00		94.6	80	120	07/13/2021
Surr: Toluene-d8	*			<b>46.4</b>	50.00		92.7	80	120	07/13/2021

**Batch 179692**      **SampType: LCSGD**      Units  $\mu\text{g/L}$

RPD Limit **20**

SampID: LCSGD-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1670</b>	2000	0	83.4	1733	3.81	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.1			07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.7</b>	50.00		95.4			07/13/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.4			07/13/2021



# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070532

Client Project: 128487 GSA

Report Date: 02-Aug-21

Carrier: Alec Rebbe

Received By: ERH

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

09-Jul-21

09-Jul-21

Mary E. Kemp

Shelly A. Hennessy

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **0.6**
- Type of thermal preservation? None  Ice  Blue Ice  Dry Ice
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Reported field parameters measured: Field  Lab  NA
- Container/Temp Blank temperature in compliance? Yes  No

*When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.*

- Water – at least one vial per sample has zero headspace? Yes  No  No VOA vials
- Water - TOX containers have zero headspace? Yes  No  No TOX containers
- Water - pH acceptable upon receipt? Yes  No  NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes  No  NA

**Any No responses must be detailed below or on the COC.**

pH strip #75145 - PRY/MKemp - 7/9/2021 3:18:49 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MKemp - 7/9/2021 3:19:04 PM

Headspace was present in the trip blank volatile vials. - Justin Carter was notified of this error via work order summary. - MKemp - 7/9/2021 3:22:08 PM

Received dissolved metals bottle for MW02 077072021, analysis added. MEK/SAH 7/9/21

21070532

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

021618 Form WCD-KC1-STL

Burns & McDonnell Engineering  
 425 South Woods Mill Road  
 Chesterfield, Missouri 63017  
 Phone: (314) 682-1500 Fax: (314) 682-1600  
 JUSTIN CARTER  
 Attention: SCARTER@BURNSMCD.COM

Laboratory: STH TELLAB, INC  
 Address: 5445 HORSESHOE LAKE RD  
 City/State/Zip: COLLINGSVILLE, IL 62234  
 Telephone: 618-344-1004

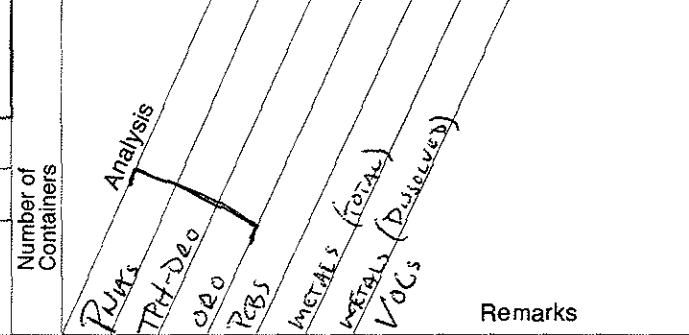
Document Control No: 128487-007

Lab. Reference No. or Episode No.:

Project Number: 128487 Sample Type

Client Name: GSA Matrix

Group or SWMU Name	Sample Point	Sample Designator	Sample Event		Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas	Number of Containers	Remarks
			Round	Year	From	To	Date	Time					



<u>7B-07</u>									X			2	X
<u>MW-01</u>	<u>07062021</u>			<u>2021</u>				<u>7/6/21</u>	<u>1635</u>	X		5	X X X X X X
<u>MW-02</u>	<u>07072021</u>			<u>2021</u>				<u>7/7/21</u>	<u>915</u>	X		5	X X X X X X
<u>MW-02</u>	<u>07072021/Dup</u>			<u>2021</u>				<u>7/7/21</u>	<u>9.5</u>	X		6	X X X X X X X X
<u>MW-03</u>	<u>07072021</u>			<u>2021</u>				<u>7/7/21</u>	<u>1105</u>	X		5	X X X X X X

**Courier**

Sampler (signature): B. Lakewood  
 (b) (6)

Sampler (signature): B. Lakewood

Special Instructions: SEE WORK ORDER EOC LIST

Relinquished By (signature): [Redacted]  
 1. (b) (6) Date/Time: 7/9

Received By (signature): [Redacted]  
 (b) (6) Date/Time: 7/9/21 1230

Ice Present in Container:  
 Yes  No

Temperature Upon Receipt:  
0.6°C LTC 5

Relinquished By (signature): [Redacted]  
 2. (b) (6) Date/Time: 7/9/21

Received By (signature): [Redacted]  
 (b) (6) Date/Time: 7/9/21 1230

Laboratory Comments: TO LAS HS; PIV 75045. PAT 7/9/21



August 02, 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:** 128487 GSA

**WorkOrder:** 21070533

Dear Justin Carter:

TEKLAB, INC received 3 samples on 7/9/2021 12:30:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)





## Report Contents

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**This reporting package includes the following:**

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Laboratory Results	7
Sample Summary	19
Dates Report	20
Quality Control Results	21
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Chain of Custody	Appended

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

### Qualifiers

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



## Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Cooler Receipt Temp:** 3.4 °C

This report was revised on 8/2/2021 per Justin Carter's request. The reason for the revision is to report DRO/ORO. Please replace report dated 7/16/2021 with this report. EEP 8/2/2021

### Locations

#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425

**Phone** (618) 344-1004

**Fax** (618) 344-1005

**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

#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415

**Phone** (217) 698-1004

**Fax** (217) 698-1005

**Email** KKlostermann@teklabinc.com

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515

**Phone** (630) 324-6855

**Fax**

**Email** arenner@teklabinc.com

#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214

**Phone** (913) 541-1998

**Fax** (913) 541-1998

**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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	8/31/2021	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: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-001

Client Sample ID: MW-18 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 8:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 17:51	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 17:51	179606
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2021 17:51	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 17:51	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 17:51	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 17:21	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 17:21	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 17:21	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 17:21	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 17:21	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 14:10	179682
Surr: Decachlorobiphenyl	*	10-152		105.7	%REC	1	07/14/2021 14:10	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128	S	327.0	%REC	1	07/14/2021 14:10	179682
<i>Surrogate recovery is outside control limits due to matrix interference.</i>								
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:13	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 14:13	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 14:13	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		68.3	%REC	1	07/14/2021 14:13	179663
Surr: Nitrobenzene-d5	*	29.1-125		88.5	%REC	1	07/14/2021 14:13	179663
Surr: p-Terphenyl-d14	*	35.2-164		116.6	%REC	1	07/14/2021 14:13	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-001

Client Sample ID: MW-18 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 8:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 15:05	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:05	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:05	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:05	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 15:05	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:05	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070533-001

**Client Sample ID:** MW-18 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 8:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 15:05	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 15:05	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 15:05	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 15:05	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 15:05	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:05	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 15:05	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:05	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 15:05	179692





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070533-001

**Client Sample ID:** MW-18 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 8:57

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:05	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:05	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 15:05	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		95.2	%REC	1	07/13/2021 15:05	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.5	%REC	1	07/13/2021 15:05	179692
Surr: Toluene-d8	*	80-120		91.3	%REC	1	07/13/2021 15:05	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-002

Client Sample ID: MW-10 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 11:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 17:25	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 17:25	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 17:25	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 17:25	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 17:25	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 14:27	179682
Surr: Decachlorobiphenyl	*	10-152		84.3	%REC	1	07/14/2021 14:27	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		127.8	%REC	1	07/14/2021 14:27	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 14:52	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 14:52	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 14:52	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		83.3	%REC	1	07/14/2021 14:52	179663
Surr: Nitrobenzene-d5	*	29.1-125		91.8	%REC	1	07/14/2021 14:52	179663
Surr: p-Terphenyl-d14	*	35.2-164		117.8	%REC	1	07/14/2021 14:52	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 15:31	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-002

Client Sample ID: MW-10 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 11:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:31	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:31	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:31	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 15:31	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:31	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-002

Client Sample ID: MW-10 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 11:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 15:31	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 15:31	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 15:31	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 15:31	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 15:31	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:31	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 15:31	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:31	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 15:31	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:31	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:31	179692



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070533-002

**Client Sample ID:** MW-10 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 11:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		<b>ND</b>	µg/L	1	07/13/2021 15:31	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		<b>95.7</b>	%REC	1	07/13/2021 15:31	179692
Surr: 4-Bromofluorobenzene	*	80-120		<b>94.1</b>	%REC	1	07/13/2021 15:31	179692
Surr: Toluene-d8	*	80-120		<b>91.5</b>	%REC	1	07/13/2021 15:31	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-003

Client Sample ID: MW-13 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 17:21	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 17:21	179606
Copper	NELAP	0.0050		0.0129	mg/L	1	07/12/2021 17:21	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 17:21	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 17:21	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 15:53	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 15:53	179625
Copper	NELAP	0.0050		0.0181	mg/L	1	07/13/2021 15:53	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 15:53	179625
Zinc	NELAP	0.0100		0.0196	mg/L	1	07/13/2021 15:53	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 14:44	179682
Surr: Decachlorobiphenyl	*	10-152		71.2	%REC	1	07/14/2021 14:44	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		108.7	%REC	1	07/14/2021 14:44	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Acenaphthylene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Anthracene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Benzo(a)anthracene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Benzo(a)pyrene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Benzo(b)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Benzo(g,h,i)perylene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Benzo(k)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Chrysene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Dibenzo(a,h)anthracene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Fluoranthene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Fluorene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Naphthalene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Phenanthrene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
Pyrene	NELAP	0.00400		ND	mg/L	1	07/14/2021 15:31	179663
TPH-DRO (C10 - C21)	*	2.00		ND	mg/L	1	07/14/2021 15:31	179663
TPH-ORO (C21 - C35)	*	2.80		ND	mg/L	1	07/14/2021 15:31	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		70.5	%REC	1	07/14/2021 15:31	179663
Surr: Nitrobenzene-d5	*	29.1-125		81.6	%REC	1	07/14/2021 15:31	179663
Surr: p-Terphenyl-d14	*	35.2-164		99.5	%REC	1	07/14/2021 15:31	179663
<i>Elevated reporting limit due to sample composition.</i>								
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692



Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-003

Client Sample ID: MW-13 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 15:56	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:56	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:56	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 15:56	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
Acetone	NELAP	10.0		22.5	µg/L	1	07/13/2021 15:56	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 15:56	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:56	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070533-003

Client Sample ID: MW-13 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 15:56	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 15:56	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 15:56	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 15:56	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 15:56	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 15:56	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 15:56	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 15:56	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 15:56	179692





# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070533-003

**Client Sample ID:** MW-13 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 14:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 15:56	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 15:56	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 15:56	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.3	%REC	1	07/13/2021 15:56	179692
Surr: 4-Bromofluorobenzene	*	80-120		95.0	%REC	1	07/13/2021 15:56	179692
Surr: Toluene-d8	*	80-120		91.2	%REC	1	07/13/2021 15:56	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Sample Summary

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Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21070533-001	MW-18 07082021	Groundwater	5	07/08/2021 8:57
21070533-002	MW-10 07082021	Groundwater	4	07/08/2021 11:18
21070533-003	MW-13 07082021	Groundwater	5	07/08/2021 14:10



## Dates Report

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Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21070533-001A	MW-18 07082021	07/08/2021 8:57	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD				07/13/2021 14:41	07/14/2021 14:10
21070533-001B	MW-18 07082021	07/08/2021 8:57	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS				07/13/2021 9:29	07/14/2021 14:13
21070533-001C	MW-18 07082021	07/08/2021 8:57	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)				07/12/2021 11:32	07/13/2021 17:21
21070533-001D	MW-18 07082021	07/08/2021 8:57	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)				07/09/2021 17:22	07/12/2021 17:51
21070533-001E	MW-18 07082021	07/08/2021 8:57	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					07/13/2021 15:05
21070533-002A	MW-10 07082021	07/08/2021 11:18	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD				07/13/2021 14:41	07/14/2021 14:27
21070533-002B	MW-10 07082021	07/08/2021 11:18	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS				07/13/2021 9:29	07/14/2021 14:52
21070533-002C	MW-10 07082021	07/08/2021 11:18	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)				07/12/2021 11:32	07/13/2021 17:25
21070533-002D	MW-10 07082021	07/08/2021 11:18	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					07/13/2021 15:31
21070533-003A	MW-13 07082021	07/08/2021 14:10	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD				07/13/2021 14:41	07/14/2021 14:44
21070533-003B	MW-13 07082021	07/08/2021 14:10	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS				07/13/2021 9:29	07/14/2021 15:31
21070533-003C	MW-13 07082021	07/08/2021 14:10	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)				07/12/2021 11:32	07/13/2021 15:53
21070533-003D	MW-13 07082021	07/08/2021 14:10	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)				07/09/2021 17:22	07/12/2021 17:21
21070533-003E	MW-13 07082021	07/08/2021 14:10	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					07/13/2021 15:56



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

**Batch 179606**    **SampType: MBLK**    Units mg/L  
 SampID: MBLK-179606

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	07/12/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/12/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/12/2021
Lead		0.0150		< 0.0150	0.0014	0	0	-100	100	07/12/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/12/2021

**Batch 179606**    **SampType: LCS**    Units mg/L  
 SampID: LCS-179606

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.455	0.5000	0	91.1	85	115	07/12/2021
Arsenic		0.0250		0.496	0.5000	0	99.1	85	115	07/12/2021
Copper		0.0050		0.242	0.2500	0	96.9	85	115	07/12/2021
Lead		0.0150		0.468	0.5000	0	93.6	85	115	07/12/2021
Zinc		0.0100		0.483	0.5000	0	96.5	85	115	07/12/2021

**Batch 179606**    **SampType: MS**    Units mg/L  
 SampID: 21070533-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.456	0.5000	0	91.3	75	125	07/12/2021
Arsenic		0.0250		0.502	0.5000	0	100.3	75	125	07/12/2021
Copper		0.0050		0.251	0.2500	0.01290	95.2	75	125	07/12/2021
Lead		0.0150		0.474	0.5000	0	94.7	75	125	07/12/2021
Zinc		0.0100		0.487	0.5000	0	97.3	75	125	07/12/2021

**Batch 179606**    **SampType: MSD**    Units mg/L  
 SampID: 21070533-003DMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.455	0.5000	0	91.0	0.4565	0.31	07/12/2021
Arsenic		0.0250		0.488	0.5000	0	97.5	0.5017	2.87	07/12/2021
Copper		0.0050		0.247	0.2500	0.01290	93.6	0.2510	1.61	07/12/2021
Lead		0.0150		0.464	0.5000	0	92.8	0.4735	2.01	07/12/2021
Zinc		0.0100		0.479	0.5000	0	95.8	0.4866	1.57	07/12/2021



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

**Batch 179625**      **SampType: MBLK**      Units mg/L  
 SampID: MBLK-179625

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	07/13/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/13/2021

**Batch 179625**      **SampType: LCS**      Units mg/L  
 SampID: LCS-179625

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.527	0.5000	0	105.5	85	115	07/13/2021
Arsenic		0.0250		0.551	0.5000	0	110.2	85	115	07/13/2021
Copper		0.0050		0.268	0.2500	0	107.2	85	115	07/13/2021
Lead		0.0150		0.523	0.5000	0	104.6	85	115	07/13/2021
Zinc		0.0100		0.540	0.5000	0	108.0	85	115	07/13/2021

**Batch 179625**      **SampType: MS**      Units mg/L  
 SampID: 21070533-003CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.418	0.5000	0	83.7	75	125	07/13/2021
Arsenic		0.0250		0.521	0.5000	0	104.1	75	125	07/13/2021
Copper		0.0050		0.271	0.2500	0.01810	101.0	75	125	07/13/2021
Lead		0.0150		0.493	0.5000	0	98.6	75	125	07/13/2021
Zinc		0.0100		0.528	0.5000	0.01960	101.6	75	125	07/13/2021

**Batch 179625**      **SampType: MSD**      Units mg/L  
 SampID: 21070533-003CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.444	0.5000	0	88.7	0.4185	5.82	07/13/2021
Arsenic		0.0250		0.548	0.5000	0	109.5	0.5207	5.04	07/13/2021
Copper		0.0050		0.282	0.2500	0.01810	105.4	0.2707	3.98	07/13/2021
Lead		0.0150		0.514	0.5000	0	102.7	0.4930	4.11	07/13/2021
Zinc		0.0100		0.550	0.5000	0.01960	106.0	0.5275	4.10	07/13/2021



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

**Batch 179682**      **SampType: MBLK**      Units µg/L

SampID: MBLK-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		ND						07/14/2021
Aroclor 1016		0.095		ND						07/14/2021
Aroclor 1221		0.095		ND						07/14/2021
Aroclor 1221		1.00		ND						07/14/2021
Aroclor 1232		0.095		ND						07/14/2021
Aroclor 1232		1.00		ND						07/14/2021
Aroclor 1242		0.095		ND						07/14/2021
Aroclor 1242		1.00		ND						07/14/2021
Aroclor 1248		1.00		ND						07/14/2021
Aroclor 1248		0.095		ND						07/14/2021
Aroclor 1254		1.00		ND						07/14/2021
Aroclor 1254		0.095		ND						07/14/2021
Aroclor 1260		1.00		ND						07/14/2021
Aroclor 1260		0.095		ND						07/14/2021
Surr: Decachlorobiphenyl	*			0.110	0.1250		88.1	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.104	0.1250		83.0	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.11	0.1250		88.1	27.5	143	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.5	35.2	135	07/14/2021

**Batch 179682**      **SampType: LCS**      Units µg/L

SampID: LCSPCB-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		2.67	2.500	0	106.9	56.2	136	07/14/2021
Aroclor 1016		0.095		2.67	2.500	0	106.9	50	140	07/14/2021
Aroclor 1260		0.095		2.68	2.500	0	107.4	8	140	07/14/2021
Aroclor 1260		1.00		2.68	2.500	0	107.4	42.1	125	07/14/2021
Surr: Decachlorobiphenyl	*			0.128	0.1250		102.2	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.13	0.1250		102.2	27.5	143	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.3	35.2	135	07/14/2021



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

Batch 179682		SampType: LCSD		Units µg/L				RPD Limit 36			
SampID: LCSPCBD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		0.095		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1016		1.00		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1260		1.00		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Aroclor 1260		0.095		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.12</b>	0.1250		96.4			07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.1			07/14/2021	

Batch 179682		SampType: LCS		Units %REC				RPD Limit 0			
SampID: LCSPST-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.099</b>	0.1250		79.1	31.2	141	07/14/2021	

Batch 179682		SampType: LCSD		Units %REC				RPD Limit 0			
SampID: LCSPSTD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	

Batch 179682		SampType: MS		Units µg/L				RPD Limit 40			
SampID: 21070533-003AMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Aroclor 1016		1.00		<b>2.53</b>	2.500	0	101.0	51	130	07/14/2021	
Aroclor 1260		1.00		<b>2.68</b>	2.500	0	107.1	38.4	123	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.09</b>	0.1250		71.4	10	152	07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.15</b>	0.1250		117.9	9.73	128	07/14/2021	

Batch 179682		SampType: MSD		Units µg/L				RPD Limit 40			
SampID: 21070533-003AMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		1.00		<b>2.34</b>	2.500	0	93.7	2.525	7.53	07/14/2021	
Aroclor 1260		1.00		<b>2.16</b>	2.500	0	86.4	2.678	21.41	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.08</b>	0.1250		65.1			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.5			07/14/2021	



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

Batch 179663		SampType: MBLK		Units mg/L							
SampID: MBLK-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		ND						07/14/2021	
Acenaphthylene		0.00100		ND						07/14/2021	
Anthracene		0.00100		ND						07/14/2021	
Benzo(a)anthracene		0.00100		ND						07/14/2021	
Benzo(a)pyrene		0.00100		ND						07/14/2021	
Benzo(b)fluoranthene		0.00100		ND						07/14/2021	
Benzo(g,h,i)perylene		0.00100		ND						07/14/2021	
Benzo(k)fluoranthene		0.00100		ND						07/14/2021	
Chrysene		0.00100		ND						07/14/2021	
Dibenzo(a,h)anthracene		0.00100		ND						07/14/2021	
Fluoranthene		0.00100		ND						07/14/2021	
Fluorene		0.00100		ND						07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/14/2021	
Naphthalene		0.00100		ND						07/14/2021	
Phenanthrene		0.00100		ND						07/14/2021	
Pyrene		0.00100		ND						07/14/2021	
TPH-DRO (C10 - C21)	*	0.500		ND						07/14/2021	
TPH-ORO (C21 - C35)	*	0.700		ND						07/14/2021	
Surr: 2-Fluorobiphenyl	*			0.00620	0.0125		49.6	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			0.00932	0.0125		74.6	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			0.0128	0.0125		102.7	35	222	07/14/2021	





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

**Batch** 179663      **SampType:** LCS      **Units** mg/L  
**SampID:** LCS-179663

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		<b>0.00843</b>	0.0100	0	84.3	39.6	145	07/14/2021
Acenaphthylene		0.00100		<b>0.00836</b>	0.0100	0	83.6	38.3	147	07/14/2021
Anthracene		0.00100		<b>0.00897</b>	0.0100	0	89.7	47.7	153	07/14/2021
Benzo(a)anthracene		0.00100		<b>0.00936</b>	0.0100	0	93.6	45	136	07/14/2021
Benzo(a)pyrene		0.00100		<b>0.00848</b>	0.0100	0	84.8	49.8	164	07/14/2021
Benzo(b)fluoranthene		0.00100		<b>0.00948</b>	0.0100	0	94.8	45.7	167	07/14/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00928</b>	0.0100	0	92.8	41	157	07/14/2021
Benzo(k)fluoranthene		0.00100		<b>0.00974</b>	0.0100	0	97.4	46.7	166	07/14/2021
Chrysene		0.00100		<b>0.00935</b>	0.0100	0	93.5	45.5	162	07/14/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00942</b>	0.0100	0	94.2	40.4	154	07/14/2021
Fluoranthene		0.00100		<b>0.00975</b>	0.0100	0	97.5	47.3	168	07/14/2021
Fluorene		0.00100		<b>0.00927</b>	0.0100	0	92.7	45.2	153	07/14/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00945</b>	0.0100	0	94.5	44.6	166	07/14/2021
Naphthalene		0.00100		<b>0.00603</b>	0.0100	0	60.3	16.6	137	07/14/2021
Phenanthrene		0.00100		<b>0.00915</b>	0.0100	0	91.5	50.8	149	07/14/2021
Pyrene		0.00100		<b>0.00943</b>	0.0100	0	94.3	44.9	163	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00980</b>	0.0125		78.4	1.09	175	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0106</b>	0.0125		85.0	35.5	156	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0146</b>	0.0125		117.1	35	222	07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCSD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Acenaphthene		0.00100		<b>0.00850</b>	0.0100	0	85.0	0.008426	0.90	07/14/2021	
Acenaphthylene		0.00100		<b>0.00826</b>	0.0100	0	82.6	0.008358	1.20	07/14/2021	
Anthracene		0.00100		<b>0.00891</b>	0.0100	0	89.1	0.008968	0.67	07/14/2021	
Benzo(a)anthracene		0.00100		<b>0.00927</b>	0.0100	0	92.7	0.009363	0.98	07/14/2021	
Benzo(a)pyrene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.008482	3.69	07/14/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00934</b>	0.0100	0	93.4	0.009480	1.45	07/14/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00912</b>	0.0100	0	91.2	0.009279	1.78	07/14/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00969</b>	0.0100	0	96.9	0.009742	0.54	07/14/2021	
Chrysene		0.00100		<b>0.00926</b>	0.0100	0	92.6	0.009354	1.05	07/14/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00929</b>	0.0100	0	92.9	0.009424	1.38	07/14/2021	
Fluoranthene		0.00100		<b>0.00952</b>	0.0100	0	95.2	0.009751	2.36	07/14/2021	
Fluorene		0.00100		<b>0.00897</b>	0.0100	0	89.7	0.009270	3.31	07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00940</b>	0.0100	0	94.0	0.009454	0.57	07/14/2021	
Naphthalene		0.00100		<b>0.00785</b>	0.0100	0	78.5	0.006030	26.26	07/14/2021	
Phenanthrene		0.00100		<b>0.00924</b>	0.0100	0	92.4	0.009147	1.05	07/14/2021	
Pyrene		0.00100		<b>0.00930</b>	0.0100	0	93.0	0.009428	1.39	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0103</b>	0.0125		82.6			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0105</b>	0.0125		83.9			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0140</b>	0.0125		111.8			07/14/2021	

Batch 179663		SampType: LCSG		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSG-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.93</b>	2.000	0	96.6	17.1	195	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0129</b>	0.0125		103.0	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0115</b>	0.0125		92.4	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0154</b>	0.0125		122.9	35	222	07/14/2021	

Batch 179663		SampType: LCSGD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSGD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.92</b>	2.000	0	96.0	1.932	0.60	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0122</b>	0.0125		97.8			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0113</b>	0.0125		90.4			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0144</b>	0.0125		115.5			07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch 179663**      **SampType: MS**      Units mg/L

SampID: 21070533-003BMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH-DRO (C10 - C21)	*	2.00		<b>7.17</b>	8.000	0	89.6	50	175	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.0493</b>	0.0500		98.6	1.39	137	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0423</b>	0.0500		84.7	29.1	125	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0527</b>	0.0500		105.5	35.2	164	07/14/2021

**Batch 179663**      **SampType: MSD**      Units mg/L

RPD Limit **40**

SampID: 21070533-003BMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH-DRO (C10 - C21)	*	2.00		<b>7.32</b>	8.000	0	91.5	7.166	2.13	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.0417</b>	0.0500		83.4			07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0411</b>	0.0500		82.3			07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0540</b>	0.0500		108.0			07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AK210713A-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						07/13/2021
1,1,1-Trichloroethane	*	2.0		ND						07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/13/2021
1,1,2-Trichloroethane	*	0.5		ND						07/13/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/13/2021
1,1-Dichloroethane	*	2.0		ND						07/13/2021
1,1-Dichloroethene	*	2.0		ND						07/13/2021
1,1-Dichloropropene	*	2.0		ND						07/13/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,3-Trichloropropane	*	2.0		ND						07/13/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/13/2021
1,2-Dibromoethane	*	2.0		ND						07/13/2021
1,2-Dichlorobenzene	*	2.0		ND						07/13/2021
1,2-Dichloroethane	*	2.0		ND						07/13/2021
1,2-Dichloropropane	*	2.0		ND						07/13/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/13/2021
1,3-Dichlorobenzene	*	2.0		ND						07/13/2021
1,3-Dichloropropane	*	2.0		ND						07/13/2021
1,4-Dichlorobenzene	*	2.0		ND						07/13/2021
1-Chlorobutane	*	5.0		ND						07/13/2021
2,2-Dichloropropane	*	2.0		ND						07/13/2021
2-Butanone	*	10.0		ND						07/13/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/13/2021
2-Chlorotoluene	*	2.0		ND						07/13/2021
2-Hexanone	*	10.0		ND						07/13/2021
2-Nitropropane	*	10.0		ND						07/13/2021
4-Chlorotoluene	*	2.0		ND						07/13/2021
4-Methyl-2-pentanone	*	10.0		ND						07/13/2021
Acetone	*	10.0		ND						07/13/2021
Acetonitrile	*	10.0		ND						07/13/2021
Acrolein	*	20.0		ND						07/13/2021
Acrylonitrile	*	5.0		ND						07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/13/2021
Benzene	*	0.5		ND						07/13/2021
Bromobenzene	*	2.0		ND						07/13/2021
Bromochloromethane	*	2.0		ND						07/13/2021
Bromodichloromethane	*	2.0		ND						07/13/2021
Bromoform	*	2.0		ND						07/13/2021
Bromomethane	*	5.0		ND						07/13/2021
Carbon disulfide	*	2.0		ND						07/13/2021
Carbon tetrachloride	*	2.0		ND						07/13/2021
Chlorobenzene	*	2.0		ND						07/13/2021
Chloroethane	*	2.0		ND						07/13/2021
Chloroform	*	2.0		ND						07/13/2021
Chloromethane	*	5.0		ND						07/13/2021
Chloroprene	*	5.0		ND						07/13/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/13/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Cyclohexanone	*	20.0		ND						07/13/2021
Dibromochloromethane	*	2.0		ND						07/13/2021
Dibromomethane	*	2.0		ND						07/13/2021
Dichlorodifluoromethane	*	2.0		ND						07/13/2021
Diisopropyl ether	*	2.0		ND						07/13/2021
Ethyl acetate	*	10.0		ND						07/13/2021
Ethyl ether	*	5.0		ND						07/13/2021
Ethyl methacrylate	*	5.0		ND						07/13/2021
Ethylbenzene	*	2.0		ND						07/13/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/13/2021
Hexachlorobutadiene	*	5.0		ND						07/13/2021
Hexachloroethane	*	5.0		ND						07/13/2021
Iodomethane	*	5.0		ND						07/13/2021
Isopropylbenzene	*	2.0		ND						07/13/2021
m,p-Xylenes	*	2.0		ND						07/13/2021
Methacrylonitrile	*	5.0		ND						07/13/2021
Methyl Methacrylate	*	5.0		ND						07/13/2021
Methyl tert-butyl ether	*	2.0		ND						07/13/2021
Methylacrylate	*	5.0		ND						07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/13/2021
Naphthalene	*	5.0		ND						07/13/2021
n-Butyl acetate	*	2.0		ND						07/13/2021
n-Butylbenzene	*	2.0		ND						07/13/2021
n-Heptane	*	5.0		ND						07/13/2021
n-Hexane	*	5.0		ND						07/13/2021
Nitrobenzene	*	50.0		ND						07/13/2021
n-Propylbenzene	*	2.0		ND						07/13/2021
o-Xylene	*	2.0		ND						07/13/2021
Pentachloroethane	*	5.0		ND						07/13/2021
p-Isopropyltoluene	*	2.0		ND						07/13/2021
Propionitrile	*	10.0		ND						07/13/2021
sec-Butylbenzene	*	2.0		ND						07/13/2021
Styrene	*	2.0		ND						07/13/2021
tert-Amyl methyl ether	*	2.0		ND						07/13/2021
tert-Butyl alcohol	*	10.0		ND						07/13/2021
tert-Butylbenzene	*	2.0		ND						07/13/2021
Tetrachloroethene	*	0.5		ND						07/13/2021
Tetrahydrofuran	*	5.0		ND						07/13/2021
Toluene	*	2.0		ND						07/13/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/13/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Trichloroethene	*	2.0		ND						07/13/2021
Trichlorofluoromethane	*	5.0		ND						07/13/2021
Vinyl acetate	*	5.0		ND						07/13/2021
Vinyl chloride	*	2.0		ND						07/13/2021
Xylenes, Total	*	4.0		ND						07/13/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/13/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/13/2021
TPH - GRO (C6 - C10)	*	500		ND						07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.8	50.00		95.7	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.4	50.00		94.7	80	120	07/13/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>49.3</b>	50.00	0	98.6	82	113	07/13/2021
1,1,1-Trichloroethane	*	2.0		<b>53.6</b>	50.00	0	107.3	76.9	128	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>44.9</b>	50.00	0	89.8	76.7	113	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>50.5</b>	50.00	0	101.0	69.5	127	07/13/2021
1,1,2-Trichloroethane	*	0.5		<b>49.1</b>	50.00	0	98.2	83.8	111	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		<b>108</b>	125.0	0	86.4	74.9	117	07/13/2021
1,1-Dichloroethane	*	2.0		<b>54.2</b>	50.00	0	108.4	77	129	07/13/2021
1,1-Dichloroethene	*	2.0		<b>50.0</b>	50.00	0	100.0	69.4	127	07/13/2021
1,1-Dichloropropene	*	2.0		<b>53.6</b>	50.00	0	107.2	75.1	123	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		<b>52.7</b>	50.00	0	105.4	77.3	121	07/13/2021
1,2,3-Trichloropropane	*	2.0		<b>44.8</b>	50.00	0	89.6	75.3	109	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		<b>46.6</b>	50.00	0	93.1	77	115	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		<b>53.3</b>	50.00	0	106.6	76.8	124	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.4	75	115	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>45.8</b>	50.00	0	91.6	71.9	119	07/13/2021
1,2-Dibromoethane	*	2.0		<b>51.4</b>	50.00	0	102.7	83.6	110	07/13/2021
1,2-Dichlorobenzene	*	2.0		<b>45.2</b>	50.00	0	90.3	72.1	113	07/13/2021
1,2-Dichloroethane	*	2.0		<b>49.4</b>	50.00	0	98.7	72.3	117	07/13/2021
1,2-Dichloropropane	*	2.0		<b>55.5</b>	50.00	0	111.0	76.5	119	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		<b>47.6</b>	50.00	0	95.3	75.2	117	07/13/2021
1,3-Dichlorobenzene	*	2.0		<b>47.3</b>	50.00	0	94.5	75.2	115	07/13/2021
1,3-Dichloropropane	*	2.0		<b>48.6</b>	50.00	0	97.2	80.9	110	07/13/2021
1,4-Dichlorobenzene	*	2.0		<b>44.8</b>	50.00	0	89.6	73.9	112	07/13/2021
1-Chlorobutane	*	5.0		<b>53.3</b>	50.00	0	106.6	74.9	130	07/13/2021
2,2-Dichloropropane	*	2.0		<b>60.2</b>	50.00	0	120.4	66.5	138	07/13/2021
2-Butanone	*	10.0		<b>134</b>	125.0	0	106.9	68.8	134	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		<b>55.5</b>	50.00	0	111.0	17.8	163	07/13/2021
2-Chlorotoluene	*	2.0		<b>45.7</b>	50.00	0	91.4	74.9	115	07/13/2021
2-Hexanone	*	10.0		<b>120</b>	125.0	0	95.8	73.2	117	07/13/2021
2-Nitropropane	*	10.0		<b>518</b>	500.0	0	103.5	67.1	140	07/13/2021
4-Chlorotoluene	*	2.0		<b>47.3</b>	50.00	0	94.6	75.7	113	07/13/2021
4-Methyl-2-pentanone	*	10.0		<b>122</b>	125.0	0	97.7	77	113	07/13/2021
Acetone	*	10.0		<b>121</b>	125.0	0	97.0	61.4	130	07/13/2021
Acetonitrile	*	10.0		<b>512</b>	500.0	0	102.3	68.8	136	07/13/2021
Acrolein	*	20.0		<b>514</b>	500.0	0	102.7	28.4	168	07/13/2021
Acrylonitrile	*	5.0		<b>55.7</b>	50.00	0	111.5	77.9	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		58.7	50.00	0	117.3	75.8	130	07/13/2021
Benzene	*	0.5		52.5	50.00	0	105.0	78.5	119	07/13/2021
Bromobenzene	*	2.0		46.6	50.00	0	93.3	77.5	113	07/13/2021
Bromochloromethane	*	2.0		50.4	50.00	0	100.8	71.5	123	07/13/2021
Bromodichloromethane	*	2.0		57.8	50.00	0	115.6	75.7	123	07/13/2021
Bromoform	*	2.0		44.4	50.00	0	88.9	78.9	121	07/13/2021
Bromomethane	*	5.0		80.7	50.00	0	161.4	30.5	192	07/13/2021
Carbon disulfide	*	2.0		47.7	50.00	0	95.3	66.7	121	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.5	70.9	127	07/13/2021
Chlorobenzene	*	2.0		48.1	50.00	0	96.1	80	111	07/13/2021
Chloroethane	*	2.0		46.0	50.00	0	92.1	69.6	135	07/13/2021
Chloroform	*	2.0		57.0	50.00	0	113.9	76.2	120	07/13/2021
Chloromethane	*	5.0		29.9	50.00	0	59.7	50.9	138	07/13/2021
Chloroprene	*	5.0		54.6	50.00	0	109.1	68.4	127	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.4	50.00	0	112.8	79.5	121	07/13/2021
cis-1,3-Dichloropropene	*	2.0		58.7	50.00	0	117.4	79.8	123	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		46.6	50.00	0	93.2	64.6	130	07/13/2021
Cyclohexanone	*	20.0		521	500.0	0	104.3	70.5	114	07/13/2021
Dibromochloromethane	*	2.0		52.3	50.00	0	104.6	84.5	114	07/13/2021
Dibromomethane	*	2.0		54.8	50.00	0	109.6	76	119	07/13/2021
Dichlorodifluoromethane	*	2.0		35.7	50.00	0	71.4	46.6	142	07/13/2021
Diisopropyl ether	*	2.0		55.0	50.00	0	110.0	72	128	07/13/2021
Ethyl acetate	*	10.0		50.4	50.00	0	100.8	70.3	115	07/13/2021
Ethyl ether	*	5.0		55.8	50.00	0	111.5	74.6	120	07/13/2021
Ethyl methacrylate	*	5.0		47.5	50.00	0	95.1	81.4	116	07/13/2021
Ethylbenzene	*	2.0		48.2	50.00	0	96.3	78.2	114	07/13/2021
Ethyl-tert-butyl ether	*	2.0		57.2	50.00	0	114.5	74.6	124	07/13/2021
Hexachlorobutadiene	*	5.0		53.5	50.00	0	107.0	73.9	129	07/13/2021
Hexachloroethane	*	5.0		39.3	50.00	0	78.6	78.3	123	07/13/2021
Iodomethane	*	5.0		35.1	50.00	0	70.3	50	151	07/13/2021
Isopropylbenzene	*	2.0		51.1	50.00	0	102.2	79.3	115	07/13/2021
m,p-Xylenes	*	2.0		93.9	100.0	0	93.9	77.2	116	07/13/2021
Methacrylonitrile	*	5.0		57.9	50.00	0	115.8	73.9	127	07/13/2021
Methyl Methacrylate	*	5.0		54.5	50.00	0	108.9	70.7	129	07/13/2021
Methyl tert-butyl ether	*	2.0		55.4	50.00	0	110.8	80.3	122	07/13/2021
Methylacrylate	*	5.0		57.5	50.00	0	115.0	75.2	124	07/13/2021





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		46.4	50.00	0	92.8	71.8	115	07/13/2021
Naphthalene	*	5.0	B	46.4	50.00	0	92.7	75.6	121	07/13/2021
n-Butyl acetate	*	2.0		49.5	50.00	0	99.0	72.4	118	07/13/2021
n-Butylbenzene	*	2.0		48.2	50.00	0	96.5	70.8	118	07/13/2021
n-Heptane	*	5.0		56.1	50.00	0	112.2	50.4	143	07/13/2021
n-Hexane	*	5.0		51.2	50.00	0	102.4	60.6	139	07/13/2021
Nitrobenzene	*	50.0		441	500.0	0	88.2	49.4	129	07/13/2021
n-Propylbenzene	*	2.0		47.1	50.00	0	94.2	74	119	07/13/2021
o-Xylene	*	2.0		47.5	50.00	0	95.1	79.2	112	07/13/2021
Pentachloroethane	*	5.0		37.9	50.00	0	75.8	71.8	124	07/13/2021
p-Isopropyltoluene	*	2.0		49.0	50.00	0	98.0	74.4	119	07/13/2021
Propionitrile	*	10.0		551	500.0	0	110.3	76.2	127	07/13/2021
sec-Butylbenzene	*	2.0		48.2	50.00	0	96.4	74.4	119	07/13/2021
Styrene	*	2.0		50.3	50.00	0	100.6	80.4	117	07/13/2021
tert-Amyl methyl ether	*	2.0		55.4	50.00	0	110.9	80.8	125	07/13/2021
tert-Butyl alcohol	*	10.0		273	250.0	0	109.1	64.9	118	07/13/2021
tert-Butylbenzene	*	2.0		48.2	50.00	0	96.5	74	115	07/13/2021
Tetrachloroethene	*	0.5		52.9	50.00	0	105.9	70.1	120	07/13/2021
Tetrahydrofuran	*	5.0		46.2	50.00	0	92.4	63.5	122	07/13/2021
Toluene	*	2.0		46.5	50.00	0	93.0	78.6	112	07/13/2021
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.6	75.7	130	07/13/2021
trans-1,3-Dichloropropene	*	2.0		50.4	50.00	0	100.8	80.3	116	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		45.1	50.00	0	90.1	65.5	124	07/13/2021
Trichloroethene	*	2.0		55.0	50.00	0	110.1	76.2	121	07/13/2021
Trichlorofluoromethane	*	5.0		46.4	50.00	0	92.7	71.1	131	07/13/2021
Vinyl acetate	*	5.0		53.9	50.00	0	107.8	79.8	129	07/13/2021
Vinyl chloride	*	2.0		41.7	50.00	0	83.3	58.6	141	07/13/2021
Xylenes, Total	*	4.0		141	150.0	0	94.3	78.3	114	07/13/2021
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	78.5	125	07/13/2021
1,3-Dichloropropene, Total	*	4.0		109	100.0	0	109.1	82.3	117	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		91.7	100.0	0	91.7	65.9	126	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.2	50.00		94.4	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.8	50.00		95.5	80	120	07/13/2021
Surr: Toluene-d8	*			46.2	50.00		92.5	80	120	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.8	50.00	0	99.5	49.31	0.89	07/13/2021
1,1,1-Trichloroethane	*	2.0		54.0	50.00	0	107.9	53.63	0.61	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		45.4	50.00	0	90.8	44.88	1.15	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.2	50.00	0	100.5	50.50	0.54	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.8	50.00	0	99.6	49.12	1.39	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.5	108.0	2.41	07/13/2021
1,1-Dichloroethane	*	2.0		54.7	50.00	0	109.4	54.20	0.88	07/13/2021
1,1-Dichloroethene	*	2.0		49.9	50.00	0	99.8	50.00	0.20	07/13/2021
1,1-Dichloropropene	*	2.0		53.4	50.00	0	106.9	53.58	0.26	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		53.1	50.00	0	106.2	52.72	0.70	07/13/2021
1,2,3-Trichloropropane	*	2.0		45.2	50.00	0	90.4	44.81	0.91	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		47.0	50.00	0	94.1	46.56	1.00	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		54.0	50.00	0	108.1	53.30	1.40	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		48.2	50.00	0	96.5	47.72	1.08	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		47.1	50.00	0	94.3	45.78	2.93	07/13/2021
1,2-Dibromoethane	*	2.0		52.1	50.00	0	104.2	51.37	1.43	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.4	50.00	0	90.9	45.17	0.62	07/13/2021
1,2-Dichloroethane	*	2.0		50.0	50.00	0	99.9	49.37	1.21	07/13/2021
1,2-Dichloropropane	*	2.0		55.8	50.00	0	111.6	55.51	0.56	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		48.0	50.00	0	96.0	47.63	0.79	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.6	50.00	0	95.2	47.27	0.65	07/13/2021
1,3-Dichloropropane	*	2.0		49.4	50.00	0	98.7	48.58	1.59	07/13/2021
1,4-Dichlorobenzene	*	2.0		45.4	50.00	0	90.7	44.78	1.29	07/13/2021
1-Chlorobutane	*	5.0		53.7	50.00	0	107.4	53.30	0.77	07/13/2021
2,2-Dichloropropane	*	2.0		59.9	50.00	0	119.8	60.19	0.52	07/13/2021
2-Butanone	*	10.0		135	125.0	0	108.3	133.6	1.33	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		56.4	50.00	0	112.9	55.50	1.70	07/13/2021
2-Chlorotoluene	*	2.0		46.0	50.00	0	92.1	45.71	0.70	07/13/2021
2-Hexanone	*	10.0		122	125.0	0	97.3	119.8	1.52	07/13/2021
2-Nitropropane	*	10.0		528	500.0	0	105.5	517.6	1.94	07/13/2021
4-Chlorotoluene	*	2.0		47.5	50.00	0	95.1	47.31	0.46	07/13/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.4	122.1	0.76	07/13/2021
Acetone	*	10.0		122	125.0	0	97.8	121.3	0.76	07/13/2021
Acetonitrile	*	10.0		519	500.0	0	103.8	511.5	1.47	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.8	513.6	0.04	07/13/2021
Acrylonitrile	*	5.0		56.2	50.00	0	112.3	55.74	0.77	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179692	SampType: LCSD	Units µg/L								RPD Limit 15.4	Date Analyzed
SampID: LCSD-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Allyl chloride	*	5.0		59.6	50.00	0	119.2	58.67	1.59	07/13/2021	
Benzene	*	0.5		52.5	50.00	0	104.9	52.49	0.06	07/13/2021	
Bromobenzene	*	2.0		47.1	50.00	0	94.3	46.65	1.04	07/13/2021	
Bromochloromethane	*	2.0		51.2	50.00	0	102.5	50.40	1.67	07/13/2021	
Bromodichloromethane	*	2.0		58.3	50.00	0	116.5	57.78	0.83	07/13/2021	
Bromoform	*	2.0		45.4	50.00	0	90.8	44.43	2.16	07/13/2021	
Bromomethane	*	5.0		81.5	50.00	0	163.1	80.72	1.01	07/13/2021	
Carbon disulfide	*	2.0		47.9	50.00	0	95.8	47.66	0.54	07/13/2021	
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.6	54.27	0.02	07/13/2021	
Chlorobenzene	*	2.0		48.4	50.00	0	96.9	48.06	0.81	07/13/2021	
Chloroethane	*	2.0		46.4	50.00	0	92.9	46.03	0.87	07/13/2021	
Chloroform	*	2.0		57.6	50.00	0	115.2	56.95	1.17	07/13/2021	
Chloromethane	*	5.0		30.2	50.00	0	60.3	29.86	1.03	07/13/2021	
Chloroprene	*	5.0		54.3	50.00	0	108.7	54.57	0.42	07/13/2021	
cis-1,2-Dichloroethene	*	2.0		56.5	50.00	0	112.9	56.39	0.12	07/13/2021	
cis-1,3-Dichloropropene	*	2.0		59.2	50.00	0	118.4	58.70	0.83	07/13/2021	
cis-1,4-Dichloro-2-butene	*	2.0		47.9	50.00	0	95.9	46.60	2.81	07/13/2021	
Cyclohexanone	*	20.0		518	500.0	0	103.7	521.3	0.58	07/13/2021	
Dibromochloromethane	*	2.0		52.9	50.00	0	105.9	52.29	1.22	07/13/2021	
Dibromomethane	*	2.0		55.2	50.00	0	110.4	54.82	0.71	07/13/2021	
Dichlorodifluoromethane	*	2.0		36.0	50.00	0	71.9	35.68	0.81	07/13/2021	
Diisopropyl ether	*	2.0		56.1	50.00	0	112.1	55.02	1.89	07/13/2021	
Ethyl acetate	*	10.0		50.0	50.00	0	100.0	50.42	0.80	07/13/2021	
Ethyl ether	*	5.0		56.8	50.00	0	113.6	55.75	1.83	07/13/2021	
Ethyl methacrylate	*	5.0		48.1	50.00	0	96.1	47.53	1.13	07/13/2021	
Ethylbenzene	*	2.0		48.5	50.00	0	96.9	48.15	0.64	07/13/2021	
Ethyl-tert-butyl ether	*	2.0		59.2	50.00	0	118.3	57.25	3.30	07/13/2021	
Hexachlorobutadiene	*	5.0		54.2	50.00	0	108.3	53.49	1.24	07/13/2021	
Hexachloroethane	*	5.0		39.7	50.00	0	79.4	39.30	1.04	07/13/2021	
Iodomethane	*	5.0		36.4	50.00	0	72.8	35.14	3.50	07/13/2021	
Isopropylbenzene	*	2.0		51.5	50.00	0	103.1	51.11	0.84	07/13/2021	
m,p-Xylenes	*	2.0		94.7	100.0	0	94.7	93.88	0.84	07/13/2021	
Methacrylonitrile	*	5.0		58.5	50.00	0	116.9	57.91	0.96	07/13/2021	
Methyl Methacrylate	*	5.0		55.0	50.00	0	110.0	54.47	0.97	07/13/2021	
Methyl tert-butyl ether	*	2.0		56.8	50.00	0	113.6	55.41	2.50	07/13/2021	
Methylacrylate	*	5.0		58.8	50.00	0	117.7	57.48	2.34	07/13/2021	

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179692	SampType: LCSD	Units µg/L								RPD Limit 15.4	Date Analyzed
SampID: LCSD-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Methylene chloride	*	2.0		46.7	50.00	0	93.5	46.40	0.71	07/13/2021	
Naphthalene	*	5.0	B	47.2	50.00	0	94.4	46.36	1.75	07/13/2021	
n-Butyl acetate	*	2.0		49.9	50.00	0	99.7	49.48	0.79	07/13/2021	
n-Butylbenzene	*	2.0		48.8	50.00	0	97.6	48.25	1.11	07/13/2021	
n-Heptane	*	5.0		57.4	50.00	0	114.7	56.08	2.26	07/13/2021	
n-Hexane	*	5.0		50.8	50.00	0	101.5	51.18	0.80	07/13/2021	
Nitrobenzene	*	50.0		455	500.0	0	91.0	440.9	3.12	07/13/2021	
n-Propylbenzene	*	2.0		47.4	50.00	0	94.8	47.08	0.70	07/13/2021	
o-Xylene	*	2.0		48.1	50.00	0	96.1	47.54	1.11	07/13/2021	
Pentachloroethane	*	5.0		38.3	50.00	0	76.5	37.89	1.00	07/13/2021	
p-Isopropyltoluene	*	2.0		49.4	50.00	0	98.8	48.99	0.83	07/13/2021	
Propionitrile	*	10.0		558	500.0	0	111.6	551.4	1.20	07/13/2021	
sec-Butylbenzene	*	2.0		48.5	50.00	0	97.0	48.18	0.66	07/13/2021	
Styrene	*	2.0		50.9	50.00	0	101.9	50.28	1.30	07/13/2021	
tert-Amyl methyl ether	*	2.0		57.0	50.00	0	114.0	55.43	2.79	07/13/2021	
tert-Butyl alcohol	*	10.0		280	250.0	0	111.9	272.7	2.53	07/13/2021	
tert-Butylbenzene	*	2.0		48.5	50.00	0	97.1	48.25	0.58	07/13/2021	
Tetrachloroethene	*	0.5		53.0	50.00	0	106.1	52.94	0.19	07/13/2021	
Tetrahydrofuran	*	5.0		46.8	50.00	0	93.6	46.22	1.29	07/13/2021	
Toluene	*	2.0		46.9	50.00	0	93.8	46.51	0.81	07/13/2021	
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.5	51.79	0.08	07/13/2021	
trans-1,3-Dichloropropene	*	2.0		51.1	50.00	0	102.3	50.40	1.46	07/13/2021	
trans-1,4-Dichloro-2-butene	*	2.0		46.1	50.00	0	92.2	45.07	2.28	07/13/2021	
Trichloroethene	*	2.0		55.3	50.00	0	110.6	55.04	0.44	07/13/2021	
Trichlorofluoromethane	*	5.0		47.2	50.00	0	94.3	46.36	1.69	07/13/2021	
Vinyl acetate	*	5.0		54.7	50.00	0	109.4	53.90	1.49	07/13/2021	
Vinyl chloride	*	2.0		42.3	50.00	0	84.7	41.66	1.62	07/13/2021	
Xylenes, Total	*	4.0		143	150.0	0	95.2	141.4	0.93	07/13/2021	
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	108.2	0.03	07/13/2021	
1,3-Dichloropropene, Total	*	4.0		110	100.0	0	110.3	109.1	1.12	07/13/2021	
1,4-Dichloro-2-butene, Total	*	4.0		94.0	100.0	0	94.0	91.67	2.55	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			47.1	50.00		94.2			07/13/2021	
Surr: 4-Bromofluorobenzene	*			47.6	50.00		95.3			07/13/2021	
Surr: Toluene-d8	*			46.0	50.00		92.1			07/13/2021	

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch 179692**      **SampType: LCSG**      Units  $\mu\text{g/L}$

SampID: LCSG-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1730</b>	2000	0	86.6	70	130	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.0	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.3</b>	50.00		94.6	80	120	07/13/2021
Surr: Toluene-d8	*			<b>46.4</b>	50.00		92.7	80	120	07/13/2021

**Batch 179692**      **SampType: LCSGD**      Units  $\mu\text{g/L}$

RPD Limit **20**

SampID: LCSGD-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1670</b>	2000	0	83.4	1733	3.81	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.1			07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.7</b>	50.00		95.4			07/13/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.4			07/13/2021

**Batch 179692**      **SampType: MS**      Units  $\mu\text{g/L}$

SampID: 21070533-003EMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene		2.0		<b>40.9</b>	50.00	0	81.7	67.5	123	07/13/2021
Benzene		0.5		<b>50.0</b>	50.00	0	99.9	72	120	07/13/2021
Chlorobenzene		2.0		<b>46.7</b>	50.00	0	93.4	73.9	108	07/13/2021
Ethylbenzene		2.0		<b>48.2</b>	50.00	0	96.4	74.8	115	07/13/2021
m,p-Xylenes		2.0		<b>46.6</b>	50.00	0	93.1	69.7	115	07/13/2021
o-Xylene		2.0		<b>46.6</b>	50.00	0	93.1	72.9	111	07/13/2021
Toluene		2.0		<b>44.6</b>	50.00	0	89.3	70.6	109	07/13/2021
Trichloroethene		2.0		<b>52.8</b>	50.00	0	105.6	77.7	119	07/13/2021
Xylenes, Total		4.0		<b>93.1</b>	100.0	0	93.1	72.1	113	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>48.0</b>	50.00		96.0	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.6</b>	50.00		95.2	80	120	07/13/2021
Surr: Toluene-d8	*			<b>45.3</b>	50.00		90.7	80	120	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070533

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179692	SampType: MSD	Units µg/L							RPD Limit 40		Date Analyzed
SampID: 21070533-003EMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
1,1-Dichloroethene		2.0		<b>42.1</b>	50.00	0	84.3	40.87	3.06	07/13/2021	
Benzene		0.5		<b>51.2</b>	50.00	0	102.3	49.95	2.37	07/13/2021	
Chlorobenzene		2.0		<b>47.8</b>	50.00	0	95.5	46.68	2.29	07/13/2021	
Ethylbenzene		2.0		<b>49.2</b>	50.00	0	98.4	48.20	2.09	07/13/2021	
m,p-Xylenes		2.0		<b>47.8</b>	50.00	0	95.5	46.55	2.55	07/13/2021	
o-Xylene		2.0		<b>47.8</b>	50.00	0	95.6	46.57	2.63	07/13/2021	
Toluene		2.0		<b>45.8</b>	50.00	0	91.5	44.65	2.48	07/13/2021	
Trichloroethene		2.0		<b>54.1</b>	50.00	0	108.2	52.80	2.45	07/13/2021	
Xylenes, Total		4.0		<b>95.6</b>	100.0	0	95.6	93.12	2.59	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>48.1</b>	50.00		96.1			07/13/2021	
Surr: 4-Bromofluorobenzene	*			<b>47.5</b>	50.00		94.9			07/13/2021	
Surr: Toluene-d8	*			<b>45.8</b>	50.00		91.6			07/13/2021	



# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070533

Client Project: 128487 GSA

Report Date: 02-Aug-21

Carrier: Alec Rebbe

Received By: ERH

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

09-Jul-21

09-Jul-21

Mary E. Kemp

Shelly A. Hennessy

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **3.4**
- Type of thermal preservation? None  Ice  Blue Ice  Dry Ice
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Reported field parameters measured: Field  Lab  NA
- Container/Temp Blank temperature in compliance? Yes  No

*When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.*

- Water – at least one vial per sample has zero headspace? Yes  No  No VOA vials
- Water - TOX containers have zero headspace? Yes  No  No TOX containers
- Water - pH acceptable upon receipt? Yes  No  NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes  No  NA

**Any No responses must be detailed below or on the COC.**

pH strip #75145 - PRY/MKemp - 7/9/2021 3:29:08 PM



21070533

Burns & McDonnell Engineering  
425 South Woods Mill Road  
Chesterfield, Missouri 63017  
Phone: (314) 682-1500 Fax: (314) 682-1600  
JUSTIN CARTER  
Attention: JCARTER@burnsmcd.com

Laboratory: ~~5445~~ TEKLUB, INC  
Address: 5445 HORSBROOK WOOD RD  
City/State/Zip: COLLINGSVILLE, MO  
Telephone: 618-344-1004

Document Control No: 128487-009

Lab. Reference No. or Episode No.:

Project Number: 128487 Sample Type:

Client Name: GSA Matrix:

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Analysis	Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas			
01 0533 01	<u>MW-18</u>	<u>07082021</u>		<u>2021</u>			<u>7/8</u>	<u>857</u>	<u>X</u>		<u>6</u>	<u>6</u>	<u>X X X X X X X X</u>	<u>ALL VOL</u>
02	<u>MW-10</u>	<u>07082021</u>		<u>2021</u>			<u>7/8</u>	<u>1118</u>	<u>X</u>		<u>5</u>	<u>5</u>	<u>X X X X X X</u>	<u>SAMPLES IN</u>
03	<u>MW-13</u>	<u>07082021</u>		<u>2021</u>			<u>7/8</u>	<u>1410</u>	<u>X</u>		<u>6</u>	<u>6</u>	<u>X X X X X X X</u>	<u>COOLER 2 (BLUE,</u>
04 03 0533 01	<u>MW-13</u>	<u>07082021 /ms</u>		<u>2021</u>			<u>7/8</u>	<u>1410</u>	<u>X</u>		<u>6</u>	<u>6</u>	<u>X X X X X X X</u>	<u>(128487-008)</u>
05	<u>MEC 7/9/21</u>													

Analysis:

PH PH-DRO DRO PCBI METALS (TOTAL) METALS (DISSOLVED) VOLs

**Courier**

Sampler (signature): (b) (6)

Sampler (signature): (b) (6)

Special Instructions: SEE WORK ORDER COC LIST.

Relinquished By (signature): (b) (6)  
1.

Date/Time: 7/9

Received By (signature): (b) (6)

Date/Time: 7/9/21 1230

Ice Present in Container: Yes  No

Temperature Upon Receipt: 3.7°C LTG 5

Relinquished By (signature): (b) (6)  
2.

Date/Time: 7/9/21

Received By (signature): (b) (6)

Date/Time: 7/9/21 1230

Laboratory Comments: PHU 75145, PH7 7/9/21, MECS MEC 7/9/21



August 02, 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: 128487 GSA**

**WorkOrder: 21070534**

Dear Justin Carter:

TEKLAB, INC received 5 samples on 7/9/2021 12:30:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**This reporting package includes the following:**

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Chain of Custody	Appended

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

### Qualifiers

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



## Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Cooler Receipt Temp:** 0.8 °C

This report was revised on 8/2/2021 per Justin Carter's request. The reason for the revision is to report DRO/ORO. Please replace report dated 7/16/2021 with this report. EEP 8/2/2021

### Locations

#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**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

#### Springfield

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

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

#### Kansas City

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



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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	8/31/2021	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



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-001

Client Sample ID: TB-08

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/12/2021 13:27	179680
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:27	179680
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:27	179680
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:27	179680
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
2-Butanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
Acetone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
Acrolein	NELAP	20.0		ND	µg/L	1	07/12/2021 13:27	179680
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Benzene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:27	179680
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Bromoform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Bromomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-001

Client Sample ID: TB-08

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Chloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Chloroform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Chloromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Chloroprene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Cyclohexanone	*	20.0		ND	µg/L	1	07/12/2021 13:27	179680
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Diisopropyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Iodomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Naphthalene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
n-Butyl acetate	*	2.0		ND	µg/L	1	07/12/2021 13:27	179680
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
n-Heptane	*	5.0		ND	µg/L	1	07/12/2021 13:27	179680
n-Hexane	*	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/12/2021 13:27	179680
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
o-Xylene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Propionitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Styrene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:27	179680
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/12/2021 13:27	179680
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:27	179680
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-001

**Client Sample ID:** TB-08

**Matrix:** TRIP BLANK

**Collection Date:** 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Toluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:27	179680
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:27	179680
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/12/2021 13:27	179680
Surr: 1,2-Dichloroethane-d4	*	80-120		97.9	%REC	1	07/12/2021 13:27	179680
Surr: 4-Bromofluorobenzene	*	80-120		103.0	%REC	1	07/12/2021 13:27	179680
Surr: Toluene-d8	*	80-120		91.1	%REC	1	07/12/2021 13:27	179680

*Allowable Marginal Exceedance of tert-Amyl methyl ether in the laboratory control sample is verified per the TNI Standard.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-002

Client Sample ID: MW-04 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 16:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 17:29	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 17:29	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 17:29	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 17:29	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 17:29	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 16:12	179682
Surr: Decachlorobiphenyl	*	10-152		83.9	%REC	1	07/14/2021 16:12	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		116.8	%REC	1	07/14/2021 16:12	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:31	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 17:31	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 17:31	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		61.0	%REC	1	07/14/2021 17:31	179663
Surr: Nitrobenzene-d5	*	29.1-125		81.9	%REC	1	07/14/2021 17:31	179663
Surr: p-Terphenyl-d14	*	35.2-164		109.9	%REC	1	07/14/2021 17:31	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 17:14	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-002

Client Sample ID: MW-04 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 16:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:14	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:14	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:14	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 17:14	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 17:14	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-002

Client Sample ID: MW-04 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 16:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 17:14	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 17:14	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 17:14	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 17:14	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 17:14	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:14	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 17:14	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 17:14	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 17:14	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:14	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:14	179692



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-002

**Client Sample ID:** MW-04 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 16:16

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 17:14	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.8	%REC	1	07/13/2021 17:14	179692
Surr: 4-Bromofluorobenzene	*	80-120		95.2	%REC	1	07/13/2021 17:14	179692
Surr: Toluene-d8	*	80-120		91.2	%REC	1	07/13/2021 17:14	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-003

Client Sample ID: MW-05 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 13:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 17:54	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 17:54	179606
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2021 17:54	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 17:54	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 17:54	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 17:40	179625
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 17:40	179625
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 17:40	179625
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 17:40	179625
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 17:40	179625
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/EC</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 16:29	179682
Surr: Decachlorobiphenyl	*	10-152		128.3	%REC	1	07/14/2021 16:29	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		116.2	%REC	1	07/14/2021 16:29	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:09	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 18:09	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 18:09	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		72.9	%REC	1	07/14/2021 18:09	179663
Surr: Nitrobenzene-d5	*	29.1-125		82.6	%REC	1	07/14/2021 18:09	179663
Surr: p-Terphenyl-d14	*	35.2-164		104.7	%REC	1	07/14/2021 18:09	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692





# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-003

Client Sample ID: MW-05 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 13:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 17:39	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:39	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:39	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 17:39	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 17:39	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 17:39	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-003

**Client Sample ID:** MW-05 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 13:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 17:39	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 17:39	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 17:39	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 17:39	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 17:39	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 17:39	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 17:39	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 17:39	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 17:39	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-003

**Client Sample ID:** MW-05 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 13:18

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 17:39	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 17:39	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 17:39	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.3	%REC	1	07/13/2021 17:39	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.3	%REC	1	07/13/2021 17:39	179692
Surr: Toluene-d8	*	80-120		90.9	%REC	1	07/13/2021 17:39	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-004

Client Sample ID: MW-06 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/14/2021 20:05	179635
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/14/2021 20:05	179635
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/14/2021 20:05	179635
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/14/2021 20:05	179635
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/14/2021 20:05	179635
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 16:46	179682
Surr: Decachlorobiphenyl	*	10-152		121.0	%REC	1	07/14/2021 16:46	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		122.3	%REC	1	07/14/2021 16:46	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 18:48	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 18:48	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 18:48	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		61.5	%REC	1	07/14/2021 18:48	179663
Surr: Nitrobenzene-d5	*	29.1-125		78.5	%REC	1	07/14/2021 18:48	179663
Surr: p-Terphenyl-d14	*	35.2-164		103.1	%REC	1	07/14/2021 18:48	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 18:05	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-004

Client Sample ID: MW-06 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:05	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:05	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:05	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 18:05	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:05	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-004

Client Sample ID: MW-06 07072021

Matrix: GROUNDWATER

Collection Date: 07/07/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 18:05	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 18:05	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 18:05	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 18:05	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 18:05	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:05	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 18:05	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:05	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 18:05	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:05	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:05	179692



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-004

**Client Sample ID:** MW-06 07072021

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 18:05	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.5	%REC	1	07/13/2021 18:05	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.7	%REC	1	07/13/2021 18:05	179692
Surr: Toluene-d8	*	80-120		91.3	%REC	1	07/13/2021 18:05	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-005

Client Sample ID: RINSE-16

Matrix: GROUNDWATER

Collection Date: 07/07/2021 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/12/2021 18:05	179606
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2021 18:05	179606
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2021 18:05	179606
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2021 18:05	179606
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/12/2021 18:05	179606
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/14/2021 19:56	179635
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/14/2021 19:56	179635
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/14/2021 19:56	179635
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/14/2021 19:56	179635
Zinc	NELAP	0.0100		0.0110	mg/L	1	07/14/2021 19:56	179635
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 17:03	179682
Surr: Decachlorobiphenyl	*	10-152		87.4	%REC	1	07/14/2021 17:03	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		112.8	%REC	1	07/14/2021 17:03	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:19	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 15:19	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 15:19	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		62.3	%REC	1	07/14/2021 15:19	179663
Surr: Nitrobenzene-d5	*	29.1-125		78.9	%REC	1	07/14/2021 15:19	179663
Surr: p-Terphenyl-d14	*	35.2-164		106.5	%REC	1	07/14/2021 15:19	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692



Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-005

Client Sample ID: RINSE-16

Matrix: GROUNDWATER

Collection Date: 07/07/2021 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 18:31	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:31	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:31	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:31	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 18:31	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:31	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Bromodichloromethane	NELAP	2.0		2.2	µg/L	1	07/13/2021 18:31	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070534-005

Client Sample ID: RINSE-16

Matrix: GROUNDWATER

Collection Date: 07/07/2021 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroform	NELAP	2.0		9.2	µg/L	1	07/13/2021 18:31	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 18:31	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 18:31	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 18:31	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 18:31	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 18:31	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:31	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 18:31	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:31	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 18:31	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070534-005

**Client Sample ID:** RINSE-16

**Matrix:** GROUNDWATER

**Collection Date:** 07/07/2021 13:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:31	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:31	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 18:31	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		95.5	%REC	1	07/13/2021 18:31	179692
Surr: 4-Bromofluorobenzene	*	80-120		94.2	%REC	1	07/13/2021 18:31	179692
Surr: Toluene-d8	*	80-120		90.7	%REC	1	07/13/2021 18:31	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Sample Summary

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21070534-001	TB-08	Trip Blank	1	07/09/2021 12:30
21070534-002	MW-04 07072021	Groundwater	4	07/07/2021 16:16
21070534-003	MW-05 07072021	Groundwater	5	07/07/2021 13:18
21070534-004	MW-06 07072021	Groundwater	4	07/07/2021 17:55
21070534-005	RINSE-16	Groundwater	5	07/07/2021 13:45



## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21070534-001A	TB-08	07/09/2021 12:30	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/12/2021 13:27			
21070534-002A	MW-04 07072021	07/07/2021 16:16	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 14:41 07/14/2021 16:12			
21070534-002B	MW-04 07072021	07/07/2021 16:16	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 17:31			
21070534-002C	MW-04 07072021	07/07/2021 16:16	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 11:32 07/13/2021 17:29			
21070534-002D	MW-04 07072021	07/07/2021 16:16	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 17:14			
21070534-003A	MW-05 07072021	07/07/2021 13:18	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 16:29			
21070534-003B	MW-05 07072021	07/07/2021 13:18	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 18:09			
21070534-003C	MW-05 07072021	07/07/2021 13:18	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 11:32 07/13/2021 17:40			
21070534-003D	MW-05 07072021	07/07/2021 13:18	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)		07/09/2021 17:22 07/12/2021 17:54			
21070534-003E	MW-05 07072021	07/07/2021 13:18	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 17:39			
21070534-004A	MW-06 07072021	07/07/2021 17:55	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 16:46			
21070534-004B	MW-06 07072021	07/07/2021 17:55	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 18:48			
21070534-004C	MW-06 07072021	07/07/2021 17:55	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 13:05 07/14/2021 20:05			
21070534-004D	MW-06 07072021	07/07/2021 17:55	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 18:05			
21070534-005A	RINSE-16	07/07/2021 13:45	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 17:03			
21070534-005B	RINSE-16	07/07/2021 13:45	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 15:19			
21070534-005C	RINSE-16	07/07/2021 13:45	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 13:05 07/14/2021 19:56			
21070534-005D	RINSE-16	07/07/2021 13:45	07/09/2021 12:30		



## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
	Test Name				
	SW-846 3005A, 6010B, Metals by ICP (Dissolved)			07/09/2021 17:22	07/12/2021 18:05
21070534-005E	RINSE-16	07/07/2021 13:45	07/09/2021 12:30		
	SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS				07/13/2021 18:31



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

**Batch 179606**    **SampType: MBLK**    Units mg/L  
 SampID: MBLK-179606

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	07/12/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/12/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/12/2021
Lead		0.0150		< 0.0150	0.0014	0	0	-100	100	07/12/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/12/2021

**Batch 179606**    **SampType: LCS**    Units mg/L  
 SampID: LCS-179606

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.455	0.5000	0	91.1	85	115	07/12/2021
Arsenic		0.0250		0.496	0.5000	0	99.1	85	115	07/12/2021
Copper		0.0050		0.242	0.2500	0	96.9	85	115	07/12/2021
Lead		0.0150		0.468	0.5000	0	93.6	85	115	07/12/2021
Zinc		0.0100		0.483	0.5000	0	96.5	85	115	07/12/2021

**Batch 179606**    **SampType: MS**    Units mg/L  
 SampID: 21070534-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.478	0.5000	0	95.7	75	125	07/12/2021
Arsenic		0.0250		0.512	0.5000	0	102.3	75	125	07/12/2021
Copper		0.0050		0.245	0.2500	0	98.2	75	125	07/12/2021
Lead		0.0150		0.461	0.5000	0	92.2	75	125	07/12/2021
Zinc		0.0100		0.479	0.5000	0	95.9	75	125	07/12/2021

**Batch 179606**    **SampType: MSD**    Units mg/L  
 SampID: 21070534-003DMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.470	0.5000	0	94.0	0.4784	1.75	07/12/2021
Arsenic		0.0250		0.500	0.5000	0	100.0	0.5116	2.31	07/12/2021
Copper		0.0050		0.243	0.2500	0	97.3	0.2454	0.90	07/12/2021
Lead		0.0150		0.452	0.5000	0	90.4	0.4610	2.02	07/12/2021
Zinc		0.0100		0.473	0.5000	0	94.5	0.4793	1.39	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

**Batch 179625**      **SampType: MBLK**      Units mg/L  
 SampID: MBLK-179625

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	07/13/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/13/2021

**Batch 179625**      **SampType: LCS**      Units mg/L  
 SampID: LCS-179625

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.527	0.5000	0	105.5	85	115	07/13/2021
Arsenic		0.0250		0.551	0.5000	0	110.2	85	115	07/13/2021
Copper		0.0050		0.268	0.2500	0	107.2	85	115	07/13/2021
Lead		0.0150		0.523	0.5000	0	104.6	85	115	07/13/2021
Zinc		0.0100		0.540	0.5000	0	108.0	85	115	07/13/2021

**Batch 179625**      **SampType: MS**      Units mg/L  
 SampID: 21070534-002CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.507	0.5000	0	101.4	75	125	07/13/2021
Arsenic		0.0250		0.541	0.5000	0	108.3	75	125	07/13/2021
Copper		0.0050		0.263	0.2500	0	105.1	75	125	07/13/2021
Lead		0.0150		0.497	0.5000	0	99.4	75	125	07/13/2021
Zinc		0.0100		0.526	0.5000	0.007600	103.6	75	125	07/13/2021

**Batch 179625**      **SampType: MSD**      Units mg/L  
 SampID: 21070534-002CMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.520	0.5000	0	104.0	0.5069	2.59	07/13/2021
Arsenic		0.0250		0.556	0.5000	0	111.2	0.5413	2.64	07/13/2021
Copper		0.0050		0.267	0.2500	0	106.8	0.2628	1.55	07/13/2021
Lead		0.0150		0.505	0.5000	0	100.9	0.4971	1.50	07/13/2021
Zinc		0.0100		0.534	0.5000	0.007600	105.2	0.5255	1.51	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

**Batch 179635**      **SampType: MBLK**      Units mg/L  
 SampID: MBLK-179635

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		< <b>0.0500</b>	0.0068	0	0	-100	100	07/13/2021
Arsenic		0.0250		< <b>0.0250</b>	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< <b>0.0050</b>	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< <b>0.0150</b>	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< <b>0.0100</b>	0.0050	0	0	-100	100	07/13/2021

**Batch 179635**      **SampType: LCS**      Units mg/L  
 SampID: LCS-179635

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		<b>0.487</b>	0.5000	0	97.3	85	115	07/13/2021
Arsenic		0.0250		<b>0.507</b>	0.5000	0	101.4	85	115	07/13/2021
Copper		0.0050		<b>0.254</b>	0.2500	0	101.7	85	115	07/13/2021
Lead		0.0150		<b>0.473</b>	0.5000	0	94.5	85	115	07/13/2021
Zinc		0.0100		<b>0.492</b>	0.5000	0	98.4	85	115	07/13/2021

**Batch 179635**      **SampType: MS**      Units mg/L  
 SampID: 21070534-004CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		<b>0.526</b>	0.5000	0	105.3	75	125	07/14/2021
Arsenic		0.0250		<b>0.544</b>	0.5000	0	108.8	75	125	07/14/2021
Copper		0.0050		<b>0.272</b>	0.2500	0	109.0	75	125	07/14/2021
Lead		0.0150		<b>0.510</b>	0.5000	0	102.0	75	125	07/14/2021
Zinc		0.0100		<b>0.529</b>	0.5000	0	105.8	75	125	07/14/2021

**Batch 179635**      **SampType: MSD**      Units mg/L  
 SampID: 21070534-004CMSD

RPD Limit **20**

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		<b>0.537</b>	0.5000	0	107.4	0.5263	2.03	07/14/2021
Arsenic		0.0250		<b>0.566</b>	0.5000	0	113.3	0.5440	4.02	07/14/2021
Copper		0.0050		<b>0.279</b>	0.2500	0	111.6	0.2724	2.43	07/14/2021
Lead		0.0150		<b>0.527</b>	0.5000	0	105.5	0.5100	3.35	07/14/2021
Zinc		0.0100		<b>0.548</b>	0.5000	0	109.6	0.5290	3.56	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179682		SampType: MBLK		Units µg/L						
SampID: MBLK-179682										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		ND						07/14/2021
Aroclor 1016		1.00		ND						07/14/2021
Aroclor 1221		1.00		ND						07/14/2021
Aroclor 1221		0.095		ND						07/14/2021
Aroclor 1232		1.00		ND						07/14/2021
Aroclor 1232		0.095		ND						07/14/2021
Aroclor 1242		0.095		ND						07/14/2021
Aroclor 1242		1.00		ND						07/14/2021
Aroclor 1248		0.095		ND						07/14/2021
Aroclor 1248		1.00		ND						07/14/2021
Aroclor 1254		1.00		ND						07/14/2021
Aroclor 1254		0.095		ND						07/14/2021
Aroclor 1260		1.00		ND						07/14/2021
Aroclor 1260		0.095		ND						07/14/2021
Surr: Decachlorobiphenyl	*			0.11	0.1250		88.1	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.110	0.1250		88.1	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.104	0.1250		83.0	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.5	35.2	135	07/14/2021

Batch 179682		SampType: LCS		Units µg/L						
SampID: LCSPCB-179682										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		2.67	2.500	0	106.9	56.2	136	07/14/2021
Aroclor 1016		0.095		2.67	2.500	0	106.9	50	140	07/14/2021
Aroclor 1260		1.00		2.68	2.500	0	107.4	42.1	125	07/14/2021
Aroclor 1260		0.095		2.68	2.500	0	107.4	8	140	07/14/2021
Surr: Decachlorobiphenyl	*			0.13	0.1250		102.2	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.128	0.1250		102.2	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.3	35.2	135	07/14/2021





## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179682		SampType: LCSD		Units µg/L				RPD Limit 40			
SampID: LCSPCBD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		1.00		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1016		0.095		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1260		0.095		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Aroclor 1260		1.00		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.12</b>	0.1250		96.4			07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.1			07/14/2021	

Batch 179682		SampType: LCS		Units %REC						
SampID: LCSPST-179682										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			<b>0.099</b>	0.1250		79.1	31.2	141	07/14/2021

Batch 179682		SampType: LCSD		Units %REC				RPD Limit 0			
SampID: LCSPSTD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179663      **SampType:** MBLK      **Units** mg/L

**SampID:** MBLK-179663

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		ND						07/14/2021
Acenaphthylene		0.00100		ND						07/14/2021
Anthracene		0.00100		ND						07/14/2021
Benzo(a)anthracene		0.00100		ND						07/14/2021
Benzo(a)pyrene		0.00100		ND						07/14/2021
Benzo(b)fluoranthene		0.00100		ND						07/14/2021
Benzo(g,h,i)perylene		0.00100		ND						07/14/2021
Benzo(k)fluoranthene		0.00100		ND						07/14/2021
Chrysene		0.00100		ND						07/14/2021
Dibenzo(a,h)anthracene		0.00100		ND						07/14/2021
Fluoranthene		0.00100		ND						07/14/2021
Fluorene		0.00100		ND						07/14/2021
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/14/2021
Naphthalene		0.00100		ND						07/14/2021
Phenanthrene		0.00100		ND						07/14/2021
Pyrene		0.00100		ND						07/14/2021
TPH-DRO (C10 - C21)	*	0.500		ND						07/14/2021
TPH-ORO (C21 - C35)	*	0.700		ND						07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00620</b>	0.0125		49.6	1.09	175	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.00932</b>	0.0125		74.6	35.5	156	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0128</b>	0.0125		102.7	35	222	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179663      **SampType:** LCS      **Units** mg/L  
**SampID:** LCS-179663

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		<b>0.00843</b>	0.0100	0	84.3	39.6	145	07/14/2021
Acenaphthylene		0.00100		<b>0.00836</b>	0.0100	0	83.6	38.3	147	07/14/2021
Anthracene		0.00100		<b>0.00897</b>	0.0100	0	89.7	47.7	153	07/14/2021
Benzo(a)anthracene		0.00100		<b>0.00936</b>	0.0100	0	93.6	45	136	07/14/2021
Benzo(a)pyrene		0.00100		<b>0.00848</b>	0.0100	0	84.8	49.8	164	07/14/2021
Benzo(b)fluoranthene		0.00100		<b>0.00948</b>	0.0100	0	94.8	45.7	167	07/14/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00928</b>	0.0100	0	92.8	41	157	07/14/2021
Benzo(k)fluoranthene		0.00100		<b>0.00974</b>	0.0100	0	97.4	46.7	166	07/14/2021
Chrysene		0.00100		<b>0.00935</b>	0.0100	0	93.5	45.5	162	07/14/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00942</b>	0.0100	0	94.2	40.4	154	07/14/2021
Fluoranthene		0.00100		<b>0.00975</b>	0.0100	0	97.5	47.3	168	07/14/2021
Fluorene		0.00100		<b>0.00927</b>	0.0100	0	92.7	45.2	153	07/14/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00945</b>	0.0100	0	94.5	44.6	166	07/14/2021
Naphthalene		0.00100		<b>0.00603</b>	0.0100	0	60.3	16.6	137	07/14/2021
Phenanthrene		0.00100		<b>0.00915</b>	0.0100	0	91.5	50.8	149	07/14/2021
Pyrene		0.00100		<b>0.00943</b>	0.0100	0	94.3	44.9	163	07/14/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00980</b>	0.0125		78.4	1.09	175	07/14/2021
Surr: Nitrobenzene-d5	*			<b>0.0106</b>	0.0125		85.0	35.5	156	07/14/2021
Surr: p-Terphenyl-d14	*			<b>0.0146</b>	0.0125		117.1	35	222	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCSD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Acenaphthene		0.00100		<b>0.00850</b>	0.0100	0	85.0	0.008426	0.90	07/14/2021	
Acenaphthylene		0.00100		<b>0.00826</b>	0.0100	0	82.6	0.008358	1.20	07/14/2021	
Anthracene		0.00100		<b>0.00891</b>	0.0100	0	89.1	0.008968	0.67	07/14/2021	
Benzo(a)anthracene		0.00100		<b>0.00927</b>	0.0100	0	92.7	0.009363	0.98	07/14/2021	
Benzo(a)pyrene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.008482	3.69	07/14/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00934</b>	0.0100	0	93.4	0.009480	1.45	07/14/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00912</b>	0.0100	0	91.2	0.009279	1.78	07/14/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00969</b>	0.0100	0	96.9	0.009742	0.54	07/14/2021	
Chrysene		0.00100		<b>0.00926</b>	0.0100	0	92.6	0.009354	1.05	07/14/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00929</b>	0.0100	0	92.9	0.009424	1.38	07/14/2021	
Fluoranthene		0.00100		<b>0.00952</b>	0.0100	0	95.2	0.009751	2.36	07/14/2021	
Fluorene		0.00100		<b>0.00897</b>	0.0100	0	89.7	0.009270	3.31	07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00940</b>	0.0100	0	94.0	0.009454	0.57	07/14/2021	
Naphthalene		0.00100		<b>0.00785</b>	0.0100	0	78.5	0.006030	26.26	07/14/2021	
Phenanthrene		0.00100		<b>0.00924</b>	0.0100	0	92.4	0.009147	1.05	07/14/2021	
Pyrene		0.00100		<b>0.00930</b>	0.0100	0	93.0	0.009428	1.39	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0103</b>	0.0125		82.6			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0105</b>	0.0125		83.9			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0140</b>	0.0125		111.8			07/14/2021	

Batch 179663		SampType: LCSG		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSG-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.93</b>	2.000	0	96.6	17.1	195	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0129</b>	0.0125		103.0	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0115</b>	0.0125		92.4	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0154</b>	0.0125		122.9	35	222	07/14/2021	

Batch 179663		SampType: LCSGD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSGD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.92</b>	2.000	0	96.0	1.932	0.60	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0122</b>	0.0125		97.8			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0113</b>	0.0125		90.4			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0144</b>	0.0125		115.5			07/14/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-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						07/12/2021
1,1,1-Trichloroethane	*	2.0		ND						07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/12/2021
1,1,2-Trichloroethane	*	0.5		ND						07/12/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/12/2021
1,1-Dichloroethane	*	2.0		ND						07/12/2021
1,1-Dichloroethene	*	2.0		ND						07/12/2021
1,1-Dichloropropene	*	2.0		ND						07/12/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,3-Trichloropropane	*	2.0		ND						07/12/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/12/2021
1,2-Dibromoethane	*	2.0		ND						07/12/2021
1,2-Dichlorobenzene	*	2.0		ND						07/12/2021
1,2-Dichloroethane	*	2.0		ND						07/12/2021
1,2-Dichloropropane	*	2.0		ND						07/12/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/12/2021
1,3-Dichlorobenzene	*	2.0		ND						07/12/2021
1,3-Dichloropropane	*	2.0		ND						07/12/2021
1,4-Dichlorobenzene	*	2.0		ND						07/12/2021
1-Chlorobutane	*	5.0		ND						07/12/2021
2,2-Dichloropropane	*	2.0		ND						07/12/2021
2-Butanone	*	10.0		ND						07/12/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/12/2021
2-Chlorotoluene	*	2.0		ND						07/12/2021
2-Hexanone	*	10.0		ND						07/12/2021
2-Nitropropane	*	10.0		ND						07/12/2021
4-Chlorotoluene	*	2.0		ND						07/12/2021
4-Methyl-2-pentanone	*	10.0		ND						07/12/2021
Acetone	*	10.0		ND						07/12/2021
Acetonitrile	*	10.0		ND						07/12/2021
Acrolein	*	20.0		ND						07/12/2021
Acrylonitrile	*	5.0		ND						07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/12/2021
Benzene	*	0.5		ND						07/12/2021
Bromobenzene	*	2.0		ND						07/12/2021
Bromochloromethane	*	2.0		ND						07/12/2021
Bromodichloromethane	*	2.0		ND						07/12/2021
Bromoform	*	2.0		ND						07/12/2021
Bromomethane	*	5.0		ND						07/12/2021
Carbon disulfide	*	2.0		ND						07/12/2021
Carbon tetrachloride	*	2.0		ND						07/12/2021
Chlorobenzene	*	2.0		ND						07/12/2021
Chloroethane	*	2.0		ND						07/12/2021
Chloroform	*	2.0		ND						07/12/2021
Chloromethane	*	5.0		ND						07/12/2021
Chloroprene	*	5.0		ND						07/12/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/12/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Cyclohexanone	*	20.0		ND						07/12/2021
Dibromochloromethane	*	2.0		ND						07/12/2021
Dibromomethane	*	2.0		ND						07/12/2021
Dichlorodifluoromethane	*	2.0		ND						07/12/2021
Diisopropyl ether	*	2.0		ND						07/12/2021
Ethyl acetate	*	10.0		ND						07/12/2021
Ethyl ether	*	5.0		ND						07/12/2021
Ethyl methacrylate	*	5.0		ND						07/12/2021
Ethylbenzene	*	2.0		ND						07/12/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/12/2021
Hexachlorobutadiene	*	5.0		ND						07/12/2021
Hexachloroethane	*	5.0		ND						07/12/2021
Iodomethane	*	5.0		ND						07/12/2021
Isopropylbenzene	*	2.0		ND						07/12/2021
m,p-Xylenes	*	2.0		ND						07/12/2021
Methacrylonitrile	*	5.0		ND						07/12/2021
Methyl Methacrylate	*	5.0		ND						07/12/2021
Methyl tert-butyl ether	*	2.0		ND						07/12/2021
Methylacrylate	*	5.0		ND						07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/12/2021
Naphthalene	*	5.0		ND						07/12/2021
n-Butyl acetate	*	2.0		ND						07/12/2021
n-Butylbenzene	*	2.0		ND						07/12/2021
n-Heptane	*	5.0		ND						07/12/2021
n-Hexane	*	5.0		ND						07/12/2021
Nitrobenzene	*	50.0		ND						07/12/2021
n-Propylbenzene	*	2.0		ND						07/12/2021
o-Xylene	*	2.0		ND						07/12/2021
Pentachloroethane	*	5.0		ND						07/12/2021
p-Isopropyltoluene	*	2.0		ND						07/12/2021
Propionitrile	*	10.0		ND						07/12/2021
sec-Butylbenzene	*	2.0		ND						07/12/2021
Styrene	*	2.0		ND						07/12/2021
tert-Amyl methyl ether	*	2.0		ND						07/12/2021
tert-Butyl alcohol	*	10.0		ND						07/12/2021
tert-Butylbenzene	*	2.0		ND						07/12/2021
Tetrachloroethene	*	0.5		ND						07/12/2021
Tetrahydrofuran	*	5.0		ND						07/12/2021
Toluene	*	2.0		ND						07/12/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/12/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Trichloroethene	*	2.0		ND						07/12/2021
Trichlorofluoromethane	*	5.0		ND						07/12/2021
Vinyl acetate	*	5.0		ND						07/12/2021
Vinyl chloride	*	2.0		ND						07/12/2021
Xylenes, Total	*	4.0		ND						07/12/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/12/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/12/2021
TPH - GRO (C6 - C10)	*	500		ND						07/12/2021
Surr: 1,2-Dichloroethane-d4	*			49.4	50.00		98.8	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			51.6	50.00		103.3	80	120	07/12/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>50.4</b>	50.00	0	100.7	82	113	07/12/2021
1,1,1-Trichloroethane	*	2.0		<b>50.8</b>	50.00	0	101.7	76.9	128	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>41.2</b>	50.00	0	82.3	76.7	113	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>49.1</b>	50.00	0	98.1	69.5	127	07/12/2021
1,1,2-Trichloroethane	*	0.5		<b>47.3</b>	50.00	0	94.5	83.8	111	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		<b>119</b>	125.0	0	95.3	74.9	117	07/12/2021
1,1-Dichloroethane	*	2.0		<b>50.2</b>	50.00	0	100.5	77	129	07/12/2021
1,1-Dichloroethene	*	2.0		<b>47.6</b>	50.00	0	95.3	69.4	127	07/12/2021
1,1-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.9	75.1	123	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	77.3	121	07/12/2021
1,2,3-Trichloropropane	*	2.0		<b>39.9</b>	50.00	0	79.7	75.3	109	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	77	115	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		<b>51.0</b>	50.00	0	102.1	76.8	124	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		<b>49.0</b>	50.00	0	97.9	75	115	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>43.2</b>	50.00	0	86.5	71.9	119	07/12/2021
1,2-Dibromoethane	*	2.0		<b>48.0</b>	50.00	0	96.0	83.6	110	07/12/2021
1,2-Dichlorobenzene	*	2.0		<b>46.6</b>	50.00	0	93.2	72.1	113	07/12/2021
1,2-Dichloroethane	*	2.0		<b>47.5</b>	50.00	0	95.0	72.3	117	07/12/2021
1,2-Dichloropropane	*	2.0		<b>49.1</b>	50.00	0	98.2	76.5	119	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		<b>46.7</b>	50.00	0	93.4	75.2	117	07/12/2021
1,3-Dichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	75.2	115	07/12/2021
1,3-Dichloropropane	*	2.0		<b>46.4</b>	50.00	0	92.8	80.9	110	07/12/2021
1,4-Dichlorobenzene	*	2.0		<b>49.4</b>	50.00	0	98.7	73.9	112	07/12/2021
1-Chlorobutane	*	5.0		<b>54.2</b>	50.00	0	108.3	74.9	130	07/12/2021
2,2-Dichloropropane	*	2.0		<b>53.1</b>	50.00	0	106.2	66.5	138	07/12/2021
2-Butanone	*	10.0		<b>127</b>	125.0	0	101.6	68.8	134	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		<b>48.1</b>	50.00	0	96.2	17.8	163	07/12/2021
2-Chlorotoluene	*	2.0		<b>45.4</b>	50.00	0	90.7	74.9	115	07/12/2021
2-Hexanone	*	10.0		<b>126</b>	125.0	0	101.1	73.2	117	07/12/2021
2-Nitropropane	*	10.0		<b>451</b>	500.0	0	90.2	67.1	140	07/12/2021
4-Chlorotoluene	*	2.0		<b>47.0</b>	50.00	0	93.9	75.7	113	07/12/2021
4-Methyl-2-pentanone	*	10.0		<b>123</b>	125.0	0	98.7	77	113	07/12/2021
Acetone	*	10.0		<b>109</b>	125.0	0	87.2	61.4	130	07/12/2021
Acetonitrile	*	10.0		<b>557</b>	500.0	0	111.5	68.8	136	07/12/2021
Acrolein	*	20.0		<b>411</b>	500.0	0	82.2	28.4	168	07/12/2021
Acrylonitrile	*	5.0		<b>49.4</b>	50.00	0	98.9	77.9	124	07/12/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>51.6</b>	50.00	0	103.2	75.8	130	07/12/2021
Benzene	*	0.5		<b>49.9</b>	50.00	0	99.8	78.5	119	07/12/2021
Bromobenzene	*	2.0		<b>47.6</b>	50.00	0	95.1	77.5	113	07/12/2021
Bromochloromethane	*	2.0		<b>46.4</b>	50.00	0	92.8	71.5	123	07/12/2021
Bromodichloromethane	*	2.0		<b>50.3</b>	50.00	0	100.6	75.7	123	07/12/2021
Bromoform	*	2.0		<b>49.0</b>	50.00	0	97.9	78.9	121	07/12/2021
Bromomethane	*	5.0		<b>59.0</b>	50.00	0	118.0	30.5	192	07/12/2021
Carbon disulfide	*	2.0		<b>47.4</b>	50.00	0	94.7	66.7	121	07/12/2021
Carbon tetrachloride	*	2.0		<b>50.5</b>	50.00	0	101.0	70.9	127	07/12/2021
Chlorobenzene	*	2.0		<b>49.1</b>	50.00	0	98.2	80	111	07/12/2021
Chloroethane	*	2.0		<b>46.0</b>	50.00	0	92.0	69.6	135	07/12/2021
Chloroform	*	2.0		<b>48.5</b>	50.00	0	97.1	76.2	120	07/12/2021
Chloromethane	*	5.0		<b>42.0</b>	50.00	0	84.0	50.9	138	07/12/2021
Chloroprene	*	5.0		<b>52.3</b>	50.00	0	104.6	68.4	127	07/12/2021
cis-1,2-Dichloroethene	*	2.0		<b>50.7</b>	50.00	0	101.3	79.5	121	07/12/2021
cis-1,3-Dichloropropene	*	2.0		<b>53.4</b>	50.00	0	106.9	79.8	123	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>41.2</b>	50.00	0	82.3	64.6	130	07/12/2021
Cyclohexanone	*	20.0		<b>432</b>	500.0	0	86.4	70.5	114	07/12/2021
Dibromochloromethane	*	2.0		<b>50.1</b>	50.00	0	100.2	84.5	114	07/12/2021
Dibromomethane	*	2.0		<b>47.4</b>	50.00	0	94.8	76	119	07/12/2021
Dichlorodifluoromethane	*	2.0		<b>39.5</b>	50.00	0	79.1	46.6	142	07/12/2021
Diisopropyl ether	*	2.0		<b>52.0</b>	50.00	0	103.9	72	128	07/12/2021
Ethyl acetate	*	10.0		<b>46.7</b>	50.00	0	93.4	70.3	115	07/12/2021
Ethyl ether	*	5.0		<b>52.3</b>	50.00	0	104.6	74.6	120	07/12/2021
Ethyl methacrylate	*	5.0		<b>47.8</b>	50.00	0	95.6	81.4	116	07/12/2021
Ethylbenzene	*	2.0		<b>51.3</b>	50.00	0	102.5	78.2	114	07/12/2021
Ethyl-tert-butyl ether	*	2.0		<b>51.4</b>	50.00	0	102.9	74.6	124	07/12/2021
Hexachlorobutadiene	*	5.0		<b>51.5</b>	50.00	0	103.0	73.9	129	07/12/2021
Hexachloroethane	*	5.0		<b>48.8</b>	50.00	0	97.6	78.3	123	07/12/2021
Iodomethane	*	5.0		<b>43.5</b>	50.00	0	87.0	50	151	07/12/2021
Isopropylbenzene	*	2.0		<b>52.2</b>	50.00	0	104.5	79.3	115	07/12/2021
m,p-Xylenes	*	2.0		<b>109</b>	100.0	0	109.2	77.2	116	07/12/2021
Methacrylonitrile	*	5.0		<b>47.1</b>	50.00	0	94.2	73.9	127	07/12/2021
Methyl Methacrylate	*	5.0		<b>52.3</b>	50.00	0	104.6	70.7	129	07/12/2021
Methyl tert-butyl ether	*	2.0		<b>48.7</b>	50.00	0	97.3	80.3	122	07/12/2021
Methylacrylate	*	5.0		<b>47.0</b>	50.00	0	93.9	75.2	124	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		<b>48.2</b>	50.00	0	96.5	71.8	115	07/12/2021
Naphthalene	*	5.0		<b>51.9</b>	50.00	0	103.8	75.6	121	07/12/2021
n-Butyl acetate	*	2.0		<b>48.5</b>	50.00	0	97.0	72.4	118	07/12/2021
n-Butylbenzene	*	2.0		<b>46.6</b>	50.00	0	93.3	70.8	118	07/12/2021
n-Heptane	*	5.0		<b>42.0</b>	50.00	0	83.9	50.4	143	07/12/2021
n-Hexane	*	5.0		<b>43.0</b>	50.00	0	85.9	60.6	139	07/12/2021
Nitrobenzene	*	50.0		<b>500</b>	500.0	0	99.9	49.4	129	07/12/2021
n-Propylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	74	119	07/12/2021
o-Xylene	*	2.0		<b>51.2</b>	50.00	0	102.4	79.2	112	07/12/2021
Pentachloroethane	*	5.0		<b>48.4</b>	50.00	0	96.8	71.8	124	07/12/2021
p-Isopropyltoluene	*	2.0		<b>46.5</b>	50.00	0	93.0	74.4	119	07/12/2021
Propionitrile	*	10.0		<b>504</b>	500.0	0	100.8	76.2	127	07/12/2021
sec-Butylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.4	74.4	119	07/12/2021
Styrene	*	2.0		<b>56.0</b>	50.00	0	111.9	80.4	117	07/12/2021
tert-Amyl methyl ether	*	2.0		<b>43.1</b>	50.00	0	86.2	80.8	125	07/12/2021
tert-Butyl alcohol	*	10.0		<b>251</b>	250.0	0	100.2	64.9	118	07/12/2021
tert-Butylbenzene	*	2.0		<b>45.7</b>	50.00	0	91.5	74	115	07/12/2021
Tetrachloroethene	*	0.5		<b>51.2</b>	50.00	0	102.3	70.1	120	07/12/2021
Tetrahydrofuran	*	5.0		<b>45.6</b>	50.00	0	91.3	63.5	122	07/12/2021
Toluene	*	2.0		<b>48.7</b>	50.00	0	97.4	78.6	112	07/12/2021
trans-1,2-Dichloroethene	*	2.0		<b>51.5</b>	50.00	0	103.1	75.7	130	07/12/2021
trans-1,3-Dichloropropene	*	2.0		<b>47.3</b>	50.00	0	94.6	80.3	116	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		<b>34.3</b>	50.00	0	68.6	65.5	124	07/12/2021
Trichloroethene	*	2.0		<b>50.5</b>	50.00	0	100.9	76.2	121	07/12/2021
Trichlorofluoromethane	*	5.0		<b>43.8</b>	50.00	0	87.6	71.1	131	07/12/2021
Vinyl acetate	*	5.0		<b>46.0</b>	50.00	0	92.1	79.8	129	07/12/2021
Vinyl chloride	*	2.0		<b>42.4</b>	50.00	0	84.8	58.6	141	07/12/2021
Xylenes, Total	*	4.0		<b>160</b>	150.0	0	107.0	78.3	114	07/12/2021
1,2-Dichloroethene, Total	*	4.0		<b>102</b>	100.0	0	102.2	78.5	125	07/12/2021
1,3-Dichloropropene, Total	*	4.0		<b>101</b>	100.0	0	100.7	82.3	117	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		<b>75.5</b>	100.0	0	75.5	65.9	126	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			<b>48.2</b>	50.00		96.4	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			<b>46.4</b>	50.00		92.9	80	120	07/12/2021
Surr: Toluene-d8	*			<b>48.5</b>	50.00		97.0	80	120	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		45.1	50.00	0	90.2	50.36	10.98	07/12/2021
1,1,1-Trichloroethane	*	2.0		43.8	50.00	0	87.7	50.83	14.79	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		39.3	50.00	0	78.6	41.17	4.65	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		42.0	50.00	0	84.0	49.06	15.55	07/12/2021
1,1,2-Trichloroethane	*	0.5		44.6	50.00	0	89.2	47.26	5.81	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.9	119.2	6.94	07/12/2021
1,1-Dichloroethane	*	2.0		44.4	50.00	0	88.8	50.25	12.41	07/12/2021
1,1-Dichloroethene	*	2.0		40.0	50.00	0	80.0	47.64	17.41	07/12/2021
1,1-Dichloropropene	*	2.0		42.7	50.00	0	85.3	50.45	16.73	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		48.4	50.00	0	96.9	51.16	5.46	07/12/2021
1,2,3-Trichloropropane	*	2.0		39.3	50.00	0	78.6	39.86	1.41	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		42.7	50.00	0	85.4	48.18	12.11	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		48.4	50.00	0	96.8	51.03	5.33	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		43.3	50.00	0	86.6	48.95	12.30	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		42.3	50.00	0	84.6	43.24	2.22	07/12/2021
1,2-Dibromoethane	*	2.0		46.6	50.00	0	93.1	47.98	3.03	07/12/2021
1,2-Dichlorobenzene	*	2.0		42.4	50.00	0	84.9	46.61	9.34	07/12/2021
1,2-Dichloroethane	*	2.0		44.7	50.00	0	89.3	47.50	6.16	07/12/2021
1,2-Dichloropropane	*	2.0		45.1	50.00	0	90.1	49.10	8.58	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		41.5	50.00	0	83.0	46.72	11.79	07/12/2021
1,3-Dichlorobenzene	*	2.0		46.6	50.00	0	93.1	51.16	9.44	07/12/2021
1,3-Dichloropropane	*	2.0		43.8	50.00	0	87.7	46.38	5.63	07/12/2021
1,4-Dichlorobenzene	*	2.0		45.1	50.00	0	90.1	49.35	9.09	07/12/2021
1-Chlorobutane	*	5.0		46.2	50.00	0	92.4	54.16	15.82	07/12/2021
2,2-Dichloropropane	*	2.0		47.6	50.00	0	95.3	53.11	10.86	07/12/2021
2-Butanone	*	10.0		131	125.0	0	104.5	127.0	2.83	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		50.4	50.00	0	100.9	48.08	4.81	07/12/2021
2-Chlorotoluene	*	2.0		40.3	50.00	0	80.6	45.35	11.79	07/12/2021
2-Hexanone	*	10.0		127	125.0	0	101.2	126.4	0.13	07/12/2021
2-Nitropropane	*	10.0		445	500.0	0	89.1	451.0	1.23	07/12/2021
4-Chlorotoluene	*	2.0		47.3	50.00	0	94.5	46.95	0.68	07/12/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.5	123.4	0.17	07/12/2021
Acetone	*	10.0		117	125.0	0	93.6	109.0	7.04	07/12/2021
Acetonitrile	*	10.0		554	500.0	0	110.7	557.4	0.70	07/12/2021
Acrolein	*	20.0		490	500.0	0	97.9	410.8	17.52	07/12/2021
Acrylonitrile	*	5.0		48.5	50.00	0	97.0	49.44	1.96	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		46.6	50.00	0	93.3	51.59	10.06	07/12/2021
Benzene	*	0.5		44.1	50.00	0	88.2	49.92	12.34	07/12/2021
Bromobenzene	*	2.0		44.1	50.00	0	88.1	47.57	7.66	07/12/2021
Bromochloromethane	*	2.0		42.7	50.00	0	85.3	46.39	8.38	07/12/2021
Bromodichloromethane	*	2.0		46.1	50.00	0	92.2	50.31	8.73	07/12/2021
Bromoform	*	2.0		46.3	50.00	0	92.6	48.95	5.61	07/12/2021
Bromomethane	*	5.0		48.6	50.00	0	97.2	59.02	19.32	07/12/2021
Carbon disulfide	*	2.0		40.1	50.00	0	80.2	47.35	16.56	07/12/2021
Carbon tetrachloride	*	2.0		43.1	50.00	0	86.2	50.49	15.79	07/12/2021
Chlorobenzene	*	2.0		44.1	50.00	0	88.2	49.09	10.66	07/12/2021
Chloroethane	*	2.0		39.1	50.00	0	78.2	45.99	16.19	07/12/2021
Chloroform	*	2.0		44.0	50.00	0	88.0	48.53	9.75	07/12/2021
Chloromethane	*	5.0		35.0	50.00	0	70.0	42.00	18.21	07/12/2021
Chloroprene	*	5.0		42.6	50.00	0	85.2	52.28	20.36	07/12/2021
cis-1,2-Dichloroethene	*	2.0		43.8	50.00	0	87.7	50.66	14.46	07/12/2021
cis-1,3-Dichloropropene	*	2.0		49.8	50.00	0	99.6	53.45	7.09	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		42.5	50.00	0	85.1	41.17	3.25	07/12/2021
Cyclohexanone	*	20.0		463	500.0	0	92.7	432.0	7.02	07/12/2021
Dibromochloromethane	*	2.0		46.2	50.00	0	92.5	50.09	7.99	07/12/2021
Dibromomethane	*	2.0		44.8	50.00	0	89.7	47.41	5.55	07/12/2021
Dichlorodifluoromethane	*	2.0		31.4	50.00	0	62.7	39.54	23.07	07/12/2021
Diisopropyl ether	*	2.0		48.2	50.00	0	96.4	51.95	7.45	07/12/2021
Ethyl acetate	*	10.0		46.4	50.00	0	92.8	46.72	0.73	07/12/2021
Ethyl ether	*	5.0		49.0	50.00	0	98.1	52.29	6.41	07/12/2021
Ethyl methacrylate	*	5.0		45.8	50.00	0	91.5	47.80	4.36	07/12/2021
Ethylbenzene	*	2.0		45.7	50.00	0	91.4	51.26	11.49	07/12/2021
Ethyl-tert-butyl ether	*	2.0		48.1	50.00	0	96.3	51.45	6.67	07/12/2021
Hexachlorobutadiene	*	5.0		47.0	50.00	0	94.1	51.51	9.07	07/12/2021
Hexachloroethane	*	5.0		41.5	50.00	0	83.0	48.78	16.18	07/12/2021
Iodomethane	*	5.0		36.8	50.00	0	73.6	43.49	16.64	07/12/2021
Isopropylbenzene	*	2.0		46.2	50.00	0	92.3	52.23	12.34	07/12/2021
m,p-Xylenes	*	2.0		98.0	100.0	0	98.0	109.2	10.84	07/12/2021
Methacrylonitrile	*	5.0		47.7	50.00	0	95.3	47.10	1.20	07/12/2021
Methyl Methacrylate	*	5.0		51.8	50.00	0	103.5	52.30	1.06	07/12/2021
Methyl tert-butyl ether	*	2.0		46.6	50.00	0	93.2	48.66	4.33	07/12/2021
Methylacrylate	*	5.0		48.7	50.00	0	97.3	46.95	3.58	07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		44.2	50.00	0	88.4	48.23	8.77	07/12/2021
Naphthalene	*	5.0		48.6	50.00	0	97.2	51.92	6.59	07/12/2021
n-Butyl acetate	*	2.0		47.2	50.00	0	94.5	48.50	2.65	07/12/2021
n-Butylbenzene	*	2.0		41.5	50.00	0	83.0	46.65	11.64	07/12/2021
n-Heptane	*	5.0		47.0	50.00	0	93.9	41.95	11.25	07/12/2021
n-Hexane	*	5.0		42.0	50.00	0	83.9	42.96	2.33	07/12/2021
Nitrobenzene	*	50.0		473	500.0	0	94.5	499.7	5.59	07/12/2021
n-Propylbenzene	*	2.0		42.4	50.00	0	84.8	48.25	12.86	07/12/2021
o-Xylene	*	2.0		46.4	50.00	0	92.7	51.21	9.96	07/12/2021
Pentachloroethane	*	5.0		42.7	50.00	0	85.4	48.39	12.47	07/12/2021
p-Isopropyltoluene	*	2.0		40.5	50.00	0	81.0	46.48	13.80	07/12/2021
Propionitrile	*	10.0		511	500.0	0	102.2	504.0	1.35	07/12/2021
sec-Butylbenzene	*	2.0		41.2	50.00	0	82.4	47.68	14.58	07/12/2021
Styrene	*	2.0		51.0	50.00	0	101.9	55.97	9.35	07/12/2021
tert-Amyl methyl ether	*	2.0	S	40.3	50.00	0	80.6	43.12	6.74	07/12/2021
tert-Butyl alcohol	*	10.0		256	250.0	0	102.5	250.5	2.28	07/12/2021
tert-Butylbenzene	*	2.0		39.9	50.00	0	79.8	45.73	13.57	07/12/2021
Tetrachloroethene	*	0.5		44.8	50.00	0	89.6	51.16	13.30	07/12/2021
Tetrahydrofuran	*	5.0		45.8	50.00	0	91.6	45.64	0.37	07/12/2021
Toluene	*	2.0		43.0	50.00	0	86.1	48.69	12.32	07/12/2021
trans-1,2-Dichloroethene	*	2.0		43.7	50.00	0	87.3	51.54	16.53	07/12/2021
trans-1,3-Dichloropropene	*	2.0		44.1	50.00	0	88.3	47.28	6.87	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		33.6	50.00	0	67.2	34.31	2.09	07/12/2021
Trichloroethene	*	2.0		45.0	50.00	0	90.0	50.47	11.44	07/12/2021
Trichlorofluoromethane	*	5.0		43.3	50.00	0	86.6	43.79	1.10	07/12/2021
Vinyl acetate	*	5.0		48.9	50.00	0	97.8	46.05	6.04	07/12/2021
Vinyl chloride	*	2.0		33.9	50.00	0	67.7	42.42	22.44	07/12/2021
Xylenes, Total	*	4.0		144	150.0	0	96.2	160.4	10.56	07/12/2021
1,2-Dichloroethene, Total	*	4.0		87.5	100.0	0	87.5	102.2	15.50	07/12/2021
1,3-Dichloropropene, Total	*	4.0		93.9	100.0	0	93.9	100.7	6.99	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		76.1	100.0	0	76.1	75.48	0.86	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			48.2	50.00		96.3			07/12/2021
Surr: 4-Bromofluorobenzene	*			46.7	50.00		93.4			07/12/2021
Surr: Toluene-d8	*			48.6	50.00		97.2			07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179680		SampType: LCSG		Units µg/L							
SampID: LCSG-AM210712A-1										Date Analyzed	
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
TPH - GRO (C6 - C10)	*	500		<b>1940</b>	2000	0	96.8	70	130	07/12/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>49.2</b>	50.00		98.4	80	120	07/12/2021	
Surr: 4-Bromofluorobenzene	*			<b>48.4</b>	50.00		96.8	80	120	07/12/2021	
Surr: Toluene-d8	*			<b>48.5</b>	50.00		97.0	80	120	07/12/2021	

Batch 179680		SampType: LCSGD		Units µg/L						RPD Limit 20		Date Analyzed
SampID: LCSGD-AM210712A-1												
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD			
TPH - GRO (C6 - C10)	*	500		<b>1830</b>	2000	0	91.6	1935	5.53	07/12/2021		
Surr: 1,2-Dichloroethane-d4	*			<b>48.8</b>	50.00		97.6			07/12/2021		
Surr: 4-Bromofluorobenzene	*			<b>48.6</b>	50.00		97.1			07/12/2021		
Surr: Toluene-d8	*			<b>48.8</b>	50.00		97.6			07/12/2021		



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AK210713A-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						07/13/2021
1,1,1-Trichloroethane	*	2.0		ND						07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/13/2021
1,1,2-Trichloroethane	*	0.5		ND						07/13/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/13/2021
1,1-Dichloroethane	*	2.0		ND						07/13/2021
1,1-Dichloroethene	*	2.0		ND						07/13/2021
1,1-Dichloropropene	*	2.0		ND						07/13/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,3-Trichloropropane	*	2.0		ND						07/13/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/13/2021
1,2-Dibromoethane	*	2.0		ND						07/13/2021
1,2-Dichlorobenzene	*	2.0		ND						07/13/2021
1,2-Dichloroethane	*	2.0		ND						07/13/2021
1,2-Dichloropropane	*	2.0		ND						07/13/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/13/2021
1,3-Dichlorobenzene	*	2.0		ND						07/13/2021
1,3-Dichloropropane	*	2.0		ND						07/13/2021
1,4-Dichlorobenzene	*	2.0		ND						07/13/2021
1-Chlorobutane	*	5.0		ND						07/13/2021
2,2-Dichloropropane	*	2.0		ND						07/13/2021
2-Butanone	*	10.0		ND						07/13/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/13/2021
2-Chlorotoluene	*	2.0		ND						07/13/2021
2-Hexanone	*	10.0		ND						07/13/2021
2-Nitropropane	*	10.0		ND						07/13/2021
4-Chlorotoluene	*	2.0		ND						07/13/2021
4-Methyl-2-pentanone	*	10.0		ND						07/13/2021
Acetone	*	10.0		ND						07/13/2021
Acetonitrile	*	10.0		ND						07/13/2021
Acrolein	*	20.0		ND						07/13/2021
Acrylonitrile	*	5.0		ND						07/13/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/13/2021
Benzene	*	0.5		ND						07/13/2021
Bromobenzene	*	2.0		ND						07/13/2021
Bromochloromethane	*	2.0		ND						07/13/2021
Bromodichloromethane	*	2.0		ND						07/13/2021
Bromoform	*	2.0		ND						07/13/2021
Bromomethane	*	5.0		ND						07/13/2021
Carbon disulfide	*	2.0		ND						07/13/2021
Carbon tetrachloride	*	2.0		ND						07/13/2021
Chlorobenzene	*	2.0		ND						07/13/2021
Chloroethane	*	2.0		ND						07/13/2021
Chloroform	*	2.0		ND						07/13/2021
Chloromethane	*	5.0		ND						07/13/2021
Chloroprene	*	5.0		ND						07/13/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/13/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Cyclohexanone	*	20.0		ND						07/13/2021
Dibromochloromethane	*	2.0		ND						07/13/2021
Dibromomethane	*	2.0		ND						07/13/2021
Dichlorodifluoromethane	*	2.0		ND						07/13/2021
Diisopropyl ether	*	2.0		ND						07/13/2021
Ethyl acetate	*	10.0		ND						07/13/2021
Ethyl ether	*	5.0		ND						07/13/2021
Ethyl methacrylate	*	5.0		ND						07/13/2021
Ethylbenzene	*	2.0		ND						07/13/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/13/2021
Hexachlorobutadiene	*	5.0		ND						07/13/2021
Hexachloroethane	*	5.0		ND						07/13/2021
Iodomethane	*	5.0		ND						07/13/2021
Isopropylbenzene	*	2.0		ND						07/13/2021
m,p-Xylenes	*	2.0		ND						07/13/2021
Methacrylonitrile	*	5.0		ND						07/13/2021
Methyl Methacrylate	*	5.0		ND						07/13/2021
Methyl tert-butyl ether	*	2.0		ND						07/13/2021
Methylacrylate	*	5.0		ND						07/13/2021





## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/13/2021
Naphthalene	*	5.0		ND						07/13/2021
n-Butyl acetate	*	2.0		ND						07/13/2021
n-Butylbenzene	*	2.0		ND						07/13/2021
n-Heptane	*	5.0		ND						07/13/2021
n-Hexane	*	5.0		ND						07/13/2021
Nitrobenzene	*	50.0		ND						07/13/2021
n-Propylbenzene	*	2.0		ND						07/13/2021
o-Xylene	*	2.0		ND						07/13/2021
Pentachloroethane	*	5.0		ND						07/13/2021
p-Isopropyltoluene	*	2.0		ND						07/13/2021
Propionitrile	*	10.0		ND						07/13/2021
sec-Butylbenzene	*	2.0		ND						07/13/2021
Styrene	*	2.0		ND						07/13/2021
tert-Amyl methyl ether	*	2.0		ND						07/13/2021
tert-Butyl alcohol	*	10.0		ND						07/13/2021
tert-Butylbenzene	*	2.0		ND						07/13/2021
Tetrachloroethene	*	0.5		ND						07/13/2021
Tetrahydrofuran	*	5.0		ND						07/13/2021
Toluene	*	2.0		ND						07/13/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/13/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Trichloroethene	*	2.0		ND						07/13/2021
Trichlorofluoromethane	*	5.0		ND						07/13/2021
Vinyl acetate	*	5.0		ND						07/13/2021
Vinyl chloride	*	2.0		ND						07/13/2021
Xylenes, Total	*	4.0		ND						07/13/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/13/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/13/2021
TPH - GRO (C6 - C10)	*	500		ND						07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.8	50.00		95.7	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.4	50.00		94.7	80	120	07/13/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>49.3</b>	50.00	0	98.6	82	113	07/13/2021
1,1,1-Trichloroethane	*	2.0		<b>53.6</b>	50.00	0	107.3	76.9	128	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>44.9</b>	50.00	0	89.8	76.7	113	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>50.5</b>	50.00	0	101.0	69.5	127	07/13/2021
1,1,2-Trichloroethane	*	0.5		<b>49.1</b>	50.00	0	98.2	83.8	111	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		<b>108</b>	125.0	0	86.4	74.9	117	07/13/2021
1,1-Dichloroethane	*	2.0		<b>54.2</b>	50.00	0	108.4	77	129	07/13/2021
1,1-Dichloroethene	*	2.0		<b>50.0</b>	50.00	0	100.0	69.4	127	07/13/2021
1,1-Dichloropropene	*	2.0		<b>53.6</b>	50.00	0	107.2	75.1	123	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		<b>52.7</b>	50.00	0	105.4	77.3	121	07/13/2021
1,2,3-Trichloropropane	*	2.0		<b>44.8</b>	50.00	0	89.6	75.3	109	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		<b>46.6</b>	50.00	0	93.1	77	115	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		<b>53.3</b>	50.00	0	106.6	76.8	124	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.4	75	115	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>45.8</b>	50.00	0	91.6	71.9	119	07/13/2021
1,2-Dibromoethane	*	2.0		<b>51.4</b>	50.00	0	102.7	83.6	110	07/13/2021
1,2-Dichlorobenzene	*	2.0		<b>45.2</b>	50.00	0	90.3	72.1	113	07/13/2021
1,2-Dichloroethane	*	2.0		<b>49.4</b>	50.00	0	98.7	72.3	117	07/13/2021
1,2-Dichloropropane	*	2.0		<b>55.5</b>	50.00	0	111.0	76.5	119	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		<b>47.6</b>	50.00	0	95.3	75.2	117	07/13/2021
1,3-Dichlorobenzene	*	2.0		<b>47.3</b>	50.00	0	94.5	75.2	115	07/13/2021
1,3-Dichloropropane	*	2.0		<b>48.6</b>	50.00	0	97.2	80.9	110	07/13/2021
1,4-Dichlorobenzene	*	2.0		<b>44.8</b>	50.00	0	89.6	73.9	112	07/13/2021
1-Chlorobutane	*	5.0		<b>53.3</b>	50.00	0	106.6	74.9	130	07/13/2021
2,2-Dichloropropane	*	2.0		<b>60.2</b>	50.00	0	120.4	66.5	138	07/13/2021
2-Butanone	*	10.0		<b>134</b>	125.0	0	106.9	68.8	134	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		<b>55.5</b>	50.00	0	111.0	17.8	163	07/13/2021
2-Chlorotoluene	*	2.0		<b>45.7</b>	50.00	0	91.4	74.9	115	07/13/2021
2-Hexanone	*	10.0		<b>120</b>	125.0	0	95.8	73.2	117	07/13/2021
2-Nitropropane	*	10.0		<b>518</b>	500.0	0	103.5	67.1	140	07/13/2021
4-Chlorotoluene	*	2.0		<b>47.3</b>	50.00	0	94.6	75.7	113	07/13/2021
4-Methyl-2-pentanone	*	10.0		<b>122</b>	125.0	0	97.7	77	113	07/13/2021
Acetone	*	10.0		<b>121</b>	125.0	0	97.0	61.4	130	07/13/2021
Acetonitrile	*	10.0		<b>512</b>	500.0	0	102.3	68.8	136	07/13/2021
Acrolein	*	20.0		<b>514</b>	500.0	0	102.7	28.4	168	07/13/2021
Acrylonitrile	*	5.0		<b>55.7</b>	50.00	0	111.5	77.9	124	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS      **Units** µg/L

**SampID:** LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		58.7	50.00	0	117.3	75.8	130	07/13/2021
Benzene	*	0.5		52.5	50.00	0	105.0	78.5	119	07/13/2021
Bromobenzene	*	2.0		46.6	50.00	0	93.3	77.5	113	07/13/2021
Bromochloromethane	*	2.0		50.4	50.00	0	100.8	71.5	123	07/13/2021
Bromodichloromethane	*	2.0		57.8	50.00	0	115.6	75.7	123	07/13/2021
Bromoform	*	2.0		44.4	50.00	0	88.9	78.9	121	07/13/2021
Bromomethane	*	5.0		80.7	50.00	0	161.4	30.5	192	07/13/2021
Carbon disulfide	*	2.0		47.7	50.00	0	95.3	66.7	121	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.5	70.9	127	07/13/2021
Chlorobenzene	*	2.0		48.1	50.00	0	96.1	80	111	07/13/2021
Chloroethane	*	2.0		46.0	50.00	0	92.1	69.6	135	07/13/2021
Chloroform	*	2.0		57.0	50.00	0	113.9	76.2	120	07/13/2021
Chloromethane	*	5.0		29.9	50.00	0	59.7	50.9	138	07/13/2021
Chloroprene	*	5.0		54.6	50.00	0	109.1	68.4	127	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.4	50.00	0	112.8	79.5	121	07/13/2021
cis-1,3-Dichloropropene	*	2.0		58.7	50.00	0	117.4	79.8	123	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		46.6	50.00	0	93.2	64.6	130	07/13/2021
Cyclohexanone	*	20.0		521	500.0	0	104.3	70.5	114	07/13/2021
Dibromochloromethane	*	2.0		52.3	50.00	0	104.6	84.5	114	07/13/2021
Dibromomethane	*	2.0		54.8	50.00	0	109.6	76	119	07/13/2021
Dichlorodifluoromethane	*	2.0		35.7	50.00	0	71.4	46.6	142	07/13/2021
Diisopropyl ether	*	2.0		55.0	50.00	0	110.0	72	128	07/13/2021
Ethyl acetate	*	10.0		50.4	50.00	0	100.8	70.3	115	07/13/2021
Ethyl ether	*	5.0		55.8	50.00	0	111.5	74.6	120	07/13/2021
Ethyl methacrylate	*	5.0		47.5	50.00	0	95.1	81.4	116	07/13/2021
Ethylbenzene	*	2.0		48.2	50.00	0	96.3	78.2	114	07/13/2021
Ethyl-tert-butyl ether	*	2.0		57.2	50.00	0	114.5	74.6	124	07/13/2021
Hexachlorobutadiene	*	5.0		53.5	50.00	0	107.0	73.9	129	07/13/2021
Hexachloroethane	*	5.0		39.3	50.00	0	78.6	78.3	123	07/13/2021
Iodomethane	*	5.0		35.1	50.00	0	70.3	50	151	07/13/2021
Isopropylbenzene	*	2.0		51.1	50.00	0	102.2	79.3	115	07/13/2021
m,p-Xylenes	*	2.0		93.9	100.0	0	93.9	77.2	116	07/13/2021
Methacrylonitrile	*	5.0		57.9	50.00	0	115.8	73.9	127	07/13/2021
Methyl Methacrylate	*	5.0		54.5	50.00	0	108.9	70.7	129	07/13/2021
Methyl tert-butyl ether	*	2.0		55.4	50.00	0	110.8	80.3	122	07/13/2021
Methylacrylate	*	5.0		57.5	50.00	0	115.0	75.2	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179692		SampType: LCS		Units µg/L							Date Analyzed
SampID: LCS-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit		
Methylene chloride	*	2.0		<b>46.4</b>	50.00	0	92.8	71.8	115	07/13/2021	
Naphthalene	*	5.0	B	<b>46.4</b>	50.00	0	92.7	75.6	121	07/13/2021	
n-Butyl acetate	*	2.0		<b>49.5</b>	50.00	0	99.0	72.4	118	07/13/2021	
n-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	70.8	118	07/13/2021	
n-Heptane	*	5.0		<b>56.1</b>	50.00	0	112.2	50.4	143	07/13/2021	
n-Hexane	*	5.0		<b>51.2</b>	50.00	0	102.4	60.6	139	07/13/2021	
Nitrobenzene	*	50.0		<b>441</b>	500.0	0	88.2	49.4	129	07/13/2021	
n-Propylbenzene	*	2.0		<b>47.1</b>	50.00	0	94.2	74	119	07/13/2021	
o-Xylene	*	2.0		<b>47.5</b>	50.00	0	95.1	79.2	112	07/13/2021	
Pentachloroethane	*	5.0		<b>37.9</b>	50.00	0	75.8	71.8	124	07/13/2021	
p-Isopropyltoluene	*	2.0		<b>49.0</b>	50.00	0	98.0	74.4	119	07/13/2021	
Propionitrile	*	10.0		<b>551</b>	500.0	0	110.3	76.2	127	07/13/2021	
sec-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	74.4	119	07/13/2021	
Styrene	*	2.0		<b>50.3</b>	50.00	0	100.6	80.4	117	07/13/2021	
tert-Amyl methyl ether	*	2.0		<b>55.4</b>	50.00	0	110.9	80.8	125	07/13/2021	
tert-Butyl alcohol	*	10.0		<b>273</b>	250.0	0	109.1	64.9	118	07/13/2021	
tert-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	74	115	07/13/2021	
Tetrachloroethene	*	0.5		<b>52.9</b>	50.00	0	105.9	70.1	120	07/13/2021	
Tetrahydrofuran	*	5.0		<b>46.2</b>	50.00	0	92.4	63.5	122	07/13/2021	
Toluene	*	2.0		<b>46.5</b>	50.00	0	93.0	78.6	112	07/13/2021	
trans-1,2-Dichloroethene	*	2.0		<b>51.8</b>	50.00	0	103.6	75.7	130	07/13/2021	
trans-1,3-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.8	80.3	116	07/13/2021	
trans-1,4-Dichloro-2-butene	*	2.0		<b>45.1</b>	50.00	0	90.1	65.5	124	07/13/2021	
Trichloroethene	*	2.0		<b>55.0</b>	50.00	0	110.1	76.2	121	07/13/2021	
Trichlorofluoromethane	*	5.0		<b>46.4</b>	50.00	0	92.7	71.1	131	07/13/2021	
Vinyl acetate	*	5.0		<b>53.9</b>	50.00	0	107.8	79.8	129	07/13/2021	
Vinyl chloride	*	2.0		<b>41.7</b>	50.00	0	83.3	58.6	141	07/13/2021	
Xylenes, Total	*	4.0		<b>141</b>	150.0	0	94.3	78.3	114	07/13/2021	
1,2-Dichloroethene, Total	*	4.0		<b>108</b>	100.0	0	108.2	78.5	125	07/13/2021	
1,3-Dichloropropene, Total	*	4.0		<b>109</b>	100.0	0	109.1	82.3	117	07/13/2021	
1,4-Dichloro-2-butene, Total	*	4.0		<b>91.7</b>	100.0	0	91.7	65.9	126	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>47.2</b>	50.00		94.4	80	120	07/13/2021	
Surr: 4-Bromofluorobenzene	*			<b>47.8</b>	50.00		95.5	80	120	07/13/2021	
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.5	80	120	07/13/2021	

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.8	50.00	0	99.5	49.31	0.89	07/13/2021
1,1,1-Trichloroethane	*	2.0		54.0	50.00	0	107.9	53.63	0.61	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		45.4	50.00	0	90.8	44.88	1.15	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.2	50.00	0	100.5	50.50	0.54	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.8	50.00	0	99.6	49.12	1.39	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.5	108.0	2.41	07/13/2021
1,1-Dichloroethane	*	2.0		54.7	50.00	0	109.4	54.20	0.88	07/13/2021
1,1-Dichloroethene	*	2.0		49.9	50.00	0	99.8	50.00	0.20	07/13/2021
1,1-Dichloropropene	*	2.0		53.4	50.00	0	106.9	53.58	0.26	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		53.1	50.00	0	106.2	52.72	0.70	07/13/2021
1,2,3-Trichloropropane	*	2.0		45.2	50.00	0	90.4	44.81	0.91	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		47.0	50.00	0	94.1	46.56	1.00	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		54.0	50.00	0	108.1	53.30	1.40	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		48.2	50.00	0	96.5	47.72	1.08	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		47.1	50.00	0	94.3	45.78	2.93	07/13/2021
1,2-Dibromoethane	*	2.0		52.1	50.00	0	104.2	51.37	1.43	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.4	50.00	0	90.9	45.17	0.62	07/13/2021
1,2-Dichloroethane	*	2.0		50.0	50.00	0	99.9	49.37	1.21	07/13/2021
1,2-Dichloropropane	*	2.0		55.8	50.00	0	111.6	55.51	0.56	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		48.0	50.00	0	96.0	47.63	0.79	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.6	50.00	0	95.2	47.27	0.65	07/13/2021
1,3-Dichloropropane	*	2.0		49.4	50.00	0	98.7	48.58	1.59	07/13/2021
1,4-Dichlorobenzene	*	2.0		45.4	50.00	0	90.7	44.78	1.29	07/13/2021
1-Chlorobutane	*	5.0		53.7	50.00	0	107.4	53.30	0.77	07/13/2021
2,2-Dichloropropane	*	2.0		59.9	50.00	0	119.8	60.19	0.52	07/13/2021
2-Butanone	*	10.0		135	125.0	0	108.3	133.6	1.33	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		56.4	50.00	0	112.9	55.50	1.70	07/13/2021
2-Chlorotoluene	*	2.0		46.0	50.00	0	92.1	45.71	0.70	07/13/2021
2-Hexanone	*	10.0		122	125.0	0	97.3	119.8	1.52	07/13/2021
2-Nitropropane	*	10.0		528	500.0	0	105.5	517.6	1.94	07/13/2021
4-Chlorotoluene	*	2.0		47.5	50.00	0	95.1	47.31	0.46	07/13/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.4	122.1	0.76	07/13/2021
Acetone	*	10.0		122	125.0	0	97.8	121.3	0.76	07/13/2021
Acetonitrile	*	10.0		519	500.0	0	103.8	511.5	1.47	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.8	513.6	0.04	07/13/2021
Acrylonitrile	*	5.0		56.2	50.00	0	112.3	55.74	0.77	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	LCSD	Units µg/L				RPD Limit 15.4			
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		59.6	50.00	0	119.2	58.67	1.59	07/13/2021
Benzene	*	0.5		52.5	50.00	0	104.9	52.49	0.06	07/13/2021
Bromobenzene	*	2.0		47.1	50.00	0	94.3	46.65	1.04	07/13/2021
Bromochloromethane	*	2.0		51.2	50.00	0	102.5	50.40	1.67	07/13/2021
Bromodichloromethane	*	2.0		58.3	50.00	0	116.5	57.78	0.83	07/13/2021
Bromoform	*	2.0		45.4	50.00	0	90.8	44.43	2.16	07/13/2021
Bromomethane	*	5.0		81.5	50.00	0	163.1	80.72	1.01	07/13/2021
Carbon disulfide	*	2.0		47.9	50.00	0	95.8	47.66	0.54	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.6	54.27	0.02	07/13/2021
Chlorobenzene	*	2.0		48.4	50.00	0	96.9	48.06	0.81	07/13/2021
Chloroethane	*	2.0		46.4	50.00	0	92.9	46.03	0.87	07/13/2021
Chloroform	*	2.0		57.6	50.00	0	115.2	56.95	1.17	07/13/2021
Chloromethane	*	5.0		30.2	50.00	0	60.3	29.86	1.03	07/13/2021
Chloroprene	*	5.0		54.3	50.00	0	108.7	54.57	0.42	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.5	50.00	0	112.9	56.39	0.12	07/13/2021
cis-1,3-Dichloropropene	*	2.0		59.2	50.00	0	118.4	58.70	0.83	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		47.9	50.00	0	95.9	46.60	2.81	07/13/2021
Cyclohexanone	*	20.0		518	500.0	0	103.7	521.3	0.58	07/13/2021
Dibromochloromethane	*	2.0		52.9	50.00	0	105.9	52.29	1.22	07/13/2021
Dibromomethane	*	2.0		55.2	50.00	0	110.4	54.82	0.71	07/13/2021
Dichlorodifluoromethane	*	2.0		36.0	50.00	0	71.9	35.68	0.81	07/13/2021
Diisopropyl ether	*	2.0		56.1	50.00	0	112.1	55.02	1.89	07/13/2021
Ethyl acetate	*	10.0		50.0	50.00	0	100.0	50.42	0.80	07/13/2021
Ethyl ether	*	5.0		56.8	50.00	0	113.6	55.75	1.83	07/13/2021
Ethyl methacrylate	*	5.0		48.1	50.00	0	96.1	47.53	1.13	07/13/2021
Ethylbenzene	*	2.0		48.5	50.00	0	96.9	48.15	0.64	07/13/2021
Ethyl-tert-butyl ether	*	2.0		59.2	50.00	0	118.3	57.25	3.30	07/13/2021
Hexachlorobutadiene	*	5.0		54.2	50.00	0	108.3	53.49	1.24	07/13/2021
Hexachloroethane	*	5.0		39.7	50.00	0	79.4	39.30	1.04	07/13/2021
Iodomethane	*	5.0		36.4	50.00	0	72.8	35.14	3.50	07/13/2021
Isopropylbenzene	*	2.0		51.5	50.00	0	103.1	51.11	0.84	07/13/2021
m,p-Xylenes	*	2.0		94.7	100.0	0	94.7	93.88	0.84	07/13/2021
Methacrylonitrile	*	5.0		58.5	50.00	0	116.9	57.91	0.96	07/13/2021
Methyl Methacrylate	*	5.0		55.0	50.00	0	110.0	54.47	0.97	07/13/2021
Methyl tert-butyl ether	*	2.0		56.8	50.00	0	113.6	55.41	2.50	07/13/2021
Methylacrylate	*	5.0		58.8	50.00	0	117.7	57.48	2.34	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		46.7	50.00	0	93.5	46.40	0.71	07/13/2021
Naphthalene	*	5.0	B	47.2	50.00	0	94.4	46.36	1.75	07/13/2021
n-Butyl acetate	*	2.0		49.9	50.00	0	99.7	49.48	0.79	07/13/2021
n-Butylbenzene	*	2.0		48.8	50.00	0	97.6	48.25	1.11	07/13/2021
n-Heptane	*	5.0		57.4	50.00	0	114.7	56.08	2.26	07/13/2021
n-Hexane	*	5.0		50.8	50.00	0	101.5	51.18	0.80	07/13/2021
Nitrobenzene	*	50.0		455	500.0	0	91.0	440.9	3.12	07/13/2021
n-Propylbenzene	*	2.0		47.4	50.00	0	94.8	47.08	0.70	07/13/2021
o-Xylene	*	2.0		48.1	50.00	0	96.1	47.54	1.11	07/13/2021
Pentachloroethane	*	5.0		38.3	50.00	0	76.5	37.89	1.00	07/13/2021
p-Isopropyltoluene	*	2.0		49.4	50.00	0	98.8	48.99	0.83	07/13/2021
Propionitrile	*	10.0		558	500.0	0	111.6	551.4	1.20	07/13/2021
sec-Butylbenzene	*	2.0		48.5	50.00	0	97.0	48.18	0.66	07/13/2021
Styrene	*	2.0		50.9	50.00	0	101.9	50.28	1.30	07/13/2021
tert-Amyl methyl ether	*	2.0		57.0	50.00	0	114.0	55.43	2.79	07/13/2021
tert-Butyl alcohol	*	10.0		280	250.0	0	111.9	272.7	2.53	07/13/2021
tert-Butylbenzene	*	2.0		48.5	50.00	0	97.1	48.25	0.58	07/13/2021
Tetrachloroethene	*	0.5		53.0	50.00	0	106.1	52.94	0.19	07/13/2021
Tetrahydrofuran	*	5.0		46.8	50.00	0	93.6	46.22	1.29	07/13/2021
Toluene	*	2.0		46.9	50.00	0	93.8	46.51	0.81	07/13/2021
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.5	51.79	0.08	07/13/2021
trans-1,3-Dichloropropene	*	2.0		51.1	50.00	0	102.3	50.40	1.46	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		46.1	50.00	0	92.2	45.07	2.28	07/13/2021
Trichloroethene	*	2.0		55.3	50.00	0	110.6	55.04	0.44	07/13/2021
Trichlorofluoromethane	*	5.0		47.2	50.00	0	94.3	46.36	1.69	07/13/2021
Vinyl acetate	*	5.0		54.7	50.00	0	109.4	53.90	1.49	07/13/2021
Vinyl chloride	*	2.0		42.3	50.00	0	84.7	41.66	1.62	07/13/2021
Xylenes, Total	*	4.0		143	150.0	0	95.2	141.4	0.93	07/13/2021
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	108.2	0.03	07/13/2021
1,3-Dichloropropene, Total	*	4.0		110	100.0	0	110.3	109.1	1.12	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		94.0	100.0	0	94.0	91.67	2.55	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.1	50.00		94.2			07/13/2021
Surr: 4-Bromofluorobenzene	*			47.6	50.00		95.3			07/13/2021
Surr: Toluene-d8	*			46.0	50.00		92.1			07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070534

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179692		SampType: LCSG		Units µg/L							
SampID: LCSG-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH - GRO (C6 - C10)	*	500		<b>1730</b>	2000	0	86.6	70	130	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.0	80	120	07/13/2021	
Surr: 4-Bromofluorobenzene	*			<b>47.3</b>	50.00		94.6	80	120	07/13/2021	
Surr: Toluene-d8	*			<b>46.4</b>	50.00		92.7	80	120	07/13/2021	

Batch 179692		SampType: LCSGD		Units µg/L						RPD Limit 20	
SampID: LCSGD-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH - GRO (C6 - C10)	*	500		<b>1670</b>	2000	0	83.4	1733	3.81	07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.1			07/13/2021	
Surr: 4-Bromofluorobenzene	*			<b>47.7</b>	50.00		95.4			07/13/2021	
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.4			07/13/2021	





# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070534

Client Project: 128487 GSA

Report Date: 02-Aug-21

Carrier: Alec Rebbe

Received By: ERH

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

09-Jul-21

09-Jul-21

Mary E. Kemp

Shelly A. Hennessy

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **0.8**
- Type of thermal preservation? None  Ice  Blue Ice  Dry Ice
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Reported field parameters measured: Field  Lab  NA
- Container/Temp Blank temperature in compliance? Yes  No

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

- Water – at least one vial per sample has zero headspace? Yes  No  No VOA vials
- Water - TOX containers have zero headspace? Yes  No  No TOX containers
- Water - pH acceptable upon receipt? Yes  No  NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes  No  NA

Any No responses must be detailed below or on the COC.

pH strip #76747. - PRY/MKemp - 7/9/2021 3:35:30 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MKemp - 7/9/2021 3:35:49 PM

Headspace was present in the trip blank volatile vials. Justin Carter was notified of this error via work order summary. - MKemp - 7/9/2021 3:35:55 PM



August 02, 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:** 128487 GSA

**WorkOrder:** 21070535

Dear Justin Carter:

TEKLAB, INC received 4 samples on 7/9/2021 12:30:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**This reporting package includes the following:**

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Sample Summary	22
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Quality Control Results	24
Receiving Check List	50
Chain of Custody	Appended

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

### Qualifiers

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



## Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Cooler Receipt Temp:** 1.6 °C

This report was revised on 8/2/2021 per Justin Carter's request. The reason for the revision is to report DRO/ORO. Please replace report dated 7/16/2021 with this report. EEP 8/2/2021

### Locations

#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**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

#### Springfield

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

#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

#### Kansas City

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



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-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	8/31/2021	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: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-001

Client Sample ID: TB-09

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/12/2021 13:53	179680
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:53	179680
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:53	179680
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/12/2021 13:53	179680
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
2-Butanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
Acetone	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
Acrolein	NELAP	20.0		ND	µg/L	1	07/12/2021 13:53	179680
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Benzene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:53	179680
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Bromoform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Bromomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-001

Client Sample ID: TB-09

Matrix: TRIP BLANK

Collection Date: 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Chloroethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Chloroform	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Chloromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Chloroprene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Cyclohexanone	*	20.0		ND	µg/L	1	07/12/2021 13:53	179680
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Diisopropyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Iodomethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Naphthalene	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
n-Butyl acetate	*	2.0		ND	µg/L	1	07/12/2021 13:53	179680
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
n-Heptane	*	5.0		ND	µg/L	1	07/12/2021 13:53	179680
n-Hexane	*	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/12/2021 13:53	179680
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
o-Xylene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Propionitrile	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Styrene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/12/2021 13:53	179680
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/12/2021 13:53	179680
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/12/2021 13:53	179680
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-001

**Client Sample ID:** TB-09

**Matrix:** TRIP BLANK

**Collection Date:** 07/09/2021 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Toluene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/12/2021 13:53	179680
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/12/2021 13:53	179680
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/12/2021 13:53	179680
Surr: 1,2-Dichloroethane-d4	*	80-120		99.1	%REC	1	07/12/2021 13:53	179680
Surr: 4-Bromofluorobenzene	*	80-120		101.5	%REC	1	07/12/2021 13:53	179680
Surr: Toluene-d8	*	80-120		91.8	%REC	1	07/12/2021 13:53	179680

*Allowable Marginal Exceedance of tert-Amyl methyl ether in the laboratory control sample is verified per the TNI Standard.*



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-002

**Client Sample ID:** MW-16 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 16:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/14/2021 20:10	179635
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/14/2021 20:10	179635
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/14/2021 20:10	179635
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/14/2021 20:10	179635
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/14/2021 20:10	179635
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 17:19	179682
Surr: Decachlorobiphenyl	*	10-152		113.9	%REC	1	07/14/2021 17:19	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		123.7	%REC	1	07/14/2021 17:19	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 15:56	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 15:56	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 15:56	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		64.5	%REC	1	07/14/2021 15:56	179663
Surr: Nitrobenzene-d5	*	29.1-125		80.0	%REC	1	07/14/2021 15:56	179663
Surr: p-Terphenyl-d14	*	35.2-164		106.2	%REC	1	07/14/2021 15:56	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 18:56	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-002

Client Sample ID: MW-16 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 16:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:56	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:56	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 18:56	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 18:56	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:56	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-002

Client Sample ID: MW-16 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 16:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 18:56	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 18:56	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 18:56	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 18:56	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 18:56	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 18:56	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 18:56	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 18:56	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 18:56	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 18:56	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 18:56	179692





## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-002

**Client Sample ID:** MW-16 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 16:28

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		<b>ND</b>	µg/L	1	07/13/2021 18:56	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		<b>96.7</b>	%REC	1	07/13/2021 18:56	179692
Surr: 4-Bromofluorobenzene	*	80-120		<b>94.3</b>	%REC	1	07/13/2021 18:56	179692
Surr: Toluene-d8	*	80-120		<b>90.8</b>	%REC	1	07/13/2021 18:56	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-003

Client Sample ID: MW-07 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 17:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/14/2021 19:57	179635
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/14/2021 19:57	179635
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/14/2021 19:57	179635
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/14/2021 19:57	179635
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/14/2021 19:57	179635
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 17:36	179682
Surr: Decachlorobiphenyl	*	10-152		102.1	%REC	1	07/14/2021 17:36	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		119.8	%REC	1	07/14/2021 17:36	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 16:33	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 16:33	179663
TPH-ORO (C21 - C35)	*	0.700		1.04	mg/L	1	07/14/2021 16:33	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		72.2	%REC	1	07/14/2021 16:33	179663
Surr: Nitrobenzene-d5	*	29.1-125		86.0	%REC	1	07/14/2021 16:33	179663
Surr: p-Terphenyl-d14	*	35.2-164		114.6	%REC	1	07/14/2021 16:33	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 19:22	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692





# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-003

Client Sample ID: MW-07 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 17:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:22	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:22	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:22	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 19:22	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 19:22	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-003

Client Sample ID: MW-07 07082021

Matrix: GROUNDWATER

Collection Date: 07/08/2021 17:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 19:22	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 19:22	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 19:22	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 19:22	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 19:22	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:22	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 19:22	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 19:22	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 19:22	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:22	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:22	179692



# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-003

**Client Sample ID:** MW-07 07082021

**Matrix:** GROUNDWATER

**Collection Date:** 07/08/2021 17:58

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 19:22	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.2	%REC	1	07/13/2021 19:22	179692
Surr: 4-Bromofluorobenzene	*	80-120		95.0	%REC	1	07/13/2021 19:22	179692
Surr: Toluene-d8	*	80-120		91.0	%REC	1	07/13/2021 19:22	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-004

**Client Sample ID:** MW-09 07092021

**Matrix:** GROUNDWATER

**Collection Date:** 07/09/2021 8:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/14/2021 20:16	179635
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/14/2021 20:16	179635
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/14/2021 20:16	179635
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/14/2021 20:16	179635
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/14/2021 20:16	179635
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 17:53	179682
Surr: Decachlorobiphenyl	*	10-152		88.9	%REC	1	07/14/2021 17:53	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		119.5	%REC	1	07/14/2021 17:53	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Chrysene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Fluorene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
Pyrene	NELAP	0.00100		ND	mg/L	1	07/14/2021 17:10	179663
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/14/2021 17:10	179663
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/14/2021 17:10	179663
Surr: 2-Fluorobiphenyl	*	1.39-137		65.6	%REC	1	07/14/2021 17:10	179663
Surr: Nitrobenzene-d5	*	29.1-125		82.8	%REC	1	07/14/2021 17:10	179663
Surr: p-Terphenyl-d14	*	35.2-164		113.8	%REC	1	07/14/2021 17:10	179663
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 19:47	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-004

Client Sample ID: MW-09 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 8:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:47	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:47	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 19:47	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 19:47	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 19:47	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Lab ID: 21070535-004

Client Sample ID: MW-09 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 8:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 19:47	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 19:47	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 19:47	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 19:47	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 19:47	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 19:47	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 19:47	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 19:47	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	07/13/2021 19:47	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 19:47	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 19:47	179692





# Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**Lab ID:** 21070535-004

**Client Sample ID:** MW-09 07092021

**Matrix:** GROUNDWATER

**Collection Date:** 07/09/2021 8:38

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 19:47	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.1	%REC	1	07/13/2021 19:47	179692
Surr: 4-Bromofluorobenzene	*	80-120		93.7	%REC	1	07/13/2021 19:47	179692
Surr: Toluene-d8	*	80-120		91.2	%REC	1	07/13/2021 19:47	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Sample Summary

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21070535-001	TB-09	Trip Blank	1	07/09/2021 12:30
21070535-002	MW-16 07082021	Groundwater	4	07/08/2021 16:28
21070535-003	MW-07 07082021	Groundwater	4	07/08/2021 17:58
21070535-004	MW-09 07092021	Groundwater	4	07/09/2021 8:38





## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21070535-001A	TB-09	07/09/2021 12:30	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/12/2021 13:53			
21070535-002A	MW-16 07082021	07/08/2021 16:28	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 17:19			
21070535-002B	MW-16 07082021	07/08/2021 16:28	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 15:56			
21070535-002C	MW-16 07082021	07/08/2021 16:28	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 13:05 07/14/2021 20:10			
21070535-002D	MW-16 07082021	07/08/2021 16:28	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 18:56			
21070535-003A	MW-07 07082021	07/08/2021 17:58	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 17:36			
21070535-003B	MW-07 07082021	07/08/2021 17:58	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 16:33			
21070535-003C	MW-07 07082021	07/08/2021 17:58	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 13:05 07/14/2021 19:57			
21070535-003D	MW-07 07082021	07/08/2021 17:58	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 19:22			
21070535-004A	MW-09 07092021	07/09/2021 8:38	07/09/2021 12:30		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 17:53			
21070535-004B	MW-09 07092021	07/09/2021 8:38	07/09/2021 12:30		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/13/2021 9:29 07/14/2021 17:10			
21070535-004C	MW-09 07092021	07/09/2021 8:38	07/09/2021 12:30		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/12/2021 13:05 07/14/2021 20:16			
21070535-004D	MW-09 07092021	07/09/2021 8:38	07/09/2021 12:30		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 19:47			



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

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

Batch 179635		SampType: MBLK		Units mg/L						
SampID: MBLK-179635										
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	07/13/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/13/2021

Batch 179635		SampType: LCS		Units mg/L						
SampID: LCS-179635										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.487	0.5000	0	97.3	85	115	07/13/2021
Arsenic		0.0250		0.507	0.5000	0	101.4	85	115	07/13/2021
Copper		0.0050		0.254	0.2500	0	101.7	85	115	07/13/2021
Lead		0.0150		0.473	0.5000	0	94.5	85	115	07/13/2021
Zinc		0.0100		0.492	0.5000	0	98.4	85	115	07/13/2021

Batch 179635		SampType: MS		Units mg/L						
SampID: 21070535-002CMS										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.535	0.5000	0	107.1	75	125	07/14/2021
Arsenic		0.0250		0.554	0.5000	0	110.8	75	125	07/14/2021
Copper		0.0050		0.274	0.2500	0	109.6	75	125	07/14/2021
Lead		0.0150		0.500	0.5000	0	100.0	75	125	07/14/2021
Zinc		0.0100		0.530	0.5000	0	106.0	75	125	07/14/2021

Batch 179635		SampType: MSD		Units mg/L				RPD Limit 20		Date Analyzed
SampID: 21070535-002CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.520	0.5000	0	103.9	0.5353	2.98	07/14/2021
Arsenic		0.0250		0.539	0.5000	0	107.7	0.5539	2.78	07/14/2021
Copper		0.0050		0.266	0.2500	0	106.6	0.2741	2.85	07/14/2021
Lead		0.0150		0.490	0.5000	0	97.9	0.4999	2.10	07/14/2021
Zinc		0.0100		0.516	0.5000	0	103.1	0.5302	2.77	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

**SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD**
**Batch 179682**      **SampType: MBLK**      Units µg/L

SampID: MBLK-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		<b>ND</b>						07/14/2021
Aroclor 1016		1.00		<b>ND</b>						07/14/2021
Aroclor 1221		1.00		<b>ND</b>						07/14/2021
Aroclor 1221		0.095		<b>ND</b>						07/14/2021
Aroclor 1232		1.00		<b>ND</b>						07/14/2021
Aroclor 1232		0.095		<b>ND</b>						07/14/2021
Aroclor 1242		1.00		<b>ND</b>						07/14/2021
Aroclor 1242		0.095		<b>ND</b>						07/14/2021
Aroclor 1248		0.095		<b>ND</b>						07/14/2021
Aroclor 1248		1.00		<b>ND</b>						07/14/2021
Aroclor 1254		0.095		<b>ND</b>						07/14/2021
Aroclor 1254		1.00		<b>ND</b>						07/14/2021
Aroclor 1260		0.095		<b>ND</b>						07/14/2021
Aroclor 1260		1.00		<b>ND</b>						07/14/2021
Surr: Decachlorobiphenyl	*			<b>0.104</b>	0.1250		83.0	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			<b>0.110</b>	0.1250		88.1	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			<b>0.11</b>	0.1250		88.1	27.5	143	07/14/2021
Surr: Tetrachloro-meta-xylene	*			<b>0.14</b>	0.1250		115.5	35.2	135	07/14/2021

**Batch 179682**      **SampType: LCS**      Units µg/L

SampID: LCSPCB-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		<b>2.67</b>	2.500	0	106.9	56.2	136	07/14/2021
Aroclor 1016		0.095		<b>2.67</b>	2.500	0	106.9	50	140	07/14/2021
Aroclor 1260		1.00		<b>2.68</b>	2.500	0	107.4	42.1	125	07/14/2021
Aroclor 1260		0.095		<b>2.68</b>	2.500	0	107.4	8	140	07/14/2021
Surr: Decachlorobiphenyl	*			<b>0.13</b>	0.1250		102.2	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			<b>0.128</b>	0.1250		102.2	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			<b>0.14</b>	0.1250		115.3	35.2	135	07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179682		SampType: LCSD		Units µg/L				RPD Limit 36			
SampID: LCSPCBD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		0.095		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1016		1.00		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1260		0.095		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Aroclor 1260		1.00		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.12</b>	0.1250		96.4			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.1			07/14/2021	

Batch 179682		SampType: LCS		Units %REC							
SampID: LCSPST-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.099</b>	0.1250		79.1	31.2	141	07/14/2021	

Batch 179682		SampType: LCSD		Units %REC				RPD Limit 0			
SampID: LCSPSTD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: MBLK		Units mg/L							
SampID: MBLK-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		ND						07/14/2021	
Acenaphthylene		0.00100		ND						07/14/2021	
Anthracene		0.00100		ND						07/14/2021	
Benzo(a)anthracene		0.00100		ND						07/14/2021	
Benzo(a)pyrene		0.00100		ND						07/14/2021	
Benzo(b)fluoranthene		0.00100		ND						07/14/2021	
Benzo(g,h,i)perylene		0.00100		ND						07/14/2021	
Benzo(k)fluoranthene		0.00100		ND						07/14/2021	
Chrysene		0.00100		ND						07/14/2021	
Dibenzo(a,h)anthracene		0.00100		ND						07/14/2021	
Fluoranthene		0.00100		ND						07/14/2021	
Fluorene		0.00100		ND						07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/14/2021	
Naphthalene		0.00100		ND						07/14/2021	
Phenanthrene		0.00100		ND						07/14/2021	
Pyrene		0.00100		ND						07/14/2021	
TPH-DRO (C10 - C21)	*	0.500		ND						07/14/2021	
TPH-ORO (C21 - C35)	*	0.700		ND						07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00620</b>	0.0125		49.6	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.00932</b>	0.0125		74.6	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0128</b>	0.0125		102.7	35	222	07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCS		Units mg/L							
SampID: LCS-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		<b>0.00843</b>	0.0100	0	84.3	39.6	145	07/14/2021	
Acenaphthylene		0.00100		<b>0.00836</b>	0.0100	0	83.6	38.3	147	07/14/2021	
Anthracene		0.00100		<b>0.00897</b>	0.0100	0	89.7	47.7	153	07/14/2021	
Benzo(a)anthracene		0.00100		<b>0.00936</b>	0.0100	0	93.6	45	136	07/14/2021	
Benzo(a)pyrene		0.00100		<b>0.00848</b>	0.0100	0	84.8	49.8	164	07/14/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00948</b>	0.0100	0	94.8	45.7	167	07/14/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00928</b>	0.0100	0	92.8	41	157	07/14/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00974</b>	0.0100	0	97.4	46.7	166	07/14/2021	
Chrysene		0.00100		<b>0.00935</b>	0.0100	0	93.5	45.5	162	07/14/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00942</b>	0.0100	0	94.2	40.4	154	07/14/2021	
Fluoranthene		0.00100		<b>0.00975</b>	0.0100	0	97.5	47.3	168	07/14/2021	
Fluorene		0.00100		<b>0.00927</b>	0.0100	0	92.7	45.2	153	07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00945</b>	0.0100	0	94.5	44.6	166	07/14/2021	
Naphthalene		0.00100		<b>0.00603</b>	0.0100	0	60.3	16.6	137	07/14/2021	
Phenanthrene		0.00100		<b>0.00915</b>	0.0100	0	91.5	50.8	149	07/14/2021	
Pyrene		0.00100		<b>0.00943</b>	0.0100	0	94.3	44.9	163	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00980</b>	0.0125		78.4	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0106</b>	0.0125		85.0	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0146</b>	0.0125		117.1	35	222	07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179663		SampType: LCSD		Units mg/L				RPD Limit 40			Date
SampID: LCSD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
Acenaphthene		0.00100		<b>0.00850</b>	0.0100	0	85.0	0.008426	0.90	07/14/2021	
Acenaphthylene		0.00100		<b>0.00826</b>	0.0100	0	82.6	0.008358	1.20	07/14/2021	
Anthracene		0.00100		<b>0.00891</b>	0.0100	0	89.1	0.008968	0.67	07/14/2021	
Benzo(a)anthracene		0.00100		<b>0.00927</b>	0.0100	0	92.7	0.009363	0.98	07/14/2021	
Benzo(a)pyrene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.008482	3.69	07/14/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00934</b>	0.0100	0	93.4	0.009480	1.45	07/14/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00912</b>	0.0100	0	91.2	0.009279	1.78	07/14/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00969</b>	0.0100	0	96.9	0.009742	0.54	07/14/2021	
Chrysene		0.00100		<b>0.00926</b>	0.0100	0	92.6	0.009354	1.05	07/14/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00929</b>	0.0100	0	92.9	0.009424	1.38	07/14/2021	
Fluoranthene		0.00100		<b>0.00952</b>	0.0100	0	95.2	0.009751	2.36	07/14/2021	
Fluorene		0.00100		<b>0.00897</b>	0.0100	0	89.7	0.009270	3.31	07/14/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00940</b>	0.0100	0	94.0	0.009454	0.57	07/14/2021	
Naphthalene		0.00100		<b>0.00785</b>	0.0100	0	78.5	0.006030	26.26	07/14/2021	
Phenanthrene		0.00100		<b>0.00924</b>	0.0100	0	92.4	0.009147	1.05	07/14/2021	
Pyrene		0.00100		<b>0.00930</b>	0.0100	0	93.0	0.009428	1.39	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0103</b>	0.0125		82.6			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0105</b>	0.0125		83.9			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0140</b>	0.0125		111.8			07/14/2021	

Batch 179663		SampType: LCSG		Units mg/L							Date
SampID: LCSG-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.93</b>	2.000	0	96.6	17.1	195	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0129</b>	0.0125		103.0	1.09	175	07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0115</b>	0.0125		92.4	35.5	156	07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0154</b>	0.0125		122.9	35	222	07/14/2021	

Batch 179663		SampType: LCSGD		Units mg/L				RPD Limit 40			Date
SampID: LCSGD-179663											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.92</b>	2.000	0	96.0	1.932	0.60	07/14/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0122</b>	0.0125		97.8			07/14/2021	
Surr: Nitrobenzene-d5	*			<b>0.0113</b>	0.0125		90.4			07/14/2021	
Surr: p-Terphenyl-d14	*			<b>0.0144</b>	0.0125		115.5			07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-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						07/12/2021
1,1,1-Trichloroethane	*	2.0		ND						07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/12/2021
1,1,2-Trichloroethane	*	0.5		ND						07/12/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/12/2021
1,1-Dichloroethane	*	2.0		ND						07/12/2021
1,1-Dichloroethene	*	2.0		ND						07/12/2021
1,1-Dichloropropene	*	2.0		ND						07/12/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,3-Trichloropropane	*	2.0		ND						07/12/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/12/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/12/2021
1,2-Dibromoethane	*	2.0		ND						07/12/2021
1,2-Dichlorobenzene	*	2.0		ND						07/12/2021
1,2-Dichloroethane	*	2.0		ND						07/12/2021
1,2-Dichloropropane	*	2.0		ND						07/12/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/12/2021
1,3-Dichlorobenzene	*	2.0		ND						07/12/2021
1,3-Dichloropropane	*	2.0		ND						07/12/2021
1,4-Dichlorobenzene	*	2.0		ND						07/12/2021
1-Chlorobutane	*	5.0		ND						07/12/2021
2,2-Dichloropropane	*	2.0		ND						07/12/2021
2-Butanone	*	10.0		ND						07/12/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/12/2021
2-Chlorotoluene	*	2.0		ND						07/12/2021
2-Hexanone	*	10.0		ND						07/12/2021
2-Nitropropane	*	10.0		ND						07/12/2021
4-Chlorotoluene	*	2.0		ND						07/12/2021
4-Methyl-2-pentanone	*	10.0		ND						07/12/2021
Acetone	*	10.0		ND						07/12/2021
Acetonitrile	*	10.0		ND						07/12/2021
Acrolein	*	20.0		ND						07/12/2021
Acrylonitrile	*	5.0		ND						07/12/2021





## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/12/2021
Benzene	*	0.5		ND						07/12/2021
Bromobenzene	*	2.0		ND						07/12/2021
Bromochloromethane	*	2.0		ND						07/12/2021
Bromodichloromethane	*	2.0		ND						07/12/2021
Bromoform	*	2.0		ND						07/12/2021
Bromomethane	*	5.0		ND						07/12/2021
Carbon disulfide	*	2.0		ND						07/12/2021
Carbon tetrachloride	*	2.0		ND						07/12/2021
Chlorobenzene	*	2.0		ND						07/12/2021
Chloroethane	*	2.0		ND						07/12/2021
Chloroform	*	2.0		ND						07/12/2021
Chloromethane	*	5.0		ND						07/12/2021
Chloroprene	*	5.0		ND						07/12/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/12/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Cyclohexanone	*	20.0		ND						07/12/2021
Dibromochloromethane	*	2.0		ND						07/12/2021
Dibromomethane	*	2.0		ND						07/12/2021
Dichlorodifluoromethane	*	2.0		ND						07/12/2021
Diisopropyl ether	*	2.0		ND						07/12/2021
Ethyl acetate	*	10.0		ND						07/12/2021
Ethyl ether	*	5.0		ND						07/12/2021
Ethyl methacrylate	*	5.0		ND						07/12/2021
Ethylbenzene	*	2.0		ND						07/12/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/12/2021
Hexachlorobutadiene	*	5.0		ND						07/12/2021
Hexachloroethane	*	5.0		ND						07/12/2021
Iodomethane	*	5.0		ND						07/12/2021
Isopropylbenzene	*	2.0		ND						07/12/2021
m,p-Xylenes	*	2.0		ND						07/12/2021
Methacrylonitrile	*	5.0		ND						07/12/2021
Methyl Methacrylate	*	5.0		ND						07/12/2021
Methyl tert-butyl ether	*	2.0		ND						07/12/2021
Methylacrylate	*	5.0		ND						07/12/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/12/2021
Naphthalene	*	5.0		ND						07/12/2021
n-Butyl acetate	*	2.0		ND						07/12/2021
n-Butylbenzene	*	2.0		ND						07/12/2021
n-Heptane	*	5.0		ND						07/12/2021
n-Hexane	*	5.0		ND						07/12/2021
Nitrobenzene	*	50.0		ND						07/12/2021
n-Propylbenzene	*	2.0		ND						07/12/2021
o-Xylene	*	2.0		ND						07/12/2021
Pentachloroethane	*	5.0		ND						07/12/2021
p-Isopropyltoluene	*	2.0		ND						07/12/2021
Propionitrile	*	10.0		ND						07/12/2021
sec-Butylbenzene	*	2.0		ND						07/12/2021
Styrene	*	2.0		ND						07/12/2021
tert-Amyl methyl ether	*	2.0		ND						07/12/2021
tert-Butyl alcohol	*	10.0		ND						07/12/2021
tert-Butylbenzene	*	2.0		ND						07/12/2021
Tetrachloroethene	*	0.5		ND						07/12/2021
Tetrahydrofuran	*	5.0		ND						07/12/2021
Toluene	*	2.0		ND						07/12/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/12/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/12/2021
Trichloroethene	*	2.0		ND						07/12/2021
Trichlorofluoromethane	*	5.0		ND						07/12/2021
Vinyl acetate	*	5.0		ND						07/12/2021
Vinyl chloride	*	2.0		ND						07/12/2021
Xylenes, Total	*	4.0		ND						07/12/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/12/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/12/2021
TPH - GRO (C6 - C10)	*	500		ND						07/12/2021
Surr: 1,2-Dichloroethane-d4	*			49.4	50.00		98.8	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			51.6	50.00		103.3	80	120	07/12/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>50.4</b>	50.00	0	100.7	82	113	07/12/2021
1,1,1-Trichloroethane	*	2.0		<b>50.8</b>	50.00	0	101.7	76.9	128	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>41.2</b>	50.00	0	82.3	76.7	113	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>49.1</b>	50.00	0	98.1	69.5	127	07/12/2021
1,1,2-Trichloroethane	*	0.5		<b>47.3</b>	50.00	0	94.5	83.8	111	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		<b>119</b>	125.0	0	95.3	74.9	117	07/12/2021
1,1-Dichloroethane	*	2.0		<b>50.2</b>	50.00	0	100.5	77	129	07/12/2021
1,1-Dichloroethene	*	2.0		<b>47.6</b>	50.00	0	95.3	69.4	127	07/12/2021
1,1-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.9	75.1	123	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	77.3	121	07/12/2021
1,2,3-Trichloropropane	*	2.0		<b>39.9</b>	50.00	0	79.7	75.3	109	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	77	115	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		<b>51.0</b>	50.00	0	102.1	76.8	124	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		<b>49.0</b>	50.00	0	97.9	75	115	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>43.2</b>	50.00	0	86.5	71.9	119	07/12/2021
1,2-Dibromoethane	*	2.0		<b>48.0</b>	50.00	0	96.0	83.6	110	07/12/2021
1,2-Dichlorobenzene	*	2.0		<b>46.6</b>	50.00	0	93.2	72.1	113	07/12/2021
1,2-Dichloroethane	*	2.0		<b>47.5</b>	50.00	0	95.0	72.3	117	07/12/2021
1,2-Dichloropropane	*	2.0		<b>49.1</b>	50.00	0	98.2	76.5	119	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		<b>46.7</b>	50.00	0	93.4	75.2	117	07/12/2021
1,3-Dichlorobenzene	*	2.0		<b>51.2</b>	50.00	0	102.3	75.2	115	07/12/2021
1,3-Dichloropropane	*	2.0		<b>46.4</b>	50.00	0	92.8	80.9	110	07/12/2021
1,4-Dichlorobenzene	*	2.0		<b>49.4</b>	50.00	0	98.7	73.9	112	07/12/2021
1-Chlorobutane	*	5.0		<b>54.2</b>	50.00	0	108.3	74.9	130	07/12/2021
2,2-Dichloropropane	*	2.0		<b>53.1</b>	50.00	0	106.2	66.5	138	07/12/2021
2-Butanone	*	10.0		<b>127</b>	125.0	0	101.6	68.8	134	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		<b>48.1</b>	50.00	0	96.2	17.8	163	07/12/2021
2-Chlorotoluene	*	2.0		<b>45.4</b>	50.00	0	90.7	74.9	115	07/12/2021
2-Hexanone	*	10.0		<b>126</b>	125.0	0	101.1	73.2	117	07/12/2021
2-Nitropropane	*	10.0		<b>451</b>	500.0	0	90.2	67.1	140	07/12/2021
4-Chlorotoluene	*	2.0		<b>47.0</b>	50.00	0	93.9	75.7	113	07/12/2021
4-Methyl-2-pentanone	*	10.0		<b>123</b>	125.0	0	98.7	77	113	07/12/2021
Acetone	*	10.0		<b>109</b>	125.0	0	87.2	61.4	130	07/12/2021
Acetonitrile	*	10.0		<b>557</b>	500.0	0	111.5	68.8	136	07/12/2021
Acrolein	*	20.0		<b>411</b>	500.0	0	82.2	28.4	168	07/12/2021
Acrylonitrile	*	5.0		<b>49.4</b>	50.00	0	98.9	77.9	124	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		51.6	50.00	0	103.2	75.8	130	07/12/2021
Benzene	*	0.5		49.9	50.00	0	99.8	78.5	119	07/12/2021
Bromobenzene	*	2.0		47.6	50.00	0	95.1	77.5	113	07/12/2021
Bromochloromethane	*	2.0		46.4	50.00	0	92.8	71.5	123	07/12/2021
Bromodichloromethane	*	2.0		50.3	50.00	0	100.6	75.7	123	07/12/2021
Bromoform	*	2.0		49.0	50.00	0	97.9	78.9	121	07/12/2021
Bromomethane	*	5.0		59.0	50.00	0	118.0	30.5	192	07/12/2021
Carbon disulfide	*	2.0		47.4	50.00	0	94.7	66.7	121	07/12/2021
Carbon tetrachloride	*	2.0		50.5	50.00	0	101.0	70.9	127	07/12/2021
Chlorobenzene	*	2.0		49.1	50.00	0	98.2	80	111	07/12/2021
Chloroethane	*	2.0		46.0	50.00	0	92.0	69.6	135	07/12/2021
Chloroform	*	2.0		48.5	50.00	0	97.1	76.2	120	07/12/2021
Chloromethane	*	5.0		42.0	50.00	0	84.0	50.9	138	07/12/2021
Chloroprene	*	5.0		52.3	50.00	0	104.6	68.4	127	07/12/2021
cis-1,2-Dichloroethene	*	2.0		50.7	50.00	0	101.3	79.5	121	07/12/2021
cis-1,3-Dichloropropene	*	2.0		53.4	50.00	0	106.9	79.8	123	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		41.2	50.00	0	82.3	64.6	130	07/12/2021
Cyclohexanone	*	20.0		432	500.0	0	86.4	70.5	114	07/12/2021
Dibromochloromethane	*	2.0		50.1	50.00	0	100.2	84.5	114	07/12/2021
Dibromomethane	*	2.0		47.4	50.00	0	94.8	76	119	07/12/2021
Dichlorodifluoromethane	*	2.0		39.5	50.00	0	79.1	46.6	142	07/12/2021
Diisopropyl ether	*	2.0		52.0	50.00	0	103.9	72	128	07/12/2021
Ethyl acetate	*	10.0		46.7	50.00	0	93.4	70.3	115	07/12/2021
Ethyl ether	*	5.0		52.3	50.00	0	104.6	74.6	120	07/12/2021
Ethyl methacrylate	*	5.0		47.8	50.00	0	95.6	81.4	116	07/12/2021
Ethylbenzene	*	2.0		51.3	50.00	0	102.5	78.2	114	07/12/2021
Ethyl-tert-butyl ether	*	2.0		51.4	50.00	0	102.9	74.6	124	07/12/2021
Hexachlorobutadiene	*	5.0		51.5	50.00	0	103.0	73.9	129	07/12/2021
Hexachloroethane	*	5.0		48.8	50.00	0	97.6	78.3	123	07/12/2021
Iodomethane	*	5.0		43.5	50.00	0	87.0	50	151	07/12/2021
Isopropylbenzene	*	2.0		52.2	50.00	0	104.5	79.3	115	07/12/2021
m,p-Xylenes	*	2.0		109	100.0	0	109.2	77.2	116	07/12/2021
Methacrylonitrile	*	5.0		47.1	50.00	0	94.2	73.9	127	07/12/2021
Methyl Methacrylate	*	5.0		52.3	50.00	0	104.6	70.7	129	07/12/2021
Methyl tert-butyl ether	*	2.0		48.7	50.00	0	97.3	80.3	122	07/12/2021
Methylacrylate	*	5.0		47.0	50.00	0	93.9	75.2	124	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179680      **SampType:** LCS

Units µg/L

SampID: LCS-AM210712A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		<b>48.2</b>	50.00	0	96.5	71.8	115	07/12/2021
Naphthalene	*	5.0		<b>51.9</b>	50.00	0	103.8	75.6	121	07/12/2021
n-Butyl acetate	*	2.0		<b>48.5</b>	50.00	0	97.0	72.4	118	07/12/2021
n-Butylbenzene	*	2.0		<b>46.6</b>	50.00	0	93.3	70.8	118	07/12/2021
n-Heptane	*	5.0		<b>42.0</b>	50.00	0	83.9	50.4	143	07/12/2021
n-Hexane	*	5.0		<b>43.0</b>	50.00	0	85.9	60.6	139	07/12/2021
Nitrobenzene	*	50.0		<b>500</b>	500.0	0	99.9	49.4	129	07/12/2021
n-Propylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	74	119	07/12/2021
o-Xylene	*	2.0		<b>51.2</b>	50.00	0	102.4	79.2	112	07/12/2021
Pentachloroethane	*	5.0		<b>48.4</b>	50.00	0	96.8	71.8	124	07/12/2021
p-Isopropyltoluene	*	2.0		<b>46.5</b>	50.00	0	93.0	74.4	119	07/12/2021
Propionitrile	*	10.0		<b>504</b>	500.0	0	100.8	76.2	127	07/12/2021
sec-Butylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.4	74.4	119	07/12/2021
Styrene	*	2.0		<b>56.0</b>	50.00	0	111.9	80.4	117	07/12/2021
tert-Amyl methyl ether	*	2.0		<b>43.1</b>	50.00	0	86.2	80.8	125	07/12/2021
tert-Butyl alcohol	*	10.0		<b>251</b>	250.0	0	100.2	64.9	118	07/12/2021
tert-Butylbenzene	*	2.0		<b>45.7</b>	50.00	0	91.5	74	115	07/12/2021
Tetrachloroethene	*	0.5		<b>51.2</b>	50.00	0	102.3	70.1	120	07/12/2021
Tetrahydrofuran	*	5.0		<b>45.6</b>	50.00	0	91.3	63.5	122	07/12/2021
Toluene	*	2.0		<b>48.7</b>	50.00	0	97.4	78.6	112	07/12/2021
trans-1,2-Dichloroethene	*	2.0		<b>51.5</b>	50.00	0	103.1	75.7	130	07/12/2021
trans-1,3-Dichloropropene	*	2.0		<b>47.3</b>	50.00	0	94.6	80.3	116	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		<b>34.3</b>	50.00	0	68.6	65.5	124	07/12/2021
Trichloroethene	*	2.0		<b>50.5</b>	50.00	0	100.9	76.2	121	07/12/2021
Trichlorofluoromethane	*	5.0		<b>43.8</b>	50.00	0	87.6	71.1	131	07/12/2021
Vinyl acetate	*	5.0		<b>46.0</b>	50.00	0	92.1	79.8	129	07/12/2021
Vinyl chloride	*	2.0		<b>42.4</b>	50.00	0	84.8	58.6	141	07/12/2021
Xylenes, Total	*	4.0		<b>160</b>	150.0	0	107.0	78.3	114	07/12/2021
1,2-Dichloroethene, Total	*	4.0		<b>102</b>	100.0	0	102.2	78.5	125	07/12/2021
1,3-Dichloropropene, Total	*	4.0		<b>101</b>	100.0	0	100.7	82.3	117	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		<b>75.5</b>	100.0	0	75.5	65.9	126	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			<b>48.2</b>	50.00		96.4	80	120	07/12/2021
Surr: 4-Bromofluorobenzene	*			<b>46.4</b>	50.00		92.9	80	120	07/12/2021
Surr: Toluene-d8	*			<b>48.5</b>	50.00		97.0	80	120	07/12/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		45.1	50.00	0	90.2	50.36	10.98	07/12/2021
1,1,1-Trichloroethane	*	2.0		43.8	50.00	0	87.7	50.83	14.79	07/12/2021
1,1,2,2-Tetrachloroethane	*	2.0		39.3	50.00	0	78.6	41.17	4.65	07/12/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		42.0	50.00	0	84.0	49.06	15.55	07/12/2021
1,1,2-Trichloroethane	*	0.5		44.6	50.00	0	89.2	47.26	5.81	07/12/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.9	119.2	6.94	07/12/2021
1,1-Dichloroethane	*	2.0		44.4	50.00	0	88.8	50.25	12.41	07/12/2021
1,1-Dichloroethene	*	2.0		40.0	50.00	0	80.0	47.64	17.41	07/12/2021
1,1-Dichloropropene	*	2.0		42.7	50.00	0	85.3	50.45	16.73	07/12/2021
1,2,3-Trichlorobenzene	*	2.0		48.4	50.00	0	96.9	51.16	5.46	07/12/2021
1,2,3-Trichloropropane	*	2.0		39.3	50.00	0	78.6	39.86	1.41	07/12/2021
1,2,3-Trimethylbenzene	*	2.0		42.7	50.00	0	85.4	48.18	12.11	07/12/2021
1,2,4-Trichlorobenzene	*	2.0		48.4	50.00	0	96.8	51.03	5.33	07/12/2021
1,2,4-Trimethylbenzene	*	2.0		43.3	50.00	0	86.6	48.95	12.30	07/12/2021
1,2-Dibromo-3-chloropropane	*	5.0		42.3	50.00	0	84.6	43.24	2.22	07/12/2021
1,2-Dibromoethane	*	2.0		46.6	50.00	0	93.1	47.98	3.03	07/12/2021
1,2-Dichlorobenzene	*	2.0		42.4	50.00	0	84.9	46.61	9.34	07/12/2021
1,2-Dichloroethane	*	2.0		44.7	50.00	0	89.3	47.50	6.16	07/12/2021
1,2-Dichloropropane	*	2.0		45.1	50.00	0	90.1	49.10	8.58	07/12/2021
1,3,5-Trimethylbenzene	*	2.0		41.5	50.00	0	83.0	46.72	11.79	07/12/2021
1,3-Dichlorobenzene	*	2.0		46.6	50.00	0	93.1	51.16	9.44	07/12/2021
1,3-Dichloropropane	*	2.0		43.8	50.00	0	87.7	46.38	5.63	07/12/2021
1,4-Dichlorobenzene	*	2.0		45.1	50.00	0	90.1	49.35	9.09	07/12/2021
1-Chlorobutane	*	5.0		46.2	50.00	0	92.4	54.16	15.82	07/12/2021
2,2-Dichloropropane	*	2.0		47.6	50.00	0	95.3	53.11	10.86	07/12/2021
2-Butanone	*	10.0		131	125.0	0	104.5	127.0	2.83	07/12/2021
2-Chloroethyl vinyl ether	*	5.0		50.4	50.00	0	100.9	48.08	4.81	07/12/2021
2-Chlorotoluene	*	2.0		40.3	50.00	0	80.6	45.35	11.79	07/12/2021
2-Hexanone	*	10.0		127	125.0	0	101.2	126.4	0.13	07/12/2021
2-Nitropropane	*	10.0		445	500.0	0	89.1	451.0	1.23	07/12/2021
4-Chlorotoluene	*	2.0		47.3	50.00	0	94.5	46.95	0.68	07/12/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.5	123.4	0.17	07/12/2021
Acetone	*	10.0		117	125.0	0	93.6	109.0	7.04	07/12/2021
Acetonitrile	*	10.0		554	500.0	0	110.7	557.4	0.70	07/12/2021
Acrolein	*	20.0		490	500.0	0	97.9	410.8	17.52	07/12/2021
Acrylonitrile	*	5.0		48.5	50.00	0	97.0	49.44	1.96	07/12/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		46.6	50.00	0	93.3	51.59	10.06	07/12/2021
Benzene	*	0.5		44.1	50.00	0	88.2	49.92	12.34	07/12/2021
Bromobenzene	*	2.0		44.1	50.00	0	88.1	47.57	7.66	07/12/2021
Bromochloromethane	*	2.0		42.7	50.00	0	85.3	46.39	8.38	07/12/2021
Bromodichloromethane	*	2.0		46.1	50.00	0	92.2	50.31	8.73	07/12/2021
Bromoform	*	2.0		46.3	50.00	0	92.6	48.95	5.61	07/12/2021
Bromomethane	*	5.0		48.6	50.00	0	97.2	59.02	19.32	07/12/2021
Carbon disulfide	*	2.0		40.1	50.00	0	80.2	47.35	16.56	07/12/2021
Carbon tetrachloride	*	2.0		43.1	50.00	0	86.2	50.49	15.79	07/12/2021
Chlorobenzene	*	2.0		44.1	50.00	0	88.2	49.09	10.66	07/12/2021
Chloroethane	*	2.0		39.1	50.00	0	78.2	45.99	16.19	07/12/2021
Chloroform	*	2.0		44.0	50.00	0	88.0	48.53	9.75	07/12/2021
Chloromethane	*	5.0		35.0	50.00	0	70.0	42.00	18.21	07/12/2021
Chloroprene	*	5.0		42.6	50.00	0	85.2	52.28	20.36	07/12/2021
cis-1,2-Dichloroethene	*	2.0		43.8	50.00	0	87.7	50.66	14.46	07/12/2021
cis-1,3-Dichloropropene	*	2.0		49.8	50.00	0	99.6	53.45	7.09	07/12/2021
cis-1,4-Dichloro-2-butene	*	2.0		42.5	50.00	0	85.1	41.17	3.25	07/12/2021
Cyclohexanone	*	20.0		463	500.0	0	92.7	432.0	7.02	07/12/2021
Dibromochloromethane	*	2.0		46.2	50.00	0	92.5	50.09	7.99	07/12/2021
Dibromomethane	*	2.0		44.8	50.00	0	89.7	47.41	5.55	07/12/2021
Dichlorodifluoromethane	*	2.0		31.4	50.00	0	62.7	39.54	23.07	07/12/2021
Diisopropyl ether	*	2.0		48.2	50.00	0	96.4	51.95	7.45	07/12/2021
Ethyl acetate	*	10.0		46.4	50.00	0	92.8	46.72	0.73	07/12/2021
Ethyl ether	*	5.0		49.0	50.00	0	98.1	52.29	6.41	07/12/2021
Ethyl methacrylate	*	5.0		45.8	50.00	0	91.5	47.80	4.36	07/12/2021
Ethylbenzene	*	2.0		45.7	50.00	0	91.4	51.26	11.49	07/12/2021
Ethyl-tert-butyl ether	*	2.0		48.1	50.00	0	96.3	51.45	6.67	07/12/2021
Hexachlorobutadiene	*	5.0		47.0	50.00	0	94.1	51.51	9.07	07/12/2021
Hexachloroethane	*	5.0		41.5	50.00	0	83.0	48.78	16.18	07/12/2021
Iodomethane	*	5.0		36.8	50.00	0	73.6	43.49	16.64	07/12/2021
Isopropylbenzene	*	2.0		46.2	50.00	0	92.3	52.23	12.34	07/12/2021
m,p-Xylenes	*	2.0		98.0	100.0	0	98.0	109.2	10.84	07/12/2021
Methacrylonitrile	*	5.0		47.7	50.00	0	95.3	47.10	1.20	07/12/2021
Methyl Methacrylate	*	5.0		51.8	50.00	0	103.5	52.30	1.06	07/12/2021
Methyl tert-butyl ether	*	2.0		46.6	50.00	0	93.2	48.66	4.33	07/12/2021
Methylacrylate	*	5.0		48.7	50.00	0	97.3	46.95	3.58	07/12/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179680	LCSD	µg/L		15.4						
SampID: LCSD-AM210712A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		44.2	50.00	0	88.4	48.23	8.77	07/12/2021
Naphthalene	*	5.0		48.6	50.00	0	97.2	51.92	6.59	07/12/2021
n-Butyl acetate	*	2.0		47.2	50.00	0	94.5	48.50	2.65	07/12/2021
n-Butylbenzene	*	2.0		41.5	50.00	0	83.0	46.65	11.64	07/12/2021
n-Heptane	*	5.0		47.0	50.00	0	93.9	41.95	11.25	07/12/2021
n-Hexane	*	5.0		42.0	50.00	0	83.9	42.96	2.33	07/12/2021
Nitrobenzene	*	50.0		473	500.0	0	94.5	499.7	5.59	07/12/2021
n-Propylbenzene	*	2.0		42.4	50.00	0	84.8	48.25	12.86	07/12/2021
o-Xylene	*	2.0		46.4	50.00	0	92.7	51.21	9.96	07/12/2021
Pentachloroethane	*	5.0		42.7	50.00	0	85.4	48.39	12.47	07/12/2021
p-Isopropyltoluene	*	2.0		40.5	50.00	0	81.0	46.48	13.80	07/12/2021
Propionitrile	*	10.0		511	500.0	0	102.2	504.0	1.35	07/12/2021
sec-Butylbenzene	*	2.0		41.2	50.00	0	82.4	47.68	14.58	07/12/2021
Styrene	*	2.0		51.0	50.00	0	101.9	55.97	9.35	07/12/2021
tert-Amyl methyl ether	*	2.0	S	40.3	50.00	0	80.6	43.12	6.74	07/12/2021
tert-Butyl alcohol	*	10.0		256	250.0	0	102.5	250.5	2.28	07/12/2021
tert-Butylbenzene	*	2.0		39.9	50.00	0	79.8	45.73	13.57	07/12/2021
Tetrachloroethene	*	0.5		44.8	50.00	0	89.6	51.16	13.30	07/12/2021
Tetrahydrofuran	*	5.0		45.8	50.00	0	91.6	45.64	0.37	07/12/2021
Toluene	*	2.0		43.0	50.00	0	86.1	48.69	12.32	07/12/2021
trans-1,2-Dichloroethene	*	2.0		43.7	50.00	0	87.3	51.54	16.53	07/12/2021
trans-1,3-Dichloropropene	*	2.0		44.1	50.00	0	88.3	47.28	6.87	07/12/2021
trans-1,4-Dichloro-2-butene	*	2.0		33.6	50.00	0	67.2	34.31	2.09	07/12/2021
Trichloroethene	*	2.0		45.0	50.00	0	90.0	50.47	11.44	07/12/2021
Trichlorofluoromethane	*	5.0		43.3	50.00	0	86.6	43.79	1.10	07/12/2021
Vinyl acetate	*	5.0		48.9	50.00	0	97.8	46.05	6.04	07/12/2021
Vinyl chloride	*	2.0		33.9	50.00	0	67.7	42.42	22.44	07/12/2021
Xylenes, Total	*	4.0		144	150.0	0	96.2	160.4	10.56	07/12/2021
1,2-Dichloroethene, Total	*	4.0		87.5	100.0	0	87.5	102.2	15.50	07/12/2021
1,3-Dichloropropene, Total	*	4.0		93.9	100.0	0	93.9	100.7	6.99	07/12/2021
1,4-Dichloro-2-butene, Total	*	4.0		76.1	100.0	0	76.1	75.48	0.86	07/12/2021
Surr: 1,2-Dichloroethane-d4	*			48.2	50.00		96.3			07/12/2021
Surr: 4-Bromofluorobenzene	*			46.7	50.00		93.4			07/12/2021
Surr: Toluene-d8	*			48.6	50.00		97.2			07/12/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch 179680		SampType: LCSG		Units µg/L							
SampID: LCSG-AM210712A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH - GRO (C6 - C10)	*	500		<b>1940</b>	2000	0	96.8	70	130	07/12/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>49.2</b>	50.00		98.4	80	120	07/12/2021	
Surr: 4-Bromofluorobenzene	*			<b>48.4</b>	50.00		96.8	80	120	07/12/2021	
Surr: Toluene-d8	*			<b>48.5</b>	50.00		97.0	80	120	07/12/2021	

Batch 179680		SampType: LCSGD		Units µg/L						RPD Limit 20	
SampID: LCSGD-AM210712A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH - GRO (C6 - C10)	*	500		<b>1830</b>	2000	0	91.6	1935	5.53	07/12/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>48.8</b>	50.00		97.6			07/12/2021	
Surr: 4-Bromofluorobenzene	*			<b>48.6</b>	50.00		97.1			07/12/2021	
Surr: Toluene-d8	*			<b>48.8</b>	50.00		97.6			07/12/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692    **SampType:** MBLK    **Units** µg/L  
**SampID:** MBLK-AK210713A-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						07/13/2021
1,1,1-Trichloroethane	*	2.0		ND						07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/13/2021
1,1,2-Trichloroethane	*	0.5		ND						07/13/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/13/2021
1,1-Dichloroethane	*	2.0		ND						07/13/2021
1,1-Dichloroethene	*	2.0		ND						07/13/2021
1,1-Dichloropropene	*	2.0		ND						07/13/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,3-Trichloropropane	*	2.0		ND						07/13/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/13/2021
1,2-Dibromoethane	*	2.0		ND						07/13/2021
1,2-Dichlorobenzene	*	2.0		ND						07/13/2021
1,2-Dichloroethane	*	2.0		ND						07/13/2021
1,2-Dichloropropane	*	2.0		ND						07/13/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/13/2021
1,3-Dichlorobenzene	*	2.0		ND						07/13/2021
1,3-Dichloropropane	*	2.0		ND						07/13/2021
1,4-Dichlorobenzene	*	2.0		ND						07/13/2021
1-Chlorobutane	*	5.0		ND						07/13/2021
2,2-Dichloropropane	*	2.0		ND						07/13/2021
2-Butanone	*	10.0		ND						07/13/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/13/2021
2-Chlorotoluene	*	2.0		ND						07/13/2021
2-Hexanone	*	10.0		ND						07/13/2021
2-Nitropropane	*	10.0		ND						07/13/2021
4-Chlorotoluene	*	2.0		ND						07/13/2021
4-Methyl-2-pentanone	*	10.0		ND						07/13/2021
Acetone	*	10.0		ND						07/13/2021
Acetonitrile	*	10.0		ND						07/13/2021
Acrolein	*	20.0		ND						07/13/2021
Acrylonitrile	*	5.0		ND						07/13/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/13/2021
Benzene	*	0.5		ND						07/13/2021
Bromobenzene	*	2.0		ND						07/13/2021
Bromochloromethane	*	2.0		ND						07/13/2021
Bromodichloromethane	*	2.0		ND						07/13/2021
Bromoform	*	2.0		ND						07/13/2021
Bromomethane	*	5.0		ND						07/13/2021
Carbon disulfide	*	2.0		ND						07/13/2021
Carbon tetrachloride	*	2.0		ND						07/13/2021
Chlorobenzene	*	2.0		ND						07/13/2021
Chloroethane	*	2.0		ND						07/13/2021
Chloroform	*	2.0		ND						07/13/2021
Chloromethane	*	5.0		ND						07/13/2021
Chloroprene	*	5.0		ND						07/13/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/13/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Cyclohexanone	*	20.0		ND						07/13/2021
Dibromochloromethane	*	2.0		ND						07/13/2021
Dibromomethane	*	2.0		ND						07/13/2021
Dichlorodifluoromethane	*	2.0		ND						07/13/2021
Diisopropyl ether	*	2.0		ND						07/13/2021
Ethyl acetate	*	10.0		ND						07/13/2021
Ethyl ether	*	5.0		ND						07/13/2021
Ethyl methacrylate	*	5.0		ND						07/13/2021
Ethylbenzene	*	2.0		ND						07/13/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/13/2021
Hexachlorobutadiene	*	5.0		ND						07/13/2021
Hexachloroethane	*	5.0		ND						07/13/2021
Iodomethane	*	5.0		ND						07/13/2021
Isopropylbenzene	*	2.0		ND						07/13/2021
m,p-Xylenes	*	2.0		ND						07/13/2021
Methacrylonitrile	*	5.0		ND						07/13/2021
Methyl Methacrylate	*	5.0		ND						07/13/2021
Methyl tert-butyl ether	*	2.0		ND						07/13/2021
Methylacrylate	*	5.0		ND						07/13/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/13/2021
Naphthalene	*	5.0		ND						07/13/2021
n-Butyl acetate	*	2.0		ND						07/13/2021
n-Butylbenzene	*	2.0		ND						07/13/2021
n-Heptane	*	5.0		ND						07/13/2021
n-Hexane	*	5.0		ND						07/13/2021
Nitrobenzene	*	50.0		ND						07/13/2021
n-Propylbenzene	*	2.0		ND						07/13/2021
o-Xylene	*	2.0		ND						07/13/2021
Pentachloroethane	*	5.0		ND						07/13/2021
p-Isopropyltoluene	*	2.0		ND						07/13/2021
Propionitrile	*	10.0		ND						07/13/2021
sec-Butylbenzene	*	2.0		ND						07/13/2021
Styrene	*	2.0		ND						07/13/2021
tert-Amyl methyl ether	*	2.0		ND						07/13/2021
tert-Butyl alcohol	*	10.0		ND						07/13/2021
tert-Butylbenzene	*	2.0		ND						07/13/2021
Tetrachloroethene	*	0.5		ND						07/13/2021
Tetrahydrofuran	*	5.0		ND						07/13/2021
Toluene	*	2.0		ND						07/13/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/13/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Trichloroethene	*	2.0		ND						07/13/2021
Trichlorofluoromethane	*	5.0		ND						07/13/2021
Vinyl acetate	*	5.0		ND						07/13/2021
Vinyl chloride	*	2.0		ND						07/13/2021
Xylenes, Total	*	4.0		ND						07/13/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/13/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/13/2021
TPH - GRO (C6 - C10)	*	500		ND						07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.8	50.00		95.7	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.4	50.00		94.7	80	120	07/13/2021
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/13/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.3	50.00	0	98.6	82	113	07/13/2021
1,1,1-Trichloroethane	*	2.0		53.6	50.00	0	107.3	76.9	128	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		44.9	50.00	0	89.8	76.7	113	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.5	50.00	0	101.0	69.5	127	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.1	50.00	0	98.2	83.8	111	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		108	125.0	0	86.4	74.9	117	07/13/2021
1,1-Dichloroethane	*	2.0		54.2	50.00	0	108.4	77	129	07/13/2021
1,1-Dichloroethene	*	2.0		50.0	50.00	0	100.0	69.4	127	07/13/2021
1,1-Dichloropropene	*	2.0		53.6	50.00	0	107.2	75.1	123	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		52.7	50.00	0	105.4	77.3	121	07/13/2021
1,2,3-Trichloropropane	*	2.0		44.8	50.00	0	89.6	75.3	109	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		46.6	50.00	0	93.1	77	115	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		53.3	50.00	0	106.6	76.8	124	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		47.7	50.00	0	95.4	75	115	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		45.8	50.00	0	91.6	71.9	119	07/13/2021
1,2-Dibromoethane	*	2.0		51.4	50.00	0	102.7	83.6	110	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.2	50.00	0	90.3	72.1	113	07/13/2021
1,2-Dichloroethane	*	2.0		49.4	50.00	0	98.7	72.3	117	07/13/2021
1,2-Dichloropropane	*	2.0		55.5	50.00	0	111.0	76.5	119	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		47.6	50.00	0	95.3	75.2	117	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.3	50.00	0	94.5	75.2	115	07/13/2021
1,3-Dichloropropane	*	2.0		48.6	50.00	0	97.2	80.9	110	07/13/2021
1,4-Dichlorobenzene	*	2.0		44.8	50.00	0	89.6	73.9	112	07/13/2021
1-Chlorobutane	*	5.0		53.3	50.00	0	106.6	74.9	130	07/13/2021
2,2-Dichloropropane	*	2.0		60.2	50.00	0	120.4	66.5	138	07/13/2021
2-Butanone	*	10.0		134	125.0	0	106.9	68.8	134	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		55.5	50.00	0	111.0	17.8	163	07/13/2021
2-Chlorotoluene	*	2.0		45.7	50.00	0	91.4	74.9	115	07/13/2021
2-Hexanone	*	10.0		120	125.0	0	95.8	73.2	117	07/13/2021
2-Nitropropane	*	10.0		518	500.0	0	103.5	67.1	140	07/13/2021
4-Chlorotoluene	*	2.0		47.3	50.00	0	94.6	75.7	113	07/13/2021
4-Methyl-2-pentanone	*	10.0		122	125.0	0	97.7	77	113	07/13/2021
Acetone	*	10.0		121	125.0	0	97.0	61.4	130	07/13/2021
Acetonitrile	*	10.0		512	500.0	0	102.3	68.8	136	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.7	28.4	168	07/13/2021
Acrylonitrile	*	5.0		55.7	50.00	0	111.5	77.9	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>58.7</b>	50.00	0	117.3	75.8	130	07/13/2021
Benzene	*	0.5		<b>52.5</b>	50.00	0	105.0	78.5	119	07/13/2021
Bromobenzene	*	2.0		<b>46.6</b>	50.00	0	93.3	77.5	113	07/13/2021
Bromochloromethane	*	2.0		<b>50.4</b>	50.00	0	100.8	71.5	123	07/13/2021
Bromodichloromethane	*	2.0		<b>57.8</b>	50.00	0	115.6	75.7	123	07/13/2021
Bromoform	*	2.0		<b>44.4</b>	50.00	0	88.9	78.9	121	07/13/2021
Bromomethane	*	5.0		<b>80.7</b>	50.00	0	161.4	30.5	192	07/13/2021
Carbon disulfide	*	2.0		<b>47.7</b>	50.00	0	95.3	66.7	121	07/13/2021
Carbon tetrachloride	*	2.0		<b>54.3</b>	50.00	0	108.5	70.9	127	07/13/2021
Chlorobenzene	*	2.0		<b>48.1</b>	50.00	0	96.1	80	111	07/13/2021
Chloroethane	*	2.0		<b>46.0</b>	50.00	0	92.1	69.6	135	07/13/2021
Chloroform	*	2.0		<b>57.0</b>	50.00	0	113.9	76.2	120	07/13/2021
Chloromethane	*	5.0		<b>29.9</b>	50.00	0	59.7	50.9	138	07/13/2021
Chloroprene	*	5.0		<b>54.6</b>	50.00	0	109.1	68.4	127	07/13/2021
cis-1,2-Dichloroethene	*	2.0		<b>56.4</b>	50.00	0	112.8	79.5	121	07/13/2021
cis-1,3-Dichloropropene	*	2.0		<b>58.7</b>	50.00	0	117.4	79.8	123	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>46.6</b>	50.00	0	93.2	64.6	130	07/13/2021
Cyclohexanone	*	20.0		<b>521</b>	500.0	0	104.3	70.5	114	07/13/2021
Dibromochloromethane	*	2.0		<b>52.3</b>	50.00	0	104.6	84.5	114	07/13/2021
Dibromomethane	*	2.0		<b>54.8</b>	50.00	0	109.6	76	119	07/13/2021
Dichlorodifluoromethane	*	2.0		<b>35.7</b>	50.00	0	71.4	46.6	142	07/13/2021
Diisopropyl ether	*	2.0		<b>55.0</b>	50.00	0	110.0	72	128	07/13/2021
Ethyl acetate	*	10.0		<b>50.4</b>	50.00	0	100.8	70.3	115	07/13/2021
Ethyl ether	*	5.0		<b>55.8</b>	50.00	0	111.5	74.6	120	07/13/2021
Ethyl methacrylate	*	5.0		<b>47.5</b>	50.00	0	95.1	81.4	116	07/13/2021
Ethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.3	78.2	114	07/13/2021
Ethyl-tert-butyl ether	*	2.0		<b>57.2</b>	50.00	0	114.5	74.6	124	07/13/2021
Hexachlorobutadiene	*	5.0		<b>53.5</b>	50.00	0	107.0	73.9	129	07/13/2021
Hexachloroethane	*	5.0		<b>39.3</b>	50.00	0	78.6	78.3	123	07/13/2021
Iodomethane	*	5.0		<b>35.1</b>	50.00	0	70.3	50	151	07/13/2021
Isopropylbenzene	*	2.0		<b>51.1</b>	50.00	0	102.2	79.3	115	07/13/2021
m,p-Xylenes	*	2.0		<b>93.9</b>	100.0	0	93.9	77.2	116	07/13/2021
Methacrylonitrile	*	5.0		<b>57.9</b>	50.00	0	115.8	73.9	127	07/13/2021
Methyl Methacrylate	*	5.0		<b>54.5</b>	50.00	0	108.9	70.7	129	07/13/2021
Methyl tert-butyl ether	*	2.0		<b>55.4</b>	50.00	0	110.8	80.3	122	07/13/2021
Methylacrylate	*	5.0		<b>57.5</b>	50.00	0	115.0	75.2	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		<b>46.4</b>	50.00	0	92.8	71.8	115	07/13/2021
Naphthalene	*	5.0	B	<b>46.4</b>	50.00	0	92.7	75.6	121	07/13/2021
n-Butyl acetate	*	2.0		<b>49.5</b>	50.00	0	99.0	72.4	118	07/13/2021
n-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	70.8	118	07/13/2021
n-Heptane	*	5.0		<b>56.1</b>	50.00	0	112.2	50.4	143	07/13/2021
n-Hexane	*	5.0		<b>51.2</b>	50.00	0	102.4	60.6	139	07/13/2021
Nitrobenzene	*	50.0		<b>441</b>	500.0	0	88.2	49.4	129	07/13/2021
n-Propylbenzene	*	2.0		<b>47.1</b>	50.00	0	94.2	74	119	07/13/2021
o-Xylene	*	2.0		<b>47.5</b>	50.00	0	95.1	79.2	112	07/13/2021
Pentachloroethane	*	5.0		<b>37.9</b>	50.00	0	75.8	71.8	124	07/13/2021
p-Isopropyltoluene	*	2.0		<b>49.0</b>	50.00	0	98.0	74.4	119	07/13/2021
Propionitrile	*	10.0		<b>551</b>	500.0	0	110.3	76.2	127	07/13/2021
sec-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	74.4	119	07/13/2021
Styrene	*	2.0		<b>50.3</b>	50.00	0	100.6	80.4	117	07/13/2021
tert-Amyl methyl ether	*	2.0		<b>55.4</b>	50.00	0	110.9	80.8	125	07/13/2021
tert-Butyl alcohol	*	10.0		<b>273</b>	250.0	0	109.1	64.9	118	07/13/2021
tert-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	74	115	07/13/2021
Tetrachloroethene	*	0.5		<b>52.9</b>	50.00	0	105.9	70.1	120	07/13/2021
Tetrahydrofuran	*	5.0		<b>46.2</b>	50.00	0	92.4	63.5	122	07/13/2021
Toluene	*	2.0		<b>46.5</b>	50.00	0	93.0	78.6	112	07/13/2021
trans-1,2-Dichloroethene	*	2.0		<b>51.8</b>	50.00	0	103.6	75.7	130	07/13/2021
trans-1,3-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.8	80.3	116	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		<b>45.1</b>	50.00	0	90.1	65.5	124	07/13/2021
Trichloroethene	*	2.0		<b>55.0</b>	50.00	0	110.1	76.2	121	07/13/2021
Trichlorofluoromethane	*	5.0		<b>46.4</b>	50.00	0	92.7	71.1	131	07/13/2021
Vinyl acetate	*	5.0		<b>53.9</b>	50.00	0	107.8	79.8	129	07/13/2021
Vinyl chloride	*	2.0		<b>41.7</b>	50.00	0	83.3	58.6	141	07/13/2021
Xylenes, Total	*	4.0		<b>141</b>	150.0	0	94.3	78.3	114	07/13/2021
1,2-Dichloroethene, Total	*	4.0		<b>108</b>	100.0	0	108.2	78.5	125	07/13/2021
1,3-Dichloropropene, Total	*	4.0		<b>109</b>	100.0	0	109.1	82.3	117	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		<b>91.7</b>	100.0	0	91.7	65.9	126	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.2</b>	50.00		94.4	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.8</b>	50.00		95.5	80	120	07/13/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.5	80	120	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.8	50.00	0	99.5	49.31	0.89	07/13/2021
1,1,1-Trichloroethane	*	2.0		54.0	50.00	0	107.9	53.63	0.61	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		45.4	50.00	0	90.8	44.88	1.15	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.2	50.00	0	100.5	50.50	0.54	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.8	50.00	0	99.6	49.12	1.39	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.5	108.0	2.41	07/13/2021
1,1-Dichloroethane	*	2.0		54.7	50.00	0	109.4	54.20	0.88	07/13/2021
1,1-Dichloroethene	*	2.0		49.9	50.00	0	99.8	50.00	0.20	07/13/2021
1,1-Dichloropropene	*	2.0		53.4	50.00	0	106.9	53.58	0.26	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		53.1	50.00	0	106.2	52.72	0.70	07/13/2021
1,2,3-Trichloropropane	*	2.0		45.2	50.00	0	90.4	44.81	0.91	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		47.0	50.00	0	94.1	46.56	1.00	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		54.0	50.00	0	108.1	53.30	1.40	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		48.2	50.00	0	96.5	47.72	1.08	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		47.1	50.00	0	94.3	45.78	2.93	07/13/2021
1,2-Dibromoethane	*	2.0		52.1	50.00	0	104.2	51.37	1.43	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.4	50.00	0	90.9	45.17	0.62	07/13/2021
1,2-Dichloroethane	*	2.0		50.0	50.00	0	99.9	49.37	1.21	07/13/2021
1,2-Dichloropropane	*	2.0		55.8	50.00	0	111.6	55.51	0.56	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		48.0	50.00	0	96.0	47.63	0.79	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.6	50.00	0	95.2	47.27	0.65	07/13/2021
1,3-Dichloropropane	*	2.0		49.4	50.00	0	98.7	48.58	1.59	07/13/2021
1,4-Dichlorobenzene	*	2.0		45.4	50.00	0	90.7	44.78	1.29	07/13/2021
1-Chlorobutane	*	5.0		53.7	50.00	0	107.4	53.30	0.77	07/13/2021
2,2-Dichloropropane	*	2.0		59.9	50.00	0	119.8	60.19	0.52	07/13/2021
2-Butanone	*	10.0		135	125.0	0	108.3	133.6	1.33	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		56.4	50.00	0	112.9	55.50	1.70	07/13/2021
2-Chlorotoluene	*	2.0		46.0	50.00	0	92.1	45.71	0.70	07/13/2021
2-Hexanone	*	10.0		122	125.0	0	97.3	119.8	1.52	07/13/2021
2-Nitropropane	*	10.0		528	500.0	0	105.5	517.6	1.94	07/13/2021
4-Chlorotoluene	*	2.0		47.5	50.00	0	95.1	47.31	0.46	07/13/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.4	122.1	0.76	07/13/2021
Acetone	*	10.0		122	125.0	0	97.8	121.3	0.76	07/13/2021
Acetonitrile	*	10.0		519	500.0	0	103.8	511.5	1.47	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.8	513.6	0.04	07/13/2021
Acrylonitrile	*	5.0		56.2	50.00	0	112.3	55.74	0.77	07/13/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		59.6	50.00	0	119.2	58.67	1.59	07/13/2021
Benzene	*	0.5		52.5	50.00	0	104.9	52.49	0.06	07/13/2021
Bromobenzene	*	2.0		47.1	50.00	0	94.3	46.65	1.04	07/13/2021
Bromochloromethane	*	2.0		51.2	50.00	0	102.5	50.40	1.67	07/13/2021
Bromodichloromethane	*	2.0		58.3	50.00	0	116.5	57.78	0.83	07/13/2021
Bromoform	*	2.0		45.4	50.00	0	90.8	44.43	2.16	07/13/2021
Bromomethane	*	5.0		81.5	50.00	0	163.1	80.72	1.01	07/13/2021
Carbon disulfide	*	2.0		47.9	50.00	0	95.8	47.66	0.54	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.6	54.27	0.02	07/13/2021
Chlorobenzene	*	2.0		48.4	50.00	0	96.9	48.06	0.81	07/13/2021
Chloroethane	*	2.0		46.4	50.00	0	92.9	46.03	0.87	07/13/2021
Chloroform	*	2.0		57.6	50.00	0	115.2	56.95	1.17	07/13/2021
Chloromethane	*	5.0		30.2	50.00	0	60.3	29.86	1.03	07/13/2021
Chloroprene	*	5.0		54.3	50.00	0	108.7	54.57	0.42	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.5	50.00	0	112.9	56.39	0.12	07/13/2021
cis-1,3-Dichloropropene	*	2.0		59.2	50.00	0	118.4	58.70	0.83	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		47.9	50.00	0	95.9	46.60	2.81	07/13/2021
Cyclohexanone	*	20.0		518	500.0	0	103.7	521.3	0.58	07/13/2021
Dibromochloromethane	*	2.0		52.9	50.00	0	105.9	52.29	1.22	07/13/2021
Dibromomethane	*	2.0		55.2	50.00	0	110.4	54.82	0.71	07/13/2021
Dichlorodifluoromethane	*	2.0		36.0	50.00	0	71.9	35.68	0.81	07/13/2021
Diisopropyl ether	*	2.0		56.1	50.00	0	112.1	55.02	1.89	07/13/2021
Ethyl acetate	*	10.0		50.0	50.00	0	100.0	50.42	0.80	07/13/2021
Ethyl ether	*	5.0		56.8	50.00	0	113.6	55.75	1.83	07/13/2021
Ethyl methacrylate	*	5.0		48.1	50.00	0	96.1	47.53	1.13	07/13/2021
Ethylbenzene	*	2.0		48.5	50.00	0	96.9	48.15	0.64	07/13/2021
Ethyl-tert-butyl ether	*	2.0		59.2	50.00	0	118.3	57.25	3.30	07/13/2021
Hexachlorobutadiene	*	5.0		54.2	50.00	0	108.3	53.49	1.24	07/13/2021
Hexachloroethane	*	5.0		39.7	50.00	0	79.4	39.30	1.04	07/13/2021
Iodomethane	*	5.0		36.4	50.00	0	72.8	35.14	3.50	07/13/2021
Isopropylbenzene	*	2.0		51.5	50.00	0	103.1	51.11	0.84	07/13/2021
m,p-Xylenes	*	2.0		94.7	100.0	0	94.7	93.88	0.84	07/13/2021
Methacrylonitrile	*	5.0		58.5	50.00	0	116.9	57.91	0.96	07/13/2021
Methyl Methacrylate	*	5.0		55.0	50.00	0	110.0	54.47	0.97	07/13/2021
Methyl tert-butyl ether	*	2.0		56.8	50.00	0	113.6	55.41	2.50	07/13/2021
Methylacrylate	*	5.0		58.8	50.00	0	117.7	57.48	2.34	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		46.7	50.00	0	93.5	46.40	0.71	07/13/2021
Naphthalene	*	5.0	B	47.2	50.00	0	94.4	46.36	1.75	07/13/2021
n-Butyl acetate	*	2.0		49.9	50.00	0	99.7	49.48	0.79	07/13/2021
n-Butylbenzene	*	2.0		48.8	50.00	0	97.6	48.25	1.11	07/13/2021
n-Heptane	*	5.0		57.4	50.00	0	114.7	56.08	2.26	07/13/2021
n-Hexane	*	5.0		50.8	50.00	0	101.5	51.18	0.80	07/13/2021
Nitrobenzene	*	50.0		455	500.0	0	91.0	440.9	3.12	07/13/2021
n-Propylbenzene	*	2.0		47.4	50.00	0	94.8	47.08	0.70	07/13/2021
o-Xylene	*	2.0		48.1	50.00	0	96.1	47.54	1.11	07/13/2021
Pentachloroethane	*	5.0		38.3	50.00	0	76.5	37.89	1.00	07/13/2021
p-Isopropyltoluene	*	2.0		49.4	50.00	0	98.8	48.99	0.83	07/13/2021
Propionitrile	*	10.0		558	500.0	0	111.6	551.4	1.20	07/13/2021
sec-Butylbenzene	*	2.0		48.5	50.00	0	97.0	48.18	0.66	07/13/2021
Styrene	*	2.0		50.9	50.00	0	101.9	50.28	1.30	07/13/2021
tert-Amyl methyl ether	*	2.0		57.0	50.00	0	114.0	55.43	2.79	07/13/2021
tert-Butyl alcohol	*	10.0		280	250.0	0	111.9	272.7	2.53	07/13/2021
tert-Butylbenzene	*	2.0		48.5	50.00	0	97.1	48.25	0.58	07/13/2021
Tetrachloroethene	*	0.5		53.0	50.00	0	106.1	52.94	0.19	07/13/2021
Tetrahydrofuran	*	5.0		46.8	50.00	0	93.6	46.22	1.29	07/13/2021
Toluene	*	2.0		46.9	50.00	0	93.8	46.51	0.81	07/13/2021
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.5	51.79	0.08	07/13/2021
trans-1,3-Dichloropropene	*	2.0		51.1	50.00	0	102.3	50.40	1.46	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		46.1	50.00	0	92.2	45.07	2.28	07/13/2021
Trichloroethene	*	2.0		55.3	50.00	0	110.6	55.04	0.44	07/13/2021
Trichlorofluoromethane	*	5.0		47.2	50.00	0	94.3	46.36	1.69	07/13/2021
Vinyl acetate	*	5.0		54.7	50.00	0	109.4	53.90	1.49	07/13/2021
Vinyl chloride	*	2.0		42.3	50.00	0	84.7	41.66	1.62	07/13/2021
Xylenes, Total	*	4.0		143	150.0	0	95.2	141.4	0.93	07/13/2021
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	108.2	0.03	07/13/2021
1,3-Dichloropropene, Total	*	4.0		110	100.0	0	110.3	109.1	1.12	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		94.0	100.0	0	94.0	91.67	2.55	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.1	50.00		94.2			07/13/2021
Surr: 4-Bromofluorobenzene	*			47.6	50.00		95.3			07/13/2021
Surr: Toluene-d8	*			46.0	50.00		92.1			07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070535

**Client Project:** 128487 GSA

**Report Date:** 02-Aug-21

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

**Batch 179692**      **SampType:** LCSG      Units µg/L

SampID: LCSG-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1730</b>	2000	0	86.6	70	130	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.0	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.3</b>	50.00		94.6	80	120	07/13/2021
Surr: Toluene-d8	*			<b>46.4</b>	50.00		92.7	80	120	07/13/2021

**Batch 179692**      **SampType:** LCSGD      Units µg/L

RPD Limit **20**

SampID: LCSGD-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1670</b>	2000	0	83.4	1733	3.81	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.0</b>	50.00		94.1			07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.7</b>	50.00		95.4			07/13/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.4			07/13/2021



# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070535

Client Project: 128487 GSA

Report Date: 02-Aug-21

Carrier: Alec Rebbe

Received By: ERH

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

09-Jul-21

09-Jul-21

Mary E. Kemp

Shelly A. Hennessy

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **1.6**
- Type of thermal preservation? None  Ice  Blue Ice  Dry Ice
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Reported field parameters measured: Field  Lab  NA
- Container/Temp Blank temperature in compliance? Yes  No

*When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.*

- Water – at least one vial per sample has zero headspace? Yes  No  No VOA vials
- Water - TOX containers have zero headspace? Yes  No  No TOX containers
- Water - pH acceptable upon receipt? Yes  No  NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes  No  NA

**Any No responses must be detailed below or on the COC.**

pH strip #75145. - PRY/MKemp - 7/9/2021 3:41:07 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MKemp - 7/9/2021 3:41:23 PM

Headspace was present in the trip blank volatile vials. Justin Carter was notified of this error via work order summary. - MKemp - 7/9/2021 3:41:27 PM

21070535



# Request for Chemical Analysis and Chain of Custody Record

021618 Form WCD-KC1-STL

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 Lane RD*  
 City/State/Zip: *COVINGVILLE, IL 62234*  
 Telephone: *618-344-1004*

Document Control No: *128487-010*

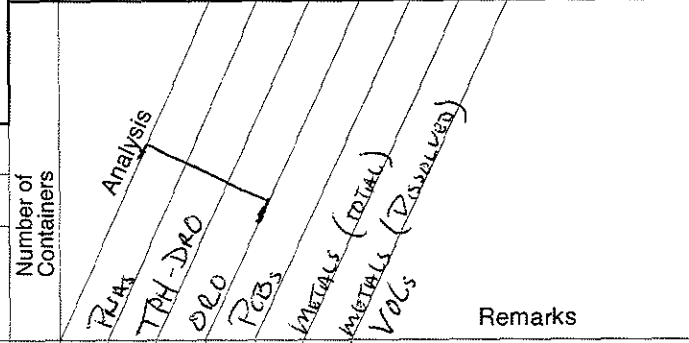
Lab. Reference No. or Episode No.:

Project Number: *128487* Sample Type

Client Name: *GSA* Matrix

Sample Number Sample Event Sample Depth (in feet) Sample Collected

Group or SWMU Name	Sample Point	Sample Designator	Round	Year	Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas
					From	To	Date	Time			
<i>TB-09</i>									X		
<i>MW-13</i>	<i>07082021</i>	<i>/MSD</i>		<i>2021</i>			<i>7/8</i>	<i>1410</i>	X		
<i>MW-16</i>	<i>07082021</i>			<i>2021</i>			<i>7/8</i>	<i>1620</i>	X		
<i>MW-07</i>	<i>07082021</i>			<i>2021</i>			<i>7/8</i>	<i>1758</i>	X		
<i>MW-09</i>	<i>07072021</i>			<i>2021</i>			<i>7/9</i>	<i>838</i>	X		



Number of Containers	PCBs	TPH-DRO	DRO	PCBs	METALS (TOTAL)	METALS (DISSOLVED)	VOLs	Remarks
<i>2</i>								<i>X Vol samples from</i>
<i>6</i>	X	X	X	X	X	X	X	<i>MW-13 cu Blue</i>
<i>5</i>	X	X	X	X	X	X	X	<i>COOLER (128487-008)</i>
<i>5</i>	X	X	X	X	X	X	X	
<i>5</i>	X	X	X	X	X	X	X	

*X with wo# 21070533 (003)*

## Courier

Sampler (signature): *(b) (6)*

Sampler (signature): *(b) (6)*

Special Instructions: *SEE WORK ORDER COC LIST*

Relinquished By (signature): *B Lockwood*  
1. *(b) (6)* Date/Time: *7/9*

Received By (signature): *(b) (6)*  
Date/Time: *7/9/21 PM*

Ice Present in Container: Yes  No  Temperature Upon Receipt: *16.0C*

Relinquished By (signature): *(b) (6)*  
2. *(b) (6)* Date/Time: *7/9 1230*

Received By (signature): *(b) (6)*  
Date/Time: *7/9/21 1230*

Laboratory Comments: *PHV 75145. TB has HS. 7/11*

July 19, 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: 128487 GSA**

**WorkOrder: 21070648**

Dear Justin Carter:

TEKLAB, INC received 5 samples on 7/12/2021 4:00:00 PM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

**This reporting package includes the following:**

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Sample Summary	26
Dates Report	27
Quality Control Results	28
Receiving Check List	56
Chain of Custody	Appended

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-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.

LCS D 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:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

### Qualifiers

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



## Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

**Cooler Receipt Temp:** 1.6 °C

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### Locations

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#### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425

**Phone** (618) 344-1004

**Fax** (618) 344-1005

**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

---

#### Springfield

**Address** 3920 Pintail Dr  
Springfield, IL 62711-9415

**Phone** (217) 698-1004

**Fax** (217) 698-1005

**Email** KKlostermann@teklabinc.com

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#### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515

**Phone** (630) 324-6855

**Fax**

**Email** arenner@teklabinc.com

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#### Kansas City

**Address** 8421 Nieman Road  
Lenexa, KS 66214

**Phone** (913) 541-1998

**Fax** (913) 541-1998

**Email** jhriley@teklabinc.com



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-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	8/31/2021	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



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-001

Client Sample ID: MW-08 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 10:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 20:01	179664
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 20:01	179664
Copper	NELAP	0.0050		0.0540	mg/L	1	07/13/2021 20:01	179664
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 20:01	179664
Zinc	NELAP	0.0100		0.0413	mg/L	1	07/13/2021 20:01	179664
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 18:10	179682
Surr: Decachlorobiphenyl	*	10-152		97.1	%REC	1	07/14/2021 18:10	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		127.2	%REC	1	07/14/2021 18:10	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Chrysene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Fluorene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
Pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 16:25	179772
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/15/2021 16:25	179772
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/15/2021 16:25	179772
Surr: 2-Fluorobiphenyl	*	1.39-137		50.2	%REC	1	07/15/2021 16:25	179772
Surr: Nitrobenzene-d5	*	29.1-125		66.2	%REC	1	07/15/2021 16:25	179772
Surr: p-Terphenyl-d14	*	35.2-164		93.8	%REC	1	07/15/2021 16:25	179772
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 20:13	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-001

Client Sample ID: MW-08 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 10:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:13	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:13	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:13	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 20:13	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 20:13	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-001

Client Sample ID: MW-08 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 10:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 20:13	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 20:13	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 20:13	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 20:13	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 20:13	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:13	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 20:13	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 20:13	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:13	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:13	179692
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 20:13	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-001

Client Sample ID: MW-08 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 10:19

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Surr: 1,2-Dichloroethane-d4	*	80-120		<b>96.1</b>	%REC	1	07/13/2021 20:13	179692
Surr: 4-Bromofluorobenzene	*	80-120		<b>94.4</b>	%REC	1	07/13/2021 20:13	179692
Surr: Toluene-d8	*	80-120		<b>91.5</b>	%REC	1	07/13/2021 20:13	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-002

Client Sample ID: MW-19 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 14:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 20:12	179664
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 20:12	179664
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 20:12	179664
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 20:12	179664
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 20:12	179664
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 18:27	179682
Surr: Decachlorobiphenyl	*	10-152		120.9	%REC	1	07/14/2021 18:27	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		117.1	%REC	1	07/14/2021 18:27	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Acenaphthylene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Anthracene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Benzo(a)anthracene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Benzo(a)pyrene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Benzo(b)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Benzo(g,h,i)perylene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Benzo(k)fluoranthene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Chrysene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Dibenzo(a,h)anthracene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Fluoranthene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Fluorene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Naphthalene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Phenanthrene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
Pyrene	NELAP	0.00400		ND	mg/L	1	07/15/2021 17:02	179772
TPH-DRO (C10 - C21)	*	2.00		ND	mg/L	1	07/15/2021 17:02	179772
TPH-ORO (C21 - C35)	*	2.80		ND	mg/L	1	07/15/2021 17:02	179772
Surr: 2-Fluorobiphenyl	*	1.39-137		49.8	%REC	1	07/15/2021 17:02	179772
Surr: Nitrobenzene-d5	*	29.1-125		64.5	%REC	1	07/15/2021 17:02	179772
Surr: p-Terphenyl-d14	*	35.2-164		89.6	%REC	1	07/15/2021 17:02	179772
<i>Elevated reporting limit due to sample composition.</i>								
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/13/2021 20:39	179692
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692





# Laboratory Results

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Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-002

Client Sample ID: MW-19 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 14:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:39	179692
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:39	179692
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/13/2021 20:39	179692
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
2-Butanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
Acetone	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
Acrolein	NELAP	20.0		ND	µg/L	1	07/13/2021 20:39	179692
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Benzene	NELAP	0.5		ND	µg/L	1	07/13/2021 20:39	179692
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Bromoform	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Bromomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Chloroethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Chloroform	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Chloromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Chloroprene	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-002

Client Sample ID: MW-19 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 14:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Cyclohexanone	*	20.0		ND	µg/L	1	07/13/2021 20:39	179692
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Diisopropyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Iodomethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/13/2021 20:39	179692
n-Butyl acetate	*	2.0		ND	µg/L	1	07/13/2021 20:39	179692
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
n-Heptane	*	5.0		ND	µg/L	1	07/13/2021 20:39	179692
n-Hexane	*	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/13/2021 20:39	179692
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
o-Xylene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Propionitrile	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Styrene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/13/2021 20:39	179692
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/13/2021 20:39	179692
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/13/2021 20:39	179692
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Toluene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/13/2021 20:39	179692
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/13/2021 20:39	179692



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-002

Client Sample ID: MW-19 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 14:12

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/13/2021 20:39	179692
Surr: 1,2-Dichloroethane-d4	*	80-120		96.0	%REC	1	07/13/2021 20:39	179692
Surr: 4-Bromofluorobenzene	*	80-120		95.3	%REC	1	07/13/2021 20:39	179692
Surr: Toluene-d8	*	80-120		91.4	%REC	1	07/13/2021 20:39	179692

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-003

Client Sample ID: MW-15 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 16:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 20:31	179664
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 20:31	179664
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 20:31	179664
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 20:31	179664
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/13/2021 20:31	179664
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 18:44	179682
Surr: Decachlorobiphenyl	*	10-152		111.6	%REC	1	07/14/2021 18:44	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		110.3	%REC	1	07/14/2021 18:44	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Chrysene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Fluorene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
Pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:08	179772
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/15/2021 20:08	179772
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/15/2021 20:08	179772
Surr: 2-Fluorobiphenyl	*	1.39-137		46.9	%REC	1	07/15/2021 20:08	179772
Surr: Nitrobenzene-d5	*	29.1-125		72.4	%REC	1	07/15/2021 20:08	179772
Surr: p-Terphenyl-d14	*	35.2-164		110.3	%REC	1	07/15/2021 20:08	179772
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/14/2021 18:09	179812
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-003

Client Sample ID: MW-15 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 16:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:09	179812
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:09	179812
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:09	179812
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
2-Butanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
Acetone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
Acrolein	NELAP	20.0		ND	µg/L	1	07/14/2021 18:09	179812
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Benzene	NELAP	0.5		ND	µg/L	1	07/14/2021 18:09	179812
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Bromoform	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Bromomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Chloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Chloroform	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Chloromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Chloroprene	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-003

Client Sample ID: MW-15 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 16:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/14/2021 18:09	179812
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Diisopropyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Iodomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/14/2021 18:09	179812
n-Butyl acetate	*	2.0		ND	µg/L	1	07/14/2021 18:09	179812
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
n-Heptane	*	5.0		ND	µg/L	1	07/14/2021 18:09	179812
n-Hexane	*	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/14/2021 18:09	179812
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
o-Xylene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Propionitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Styrene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:09	179812
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/14/2021 18:09	179812
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/14/2021 18:09	179812
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Toluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:09	179812
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:09	179812
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/14/2021 18:09	179812



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-003

Client Sample ID: MW-15 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 16:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Surr: 1,2-Dichloroethane-d4	*	80-120		<b>98.3</b>	%REC	1	07/14/2021 18:09	179812
Surr: 4-Bromofluorobenzene	*	80-120		<b>101.2</b>	%REC	1	07/14/2021 18:09	179812
Surr: Toluene-d8	*	80-120		<b>93.9</b>	%REC	1	07/14/2021 18:09	179812
<i>Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.</i>								





# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-004

Client Sample ID: MW-12 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/13/2021 20:35	179664
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/13/2021 20:35	179664
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/13/2021 20:35	179664
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/13/2021 20:35	179664
Zinc	NELAP	0.0100		0.0206	mg/L	1	07/13/2021 20:35	179664
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1221	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1232	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1242	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1248	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1254	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Aroclor 1260	NELAP	1.00		ND	µg/L	1	07/14/2021 19:01	179682
Surr: Decachlorobiphenyl	*	10-152		89.0	%REC	1	07/14/2021 19:01	179682
Surr: Tetrachloro-meta-xylene	*	9.73-128		102.5	%REC	1	07/14/2021 19:01	179682
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Chrysene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Fluoranthene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Fluorene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Naphthalene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Phenanthrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
Pyrene	NELAP	0.00100		ND	mg/L	1	07/15/2021 20:45	179772
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	07/15/2021 20:45	179772
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	07/15/2021 20:45	179772
Surr: 2-Fluorobiphenyl	*	1.39-137		60.1	%REC	1	07/15/2021 20:45	179772
Surr: Nitrobenzene-d5	*	29.1-125		71.5	%REC	1	07/15/2021 20:45	179772
Surr: p-Terphenyl-d14	*	35.2-164		98.0	%REC	1	07/15/2021 20:45	179772
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/14/2021 18:35	179812
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812



Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-004

Client Sample ID: MW-12 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:35	179812
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:35	179812
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/14/2021 18:35	179812
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
2-Butanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
Acetone	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
Acrolein	NELAP	20.0		ND	µg/L	1	07/14/2021 18:35	179812
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Benzene	NELAP	0.5		ND	µg/L	1	07/14/2021 18:35	179812
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Bromoform	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Bromomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Chloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Chloroform	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Chloromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Chloroprene	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-004

Client Sample ID: MW-12 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	07/14/2021 18:35	179812
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Diisopropyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Iodomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/14/2021 18:35	179812
n-Butyl acetate	*	2.0		ND	µg/L	1	07/14/2021 18:35	179812
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
n-Heptane	*	5.0		ND	µg/L	1	07/14/2021 18:35	179812
n-Hexane	*	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/14/2021 18:35	179812
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
o-Xylene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Propionitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Styrene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/14/2021 18:35	179812
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/14/2021 18:35	179812
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/14/2021 18:35	179812
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Toluene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/14/2021 18:35	179812
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 18:35	179812
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/14/2021 18:35	179812



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-004

Client Sample ID: MW-12 07092021

Matrix: GROUNDWATER

Collection Date: 07/09/2021 17:55

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Surr: 1,2-Dichloroethane-d4	*	80-120		<b>99.0</b>	%REC	1	07/14/2021 18:35	179812
Surr: 4-Bromofluorobenzene	*	80-120		<b>100.8</b>	%REC	1	07/14/2021 18:35	179812
Surr: Toluene-d8	*	80-120		<b>93.8</b>	%REC	1	07/14/2021 18:35	179812

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-005

Client Sample ID: Trip Blank 10 (TB-10)

Matrix: TRIP BLANK

Collection Date: 07/12/2021 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	07/14/2021 19:01	179812
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	07/14/2021 19:01	179812
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	07/14/2021 19:01	179812
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	07/14/2021 19:01	179812
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
2-Butanone	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
2-Hexanone	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
2-Nitropropane	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
Acetone	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
Acetonitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
Acrolein	NELAP	20.0		ND	µg/L	1	07/14/2021 19:01	179812
Acrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Allyl chloride	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Benzene	NELAP	0.5		ND	µg/L	1	07/14/2021 19:01	179812
Bromobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Bromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Bromoform	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Bromomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Carbon disulfide	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Lab ID: 21070648-005

Client Sample ID: Trip Blank 10 (TB-10)

Matrix: TRIP BLANK

Collection Date: 07/12/2021 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Chlorobenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Chloroethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Chloroform	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Chloromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Chloroprene	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Cyclohexanone	*	20.0		ND	µg/L	1	07/14/2021 19:01	179812
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Dibromomethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Diisopropyl ether	*	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Ethyl acetate	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
Ethyl ether	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Ethylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Hexachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Iodomethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Methylacrylate	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Methylene chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Naphthalene	NELAP	5.0	B	ND	µg/L	1	07/14/2021 19:01	179812
n-Butyl acetate	*	2.0		ND	µg/L	1	07/14/2021 19:01	179812
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
n-Heptane	*	5.0		ND	µg/L	1	07/14/2021 19:01	179812
n-Hexane	*	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Nitrobenzene	NELAP	50.0		ND	µg/L	1	07/14/2021 19:01	179812
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
o-Xylene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Pentachloroethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Propionitrile	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Styrene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	07/14/2021 19:01	179812
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	07/14/2021 19:01	179812
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	07/14/2021 19:01	179812
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

**Lab ID:** 21070648-005

**Client Sample ID:** Trip Blank 10 (TB-10)

**Matrix:** TRIP BLANK

**Collection Date:** 07/12/2021 16:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Toluene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Trichloroethene	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Vinyl acetate	NELAP	5.0		ND	µg/L	1	07/14/2021 19:01	179812
Vinyl chloride	NELAP	2.0		ND	µg/L	1	07/14/2021 19:01	179812
Xylenes, Total	NELAP	4.0		ND	µg/L	1	07/14/2021 19:01	179812
Surr: 1,2-Dichloroethane-d4	*	80-120		98.2	%REC	1	07/14/2021 19:01	179812
Surr: 4-Bromofluorobenzene	*	80-120		101.1	%REC	1	07/14/2021 19:01	179812
Surr: Toluene-d8	*	80-120		92.9	%REC	1	07/14/2021 19:01	179812

*Naphthalene was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.*



## Sample Summary

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21070648-001	MW-08 07092021	Groundwater	4	07/09/2021 10:19
21070648-002	MW-19 07092021	Groundwater	4	07/09/2021 14:12
21070648-003	MW-15 07092021	Groundwater	4	07/09/2021 16:30
21070648-004	MW-12 07092021	Groundwater	4	07/09/2021 17:55
21070648-005	Trip Blank 10 (TB-10)	Trip Blank	1	07/12/2021 16:00





## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21070648-001A	MW-08 07092021	07/09/2021 10:19	07/12/2021 16:00		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 17:15 07/14/2021 18:10			
21070648-001B	MW-08 07092021	07/09/2021 10:19	07/12/2021 16:00		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/15/2021 9:37 07/15/2021 16:25			
21070648-001C	MW-08 07092021	07/09/2021 10:19	07/12/2021 16:00		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/13/2021 9:35 07/13/2021 20:01			
21070648-001D	MW-08 07092021	07/09/2021 10:19	07/12/2021 16:00		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 20:13			
21070648-002A	MW-19 07092021	07/09/2021 14:12	07/12/2021 16:00		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 19:10 07/14/2021 18:27			
21070648-002B	MW-19 07092021	07/09/2021 14:12	07/12/2021 16:00		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/15/2021 9:37 07/15/2021 17:02			
21070648-002C	MW-19 07092021	07/09/2021 14:12	07/12/2021 16:00		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/13/2021 9:35 07/13/2021 20:12			
21070648-002D	MW-19 07092021	07/09/2021 14:12	07/12/2021 16:00		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/13/2021 20:39			
21070648-003A	MW-15 07092021	07/09/2021 16:30	07/12/2021 16:00		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 19:10 07/14/2021 18:44			
21070648-003B	MW-15 07092021	07/09/2021 16:30	07/12/2021 16:00		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/15/2021 9:37 07/15/2021 20:08			
21070648-003C	MW-15 07092021	07/09/2021 16:30	07/12/2021 16:00		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/13/2021 9:35 07/13/2021 20:31			
21070648-003D	MW-15 07092021	07/09/2021 16:30	07/12/2021 16:00		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/14/2021 18:09			
21070648-004A	MW-12 07092021	07/09/2021 17:55	07/12/2021 16:00		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD		07/13/2021 19:10 07/14/2021 19:01			
21070648-004B	MW-12 07092021	07/09/2021 17:55	07/12/2021 16:00		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS		07/15/2021 9:37 07/15/2021 20:45			
21070648-004C	MW-12 07092021	07/09/2021 17:55	07/12/2021 16:00		
SW-846 3005A, 6010B, Metals by ICP (Total)		07/13/2021 9:35 07/13/2021 20:35			
21070648-004D	MW-12 07092021	07/09/2021 17:55	07/12/2021 16:00		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/14/2021 18:35			
21070648-005A	Trip Blank 10 (TB-10)	07/12/2021 16:00	07/12/2021 16:00		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS		07/14/2021 19:01			





## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

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

**Batch 179664**    **SampType: MBLK**    Units mg/L  
 SampID: MBLK-179664

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	07/13/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/13/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/13/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	07/13/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/13/2021

**Batch 179664**    **SampType: LCS**    Units mg/L  
 SampID: LCS-179664

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.511	0.5000	0	102.2	85	115	07/13/2021
Arsenic		0.0250		0.537	0.5000	0	107.4	85	115	07/13/2021
Copper		0.0050		0.260	0.2500	0	104.1	85	115	07/13/2021
Lead		0.0150		0.502	0.5000	0	100.3	85	115	07/13/2021
Zinc		0.0100		0.519	0.5000	0	103.8	85	115	07/13/2021

**Batch 179664**    **SampType: MS**    Units mg/L  
 SampID: 21070648-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.508	0.5000	0	101.7	75	125	07/13/2021
Arsenic		0.0250		0.531	0.5000	0	106.2	75	125	07/13/2021
Copper		0.0050		0.263	0.2500	0.05400	83.6	75	125	07/13/2021
Lead		0.0150		0.491	0.5000	0	98.2	75	125	07/13/2021
Zinc		0.0100		0.516	0.5000	0.04130	94.9	75	125	07/13/2021

**Batch 179664**    **SampType: MSD**    Units mg/L  
 SampID: 21070648-001CMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.505	0.5000	0	101.0	0.5084	0.67	07/13/2021
Arsenic		0.0250		0.534	0.5000	0	106.7	0.5308	0.53	07/13/2021
Copper		0.0050		0.258	0.2500	0.05400	81.5	0.2629	2.00	07/13/2021
Lead		0.0150		0.488	0.5000	0	97.5	0.4911	0.69	07/13/2021
Zinc		0.0100		0.508	0.5000	0.04130	93.4	0.5157	1.45	07/13/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch 179682**      **SampType: MBLK**      Units µg/L

SampID: MBLK-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		ND						07/14/2021
Aroclor 1016		1.00		ND						07/14/2021
Aroclor 1221		0.095		ND						07/14/2021
Aroclor 1221		1.00		ND						07/14/2021
Aroclor 1232		0.095		ND						07/14/2021
Aroclor 1232		1.00		ND						07/14/2021
Aroclor 1242		1.00		ND						07/14/2021
Aroclor 1242		0.095		ND						07/14/2021
Aroclor 1248		1.00		ND						07/14/2021
Aroclor 1248		0.095		ND						07/14/2021
Aroclor 1254		0.095		ND						07/14/2021
Aroclor 1254		1.00		ND						07/14/2021
Aroclor 1260		1.00		ND						07/14/2021
Aroclor 1260		0.095		ND						07/14/2021
Surr: Decachlorobiphenyl	*			0.110	0.1250		88.1	31.2	141	07/14/2021
Surr: Decachlorobiphenyl	*			0.11	0.1250		88.1	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.104	0.1250		83.0	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.5	35.2	135	07/14/2021

**Batch 179682**      **SampType: LCS**      Units µg/L

SampID: LCSPCB-179682

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		1.00		2.67	2.500	0	106.9	56.2	136	07/14/2021
Aroclor 1016		0.095		2.67	2.500	0	106.9	50	140	07/14/2021
Aroclor 1260		0.095		2.68	2.500	0	107.4	8	140	07/14/2021
Aroclor 1260		1.00		2.68	2.500	0	107.4	42.1	125	07/14/2021
Surr: Decachlorobiphenyl	*			0.13	0.1250		102.2	27.5	143	07/14/2021
Surr: Decachlorobiphenyl	*			0.128	0.1250		102.2	31.2	141	07/14/2021
Surr: Tetrachloro-meta-xylene	*			0.14	0.1250		115.3	35.2	135	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch 179682		SampType: LCSD		Units µg/L				RPD Limit 40			
SampID: LCSPCBD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		1.00		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1016		0.095		<b>2.54</b>	2.500	0	101.5	2.672	5.14	07/14/2021	
Aroclor 1260		1.00		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Aroclor 1260		0.095		<b>2.44</b>	2.500	0	97.7	2.684	9.49	07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	
Surr: Decachlorobiphenyl	*			<b>0.12</b>	0.1250		96.4			07/14/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.13</b>	0.1250		105.1			07/14/2021	

Batch 179682		SampType: LCS		Units %REC						
SampID: LCSPST-179682										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: Decachlorobiphenyl	*			<b>0.099</b>	0.1250		79.1	31.2	141	07/14/2021

Batch 179682		SampType: LCSD		Units %REC				RPD Limit 0			
SampID: LCSPSTD-179682											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.120</b>	0.1250		96.4			07/14/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch 179772		SampType: MBLK		Units mg/L							
SampID: MBLK-179772											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		ND						07/15/2021	
Acenaphthylene		0.00100		ND						07/15/2021	
Anthracene		0.00100		ND						07/15/2021	
Benzo(a)anthracene		0.00100		ND						07/15/2021	
Benzo(a)pyrene		0.00100		ND						07/15/2021	
Benzo(b)fluoranthene		0.00100		ND						07/15/2021	
Benzo(g,h,i)perylene		0.00100		ND						07/15/2021	
Benzo(k)fluoranthene		0.00100		ND						07/15/2021	
Chrysene		0.00100		ND						07/15/2021	
Dibenzo(a,h)anthracene		0.00100		ND						07/15/2021	
Fluoranthene		0.00100		ND						07/15/2021	
Fluorene		0.00100		ND						07/15/2021	
Indeno(1,2,3-cd)pyrene		0.00100		ND						07/15/2021	
Naphthalene		0.00100		ND						07/15/2021	
Phenanthrene		0.00100		ND						07/15/2021	
Pyrene		0.00100		ND						07/15/2021	
TPH-DRO (C10 - C21)	*	0.500		ND						07/15/2021	
TPH-ORO (C21 - C35)	*	0.700		ND						07/15/2021	
Surr: 2-Fluorobiphenyl	*			0.00715	0.0125		57.2	1.09	175	07/15/2021	
Surr: Nitrobenzene-d5	*			0.00871	0.0125		69.7	35.5	156	07/15/2021	
Surr: p-Terphenyl-d14	*			0.0109	0.0125		87.3	35	222	07/15/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179772    **SampType:** LCS    **Units** mg/L  
**SampID:** LCS-179772

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		<b>0.00672</b>	0.0100	0	67.2	39.6	145	07/15/2021
Acenaphthylene		0.00100		<b>0.00660</b>	0.0100	0	66.0	38.3	147	07/15/2021
Anthracene		0.00100		<b>0.00704</b>	0.0100	0	70.4	47.7	153	07/15/2021
Benzo(a)anthracene		0.00100		<b>0.00730</b>	0.0100	0	73.0	45	136	07/15/2021
Benzo(a)pyrene		0.00100		<b>0.00624</b>	0.0100	0	62.4	49.8	164	07/15/2021
Benzo(b)fluoranthene		0.00100		<b>0.00723</b>	0.0100	0	72.3	45.7	167	07/15/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00696</b>	0.0100	0	69.6	41	157	07/15/2021
Benzo(k)fluoranthene		0.00100		<b>0.00755</b>	0.0100	0	75.5	46.7	166	07/15/2021
Chrysene		0.00100		<b>0.00732</b>	0.0100	0	73.2	45.5	162	07/15/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00707</b>	0.0100	0	70.7	40.4	154	07/15/2021
Fluoranthene		0.00100		<b>0.00748</b>	0.0100	0	74.8	47.3	168	07/15/2021
Fluorene		0.00100		<b>0.00722</b>	0.0100	0	72.2	45.2	153	07/15/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00720</b>	0.0100	0	72.0	44.6	166	07/15/2021
Naphthalene		0.00100		<b>0.00642</b>	0.0100	0	64.2	16.6	137	07/15/2021
Phenanthrene		0.00100		<b>0.00728</b>	0.0100	0	72.8	50.8	149	07/15/2021
Pyrene		0.00100		<b>0.00741</b>	0.0100	0	74.1	44.9	163	07/15/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00717</b>	0.0125		57.3	1.09	175	07/15/2021
Surr: Nitrobenzene-d5	*			<b>0.00849</b>	0.0125		67.9	35.5	156	07/15/2021
Surr: p-Terphenyl-d14	*			<b>0.0115</b>	0.0125		91.7	35	222	07/15/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

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

Batch 179772		SampType: LCSD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSD-179772											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Acenaphthene		0.00100		<b>0.00564</b>	0.0100	0	56.4	0.006720	17.50	07/15/2021	
Acenaphthylene		0.00100		<b>0.00549</b>	0.0100	0	54.9	0.006595	18.21	07/15/2021	
Anthracene		0.00100		<b>0.00636</b>	0.0100	0	63.6	0.007038	10.05	07/15/2021	
Benzo(a)anthracene		0.00100		<b>0.00662</b>	0.0100	0	66.2	0.007304	9.79	07/15/2021	
Benzo(a)pyrene		0.00100		<b>0.00596</b>	0.0100	0	59.6	0.006242	4.56	07/15/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00678</b>	0.0100	0	67.8	0.007230	6.42	07/15/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00654</b>	0.0100	0	65.4	0.006958	6.20	07/15/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00696</b>	0.0100	0	69.6	0.007554	8.20	07/15/2021	
Chrysene		0.00100		<b>0.00665</b>	0.0100	0	66.5	0.007324	9.64	07/15/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00664</b>	0.0100	0	66.4	0.007072	6.27	07/15/2021	
Fluoranthene		0.00100		<b>0.00677</b>	0.0100	0	67.7	0.007476	9.89	07/15/2021	
Fluorene		0.00100		<b>0.00637</b>	0.0100	0	63.7	0.007225	12.62	07/15/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00671</b>	0.0100	0	67.1	0.007200	7.09	07/15/2021	
Naphthalene		0.00100	R	<b>0.00339</b>	0.0100	0	33.9	0.006419	61.64	07/15/2021	
Phenanthrene		0.00100		<b>0.00668</b>	0.0100	0	66.8	0.007284	8.59	07/15/2021	
Pyrene		0.00100		<b>0.00678</b>	0.0100	0	67.8	0.007406	8.75	07/15/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00661</b>	0.0125		52.9			07/15/2021	
Surr: Nitrobenzene-d5	*			<b>0.00756</b>	0.0125		60.4			07/15/2021	
Surr: p-Terphenyl-d14	*			<b>0.0103</b>	0.0125		82.3			07/15/2021	

Batch 179772		SampType: LCSG		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSG-179772											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.37</b>	2.000	0	68.6	17.1	195	07/15/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00871</b>	0.0125		69.6	1.09	175	07/15/2021	
Surr: Nitrobenzene-d5	*			<b>0.00857</b>	0.0125		68.5	35.5	156	07/15/2021	
Surr: p-Terphenyl-d14	*			<b>0.0104</b>	0.0125		83.6	35	222	07/15/2021	

Batch 179772		SampType: LCSGD		Units mg/L				RPD Limit 40			Date Analyzed
SampID: LCSGD-179772											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	0.500		<b>1.38</b>	2.000	0	68.9	1.373	0.40	07/15/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00820</b>	0.0125		65.6			07/15/2021	
Surr: Nitrobenzene-d5	*			<b>0.00822</b>	0.0125		65.7			07/15/2021	
Surr: p-Terphenyl-d14	*			<b>0.0104</b>	0.0125		82.9			07/15/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

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

Batch 179772		SampType: MS		Units mg/L							
SampID: 21070648-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>6.72</b>	8.000	0	84.0	50	175	07/15/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0318</b>	0.0500		63.7	1.39	137	07/15/2021	
Surr: Nitrobenzene-d5	*			<b>0.0350</b>	0.0500		70.0	29.1	125	07/15/2021	
Surr: p-Terphenyl-d14	*			<b>0.0489</b>	0.0500		97.8	35.2	164	07/15/2021	

Batch 179772		SampType: MSD		Units mg/L						RPD Limit 40	
SampID: 21070648-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>6.19</b>	8.000	0	77.4	6.718	8.18	07/15/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0271</b>	0.0500		54.2			07/15/2021	
Surr: Nitrobenzene-d5	*			<b>0.0318</b>	0.0500		63.7			07/15/2021	
Surr: p-Terphenyl-d14	*			<b>0.0447</b>	0.0500		89.5			07/15/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

**SampID:** MBLK-AK210713A-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						07/13/2021
1,1,1-Trichloroethane	*	2.0		ND						07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/13/2021
1,1,2-Trichloroethane	*	0.5		ND						07/13/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/13/2021
1,1-Dichloroethane	*	2.0		ND						07/13/2021
1,1-Dichloroethene	*	2.0		ND						07/13/2021
1,1-Dichloropropene	*	2.0		ND						07/13/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,3-Trichloropropane	*	2.0		ND						07/13/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/13/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/13/2021
1,2-Dibromoethane	*	2.0		ND						07/13/2021
1,2-Dichlorobenzene	*	2.0		ND						07/13/2021
1,2-Dichloroethane	*	2.0		ND						07/13/2021
1,2-Dichloropropane	*	2.0		ND						07/13/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/13/2021
1,3-Dichlorobenzene	*	2.0		ND						07/13/2021
1,3-Dichloropropane	*	2.0		ND						07/13/2021
1,4-Dichlorobenzene	*	2.0		ND						07/13/2021
1-Chlorobutane	*	5.0		ND						07/13/2021
2,2-Dichloropropane	*	2.0		ND						07/13/2021
2-Butanone	*	10.0		ND						07/13/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/13/2021
2-Chlorotoluene	*	2.0		ND						07/13/2021
2-Hexanone	*	10.0		ND						07/13/2021
2-Nitropropane	*	10.0		ND						07/13/2021
4-Chlorotoluene	*	2.0		ND						07/13/2021
4-Methyl-2-pentanone	*	10.0		ND						07/13/2021
Acetone	*	10.0		ND						07/13/2021
Acetonitrile	*	10.0		ND						07/13/2021
Acrolein	*	20.0		ND						07/13/2021
Acrylonitrile	*	5.0		ND						07/13/2021



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**Work Order:** 21070648

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

**Batch** 179692      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/13/2021
Benzene	*	0.5		ND						07/13/2021
Bromobenzene	*	2.0		ND						07/13/2021
Bromochloromethane	*	2.0		ND						07/13/2021
Bromodichloromethane	*	2.0		ND						07/13/2021
Bromoform	*	2.0		ND						07/13/2021
Bromomethane	*	5.0		ND						07/13/2021
Carbon disulfide	*	2.0		ND						07/13/2021
Carbon tetrachloride	*	2.0		ND						07/13/2021
Chlorobenzene	*	2.0		ND						07/13/2021
Chloroethane	*	2.0		ND						07/13/2021
Chloroform	*	2.0		ND						07/13/2021
Chloromethane	*	5.0		ND						07/13/2021
Chloroprene	*	5.0		ND						07/13/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/13/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021
Cyclohexanone	*	20.0		ND						07/13/2021
Dibromochloromethane	*	2.0		ND						07/13/2021
Dibromomethane	*	2.0		ND						07/13/2021
Dichlorodifluoromethane	*	2.0		ND						07/13/2021
Diisopropyl ether	*	2.0		ND						07/13/2021
Ethyl acetate	*	10.0		ND						07/13/2021
Ethyl ether	*	5.0		ND						07/13/2021
Ethyl methacrylate	*	5.0		ND						07/13/2021
Ethylbenzene	*	2.0		ND						07/13/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/13/2021
Hexachlorobutadiene	*	5.0		ND						07/13/2021
Hexachloroethane	*	5.0		ND						07/13/2021
Iodomethane	*	5.0		ND						07/13/2021
Isopropylbenzene	*	2.0		ND						07/13/2021
m,p-Xylenes	*	2.0		ND						07/13/2021
Methacrylonitrile	*	5.0		ND						07/13/2021
Methyl Methacrylate	*	5.0		ND						07/13/2021
Methyl tert-butyl ether	*	2.0		ND						07/13/2021
Methylacrylate	*	5.0		ND						07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

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

Batch 179692		SampType: MBLK		Units µg/L							
SampID: MBLK-AK210713A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Methylene chloride	*	2.0		ND						07/13/2021	
Naphthalene	*	5.0		ND						07/13/2021	
n-Butyl acetate	*	2.0		ND						07/13/2021	
n-Butylbenzene	*	2.0		ND						07/13/2021	
n-Heptane	*	5.0		ND						07/13/2021	
n-Hexane	*	5.0		ND						07/13/2021	
Nitrobenzene	*	50.0		ND						07/13/2021	
n-Propylbenzene	*	2.0		ND						07/13/2021	
o-Xylene	*	2.0		ND						07/13/2021	
Pentachloroethane	*	5.0		ND						07/13/2021	
p-Isopropyltoluene	*	2.0		ND						07/13/2021	
Propionitrile	*	10.0		ND						07/13/2021	
sec-Butylbenzene	*	2.0		ND						07/13/2021	
Styrene	*	2.0		ND						07/13/2021	
tert-Amyl methyl ether	*	2.0		ND						07/13/2021	
tert-Butyl alcohol	*	10.0		ND						07/13/2021	
tert-Butylbenzene	*	2.0		ND						07/13/2021	
Tetrachloroethene	*	0.5		ND						07/13/2021	
Tetrahydrofuran	*	5.0		ND						07/13/2021	
Toluene	*	2.0		ND						07/13/2021	
trans-1,2-Dichloroethene	*	2.0		ND						07/13/2021	
trans-1,3-Dichloropropene	*	2.0		ND						07/13/2021	
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/13/2021	
Trichloroethene	*	2.0		ND						07/13/2021	
Trichlorofluoromethane	*	5.0		ND						07/13/2021	
Vinyl acetate	*	5.0		ND						07/13/2021	
Vinyl chloride	*	2.0		ND						07/13/2021	
Xylenes, Total	*	4.0		ND						07/13/2021	
1,2-Dichloroethene, Total	*	4.0		ND						07/13/2021	
1,3-Dichloropropene, Total	*	4.0		ND						07/13/2021	
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/13/2021	
Surr: 1,2-Dichloroethane-d4	*			47.8	50.00		95.7	80	120	07/13/2021	
Surr: 4-Bromofluorobenzene	*			47.4	50.00		94.7	80	120	07/13/2021	
Surr: Toluene-d8	*			45.8	50.00		91.7	80	120	07/13/2021	

**Client:** Burns & McDonnell Waste Consultants

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**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.3	50.00	0	98.6	82	113	07/13/2021
1,1,1-Trichloroethane	*	2.0		53.6	50.00	0	107.3	76.9	128	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		44.9	50.00	0	89.8	76.7	113	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.5	50.00	0	101.0	69.5	127	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.1	50.00	0	98.2	83.8	111	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		108	125.0	0	86.4	74.9	117	07/13/2021
1,1-Dichloroethane	*	2.0		54.2	50.00	0	108.4	77	129	07/13/2021
1,1-Dichloroethene	*	2.0		50.0	50.00	0	100.0	69.4	127	07/13/2021
1,1-Dichloropropene	*	2.0		53.6	50.00	0	107.2	75.1	123	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		52.7	50.00	0	105.4	77.3	121	07/13/2021
1,2,3-Trichloropropane	*	2.0		44.8	50.00	0	89.6	75.3	109	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		46.6	50.00	0	93.1	77	115	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		53.3	50.00	0	106.6	76.8	124	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		47.7	50.00	0	95.4	75	115	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		45.8	50.00	0	91.6	71.9	119	07/13/2021
1,2-Dibromoethane	*	2.0		51.4	50.00	0	102.7	83.6	110	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.2	50.00	0	90.3	72.1	113	07/13/2021
1,2-Dichloroethane	*	2.0		49.4	50.00	0	98.7	72.3	117	07/13/2021
1,2-Dichloropropane	*	2.0		55.5	50.00	0	111.0	76.5	119	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		47.6	50.00	0	95.3	75.2	117	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.3	50.00	0	94.5	75.2	115	07/13/2021
1,3-Dichloropropane	*	2.0		48.6	50.00	0	97.2	80.9	110	07/13/2021
1,4-Dichlorobenzene	*	2.0		44.8	50.00	0	89.6	73.9	112	07/13/2021
1-Chlorobutane	*	5.0		53.3	50.00	0	106.6	74.9	130	07/13/2021
2,2-Dichloropropane	*	2.0		60.2	50.00	0	120.4	66.5	138	07/13/2021
2-Butanone	*	10.0		134	125.0	0	106.9	68.8	134	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		55.5	50.00	0	111.0	17.8	163	07/13/2021
2-Chlorotoluene	*	2.0		45.7	50.00	0	91.4	74.9	115	07/13/2021
2-Hexanone	*	10.0		120	125.0	0	95.8	73.2	117	07/13/2021
2-Nitropropane	*	10.0		518	500.0	0	103.5	67.1	140	07/13/2021
4-Chlorotoluene	*	2.0		47.3	50.00	0	94.6	75.7	113	07/13/2021
4-Methyl-2-pentanone	*	10.0		122	125.0	0	97.7	77	113	07/13/2021
Acetone	*	10.0		121	125.0	0	97.0	61.4	130	07/13/2021
Acetonitrile	*	10.0		512	500.0	0	102.3	68.8	136	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.7	28.4	168	07/13/2021
Acrylonitrile	*	5.0		55.7	50.00	0	111.5	77.9	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179692      **SampType:** LCS

**Units** µg/L

**SampID:** LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>58.7</b>	50.00	0	117.3	75.8	130	07/13/2021
Benzene	*	0.5		<b>52.5</b>	50.00	0	105.0	78.5	119	07/13/2021
Bromobenzene	*	2.0		<b>46.6</b>	50.00	0	93.3	77.5	113	07/13/2021
Bromochloromethane	*	2.0		<b>50.4</b>	50.00	0	100.8	71.5	123	07/13/2021
Bromodichloromethane	*	2.0		<b>57.8</b>	50.00	0	115.6	75.7	123	07/13/2021
Bromoform	*	2.0		<b>44.4</b>	50.00	0	88.9	78.9	121	07/13/2021
Bromomethane	*	5.0		<b>80.7</b>	50.00	0	161.4	30.5	192	07/13/2021
Carbon disulfide	*	2.0		<b>47.7</b>	50.00	0	95.3	66.7	121	07/13/2021
Carbon tetrachloride	*	2.0		<b>54.3</b>	50.00	0	108.5	70.9	127	07/13/2021
Chlorobenzene	*	2.0		<b>48.1</b>	50.00	0	96.1	80	111	07/13/2021
Chloroethane	*	2.0		<b>46.0</b>	50.00	0	92.1	69.6	135	07/13/2021
Chloroform	*	2.0		<b>57.0</b>	50.00	0	113.9	76.2	120	07/13/2021
Chloromethane	*	5.0		<b>29.9</b>	50.00	0	59.7	50.9	138	07/13/2021
Chloroprene	*	5.0		<b>54.6</b>	50.00	0	109.1	68.4	127	07/13/2021
cis-1,2-Dichloroethene	*	2.0		<b>56.4</b>	50.00	0	112.8	79.5	121	07/13/2021
cis-1,3-Dichloropropene	*	2.0		<b>58.7</b>	50.00	0	117.4	79.8	123	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>46.6</b>	50.00	0	93.2	64.6	130	07/13/2021
Cyclohexanone	*	20.0		<b>521</b>	500.0	0	104.3	70.5	114	07/13/2021
Dibromochloromethane	*	2.0		<b>52.3</b>	50.00	0	104.6	84.5	114	07/13/2021
Dibromomethane	*	2.0		<b>54.8</b>	50.00	0	109.6	76	119	07/13/2021
Dichlorodifluoromethane	*	2.0		<b>35.7</b>	50.00	0	71.4	46.6	142	07/13/2021
Diisopropyl ether	*	2.0		<b>55.0</b>	50.00	0	110.0	72	128	07/13/2021
Ethyl acetate	*	10.0		<b>50.4</b>	50.00	0	100.8	70.3	115	07/13/2021
Ethyl ether	*	5.0		<b>55.8</b>	50.00	0	111.5	74.6	120	07/13/2021
Ethyl methacrylate	*	5.0		<b>47.5</b>	50.00	0	95.1	81.4	116	07/13/2021
Ethylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.3	78.2	114	07/13/2021
Ethyl-tert-butyl ether	*	2.0		<b>57.2</b>	50.00	0	114.5	74.6	124	07/13/2021
Hexachlorobutadiene	*	5.0		<b>53.5</b>	50.00	0	107.0	73.9	129	07/13/2021
Hexachloroethane	*	5.0		<b>39.3</b>	50.00	0	78.6	78.3	123	07/13/2021
Iodomethane	*	5.0		<b>35.1</b>	50.00	0	70.3	50	151	07/13/2021
Isopropylbenzene	*	2.0		<b>51.1</b>	50.00	0	102.2	79.3	115	07/13/2021
m,p-Xylenes	*	2.0		<b>93.9</b>	100.0	0	93.9	77.2	116	07/13/2021
Methacrylonitrile	*	5.0		<b>57.9</b>	50.00	0	115.8	73.9	127	07/13/2021
Methyl Methacrylate	*	5.0		<b>54.5</b>	50.00	0	108.9	70.7	129	07/13/2021
Methyl tert-butyl ether	*	2.0		<b>55.4</b>	50.00	0	110.8	80.3	122	07/13/2021
Methylacrylate	*	5.0		<b>57.5</b>	50.00	0	115.0	75.2	124	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179692      **SampType:** LCS

Units µg/L

SampID: LCS-AK210713A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		<b>46.4</b>	50.00	0	92.8	71.8	115	07/13/2021
Naphthalene	*	5.0	B	<b>46.4</b>	50.00	0	92.7	75.6	121	07/13/2021
n-Butyl acetate	*	2.0		<b>49.5</b>	50.00	0	99.0	72.4	118	07/13/2021
n-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	70.8	118	07/13/2021
n-Heptane	*	5.0		<b>56.1</b>	50.00	0	112.2	50.4	143	07/13/2021
n-Hexane	*	5.0		<b>51.2</b>	50.00	0	102.4	60.6	139	07/13/2021
Nitrobenzene	*	50.0		<b>441</b>	500.0	0	88.2	49.4	129	07/13/2021
n-Propylbenzene	*	2.0		<b>47.1</b>	50.00	0	94.2	74	119	07/13/2021
o-Xylene	*	2.0		<b>47.5</b>	50.00	0	95.1	79.2	112	07/13/2021
Pentachloroethane	*	5.0		<b>37.9</b>	50.00	0	75.8	71.8	124	07/13/2021
p-Isopropyltoluene	*	2.0		<b>49.0</b>	50.00	0	98.0	74.4	119	07/13/2021
Propionitrile	*	10.0		<b>551</b>	500.0	0	110.3	76.2	127	07/13/2021
sec-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.4	74.4	119	07/13/2021
Styrene	*	2.0		<b>50.3</b>	50.00	0	100.6	80.4	117	07/13/2021
tert-Amyl methyl ether	*	2.0		<b>55.4</b>	50.00	0	110.9	80.8	125	07/13/2021
tert-Butyl alcohol	*	10.0		<b>273</b>	250.0	0	109.1	64.9	118	07/13/2021
tert-Butylbenzene	*	2.0		<b>48.2</b>	50.00	0	96.5	74	115	07/13/2021
Tetrachloroethene	*	0.5		<b>52.9</b>	50.00	0	105.9	70.1	120	07/13/2021
Tetrahydrofuran	*	5.0		<b>46.2</b>	50.00	0	92.4	63.5	122	07/13/2021
Toluene	*	2.0		<b>46.5</b>	50.00	0	93.0	78.6	112	07/13/2021
trans-1,2-Dichloroethene	*	2.0		<b>51.8</b>	50.00	0	103.6	75.7	130	07/13/2021
trans-1,3-Dichloropropene	*	2.0		<b>50.4</b>	50.00	0	100.8	80.3	116	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		<b>45.1</b>	50.00	0	90.1	65.5	124	07/13/2021
Trichloroethene	*	2.0		<b>55.0</b>	50.00	0	110.1	76.2	121	07/13/2021
Trichlorofluoromethane	*	5.0		<b>46.4</b>	50.00	0	92.7	71.1	131	07/13/2021
Vinyl acetate	*	5.0		<b>53.9</b>	50.00	0	107.8	79.8	129	07/13/2021
Vinyl chloride	*	2.0		<b>41.7</b>	50.00	0	83.3	58.6	141	07/13/2021
Xylenes, Total	*	4.0		<b>141</b>	150.0	0	94.3	78.3	114	07/13/2021
1,2-Dichloroethene, Total	*	4.0		<b>108</b>	100.0	0	108.2	78.5	125	07/13/2021
1,3-Dichloropropene, Total	*	4.0		<b>109</b>	100.0	0	109.1	82.3	117	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		<b>91.7</b>	100.0	0	91.7	65.9	126	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			<b>47.2</b>	50.00		94.4	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			<b>47.8</b>	50.00		95.5	80	120	07/13/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.5	80	120	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		49.8	50.00	0	99.5	49.31	0.89	07/13/2021
1,1,1-Trichloroethane	*	2.0		54.0	50.00	0	107.9	53.63	0.61	07/13/2021
1,1,2,2-Tetrachloroethane	*	2.0		45.4	50.00	0	90.8	44.88	1.15	07/13/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		50.2	50.00	0	100.5	50.50	0.54	07/13/2021
1,1,2-Trichloroethane	*	0.5		49.8	50.00	0	99.6	49.12	1.39	07/13/2021
1,1-Dichloro-2-propanone	*	30.0		111	125.0	0	88.5	108.0	2.41	07/13/2021
1,1-Dichloroethane	*	2.0		54.7	50.00	0	109.4	54.20	0.88	07/13/2021
1,1-Dichloroethene	*	2.0		49.9	50.00	0	99.8	50.00	0.20	07/13/2021
1,1-Dichloropropene	*	2.0		53.4	50.00	0	106.9	53.58	0.26	07/13/2021
1,2,3-Trichlorobenzene	*	2.0		53.1	50.00	0	106.2	52.72	0.70	07/13/2021
1,2,3-Trichloropropane	*	2.0		45.2	50.00	0	90.4	44.81	0.91	07/13/2021
1,2,3-Trimethylbenzene	*	2.0		47.0	50.00	0	94.1	46.56	1.00	07/13/2021
1,2,4-Trichlorobenzene	*	2.0		54.0	50.00	0	108.1	53.30	1.40	07/13/2021
1,2,4-Trimethylbenzene	*	2.0		48.2	50.00	0	96.5	47.72	1.08	07/13/2021
1,2-Dibromo-3-chloropropane	*	5.0		47.1	50.00	0	94.3	45.78	2.93	07/13/2021
1,2-Dibromoethane	*	2.0		52.1	50.00	0	104.2	51.37	1.43	07/13/2021
1,2-Dichlorobenzene	*	2.0		45.4	50.00	0	90.9	45.17	0.62	07/13/2021
1,2-Dichloroethane	*	2.0		50.0	50.00	0	99.9	49.37	1.21	07/13/2021
1,2-Dichloropropane	*	2.0		55.8	50.00	0	111.6	55.51	0.56	07/13/2021
1,3,5-Trimethylbenzene	*	2.0		48.0	50.00	0	96.0	47.63	0.79	07/13/2021
1,3-Dichlorobenzene	*	2.0		47.6	50.00	0	95.2	47.27	0.65	07/13/2021
1,3-Dichloropropane	*	2.0		49.4	50.00	0	98.7	48.58	1.59	07/13/2021
1,4-Dichlorobenzene	*	2.0		45.4	50.00	0	90.7	44.78	1.29	07/13/2021
1-Chlorobutane	*	5.0		53.7	50.00	0	107.4	53.30	0.77	07/13/2021
2,2-Dichloropropane	*	2.0		59.9	50.00	0	119.8	60.19	0.52	07/13/2021
2-Butanone	*	10.0		135	125.0	0	108.3	133.6	1.33	07/13/2021
2-Chloroethyl vinyl ether	*	5.0		56.4	50.00	0	112.9	55.50	1.70	07/13/2021
2-Chlorotoluene	*	2.0		46.0	50.00	0	92.1	45.71	0.70	07/13/2021
2-Hexanone	*	10.0		122	125.0	0	97.3	119.8	1.52	07/13/2021
2-Nitropropane	*	10.0		528	500.0	0	105.5	517.6	1.94	07/13/2021
4-Chlorotoluene	*	2.0		47.5	50.00	0	95.1	47.31	0.46	07/13/2021
4-Methyl-2-pentanone	*	10.0		123	125.0	0	98.4	122.1	0.76	07/13/2021
Acetone	*	10.0		122	125.0	0	97.8	121.3	0.76	07/13/2021
Acetonitrile	*	10.0		519	500.0	0	103.8	511.5	1.47	07/13/2021
Acrolein	*	20.0		514	500.0	0	102.8	513.6	0.04	07/13/2021
Acrylonitrile	*	5.0		56.2	50.00	0	112.3	55.74	0.77	07/13/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch	SampType:	Units		RPD Limit						
179692	LCSD	µg/L		15.4						
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		59.6	50.00	0	119.2	58.67	1.59	07/13/2021
Benzene	*	0.5		52.5	50.00	0	104.9	52.49	0.06	07/13/2021
Bromobenzene	*	2.0		47.1	50.00	0	94.3	46.65	1.04	07/13/2021
Bromochloromethane	*	2.0		51.2	50.00	0	102.5	50.40	1.67	07/13/2021
Bromodichloromethane	*	2.0		58.3	50.00	0	116.5	57.78	0.83	07/13/2021
Bromoform	*	2.0		45.4	50.00	0	90.8	44.43	2.16	07/13/2021
Bromomethane	*	5.0		81.5	50.00	0	163.1	80.72	1.01	07/13/2021
Carbon disulfide	*	2.0		47.9	50.00	0	95.8	47.66	0.54	07/13/2021
Carbon tetrachloride	*	2.0		54.3	50.00	0	108.6	54.27	0.02	07/13/2021
Chlorobenzene	*	2.0		48.4	50.00	0	96.9	48.06	0.81	07/13/2021
Chloroethane	*	2.0		46.4	50.00	0	92.9	46.03	0.87	07/13/2021
Chloroform	*	2.0		57.6	50.00	0	115.2	56.95	1.17	07/13/2021
Chloromethane	*	5.0		30.2	50.00	0	60.3	29.86	1.03	07/13/2021
Chloroprene	*	5.0		54.3	50.00	0	108.7	54.57	0.42	07/13/2021
cis-1,2-Dichloroethene	*	2.0		56.5	50.00	0	112.9	56.39	0.12	07/13/2021
cis-1,3-Dichloropropene	*	2.0		59.2	50.00	0	118.4	58.70	0.83	07/13/2021
cis-1,4-Dichloro-2-butene	*	2.0		47.9	50.00	0	95.9	46.60	2.81	07/13/2021
Cyclohexanone	*	20.0		518	500.0	0	103.7	521.3	0.58	07/13/2021
Dibromochloromethane	*	2.0		52.9	50.00	0	105.9	52.29	1.22	07/13/2021
Dibromomethane	*	2.0		55.2	50.00	0	110.4	54.82	0.71	07/13/2021
Dichlorodifluoromethane	*	2.0		36.0	50.00	0	71.9	35.68	0.81	07/13/2021
Diisopropyl ether	*	2.0		56.1	50.00	0	112.1	55.02	1.89	07/13/2021
Ethyl acetate	*	10.0		50.0	50.00	0	100.0	50.42	0.80	07/13/2021
Ethyl ether	*	5.0		56.8	50.00	0	113.6	55.75	1.83	07/13/2021
Ethyl methacrylate	*	5.0		48.1	50.00	0	96.1	47.53	1.13	07/13/2021
Ethylbenzene	*	2.0		48.5	50.00	0	96.9	48.15	0.64	07/13/2021
Ethyl-tert-butyl ether	*	2.0		59.2	50.00	0	118.3	57.25	3.30	07/13/2021
Hexachlorobutadiene	*	5.0		54.2	50.00	0	108.3	53.49	1.24	07/13/2021
Hexachloroethane	*	5.0		39.7	50.00	0	79.4	39.30	1.04	07/13/2021
Iodomethane	*	5.0		36.4	50.00	0	72.8	35.14	3.50	07/13/2021
Isopropylbenzene	*	2.0		51.5	50.00	0	103.1	51.11	0.84	07/13/2021
m,p-Xylenes	*	2.0		94.7	100.0	0	94.7	93.88	0.84	07/13/2021
Methacrylonitrile	*	5.0		58.5	50.00	0	116.9	57.91	0.96	07/13/2021
Methyl Methacrylate	*	5.0		55.0	50.00	0	110.0	54.47	0.97	07/13/2021
Methyl tert-butyl ether	*	2.0		56.8	50.00	0	113.6	55.41	2.50	07/13/2021
Methylacrylate	*	5.0		58.8	50.00	0	117.7	57.48	2.34	07/13/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch 179692	SampType: LCSD	Units µg/L								RPD Limit 15.4
SampID: LCSD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		46.7	50.00	0	93.5	46.40	0.71	07/13/2021
Naphthalene	*	5.0	B	47.2	50.00	0	94.4	46.36	1.75	07/13/2021
n-Butyl acetate	*	2.0		49.9	50.00	0	99.7	49.48	0.79	07/13/2021
n-Butylbenzene	*	2.0		48.8	50.00	0	97.6	48.25	1.11	07/13/2021
n-Heptane	*	5.0		57.4	50.00	0	114.7	56.08	2.26	07/13/2021
n-Hexane	*	5.0		50.8	50.00	0	101.5	51.18	0.80	07/13/2021
Nitrobenzene	*	50.0		455	500.0	0	91.0	440.9	3.12	07/13/2021
n-Propylbenzene	*	2.0		47.4	50.00	0	94.8	47.08	0.70	07/13/2021
o-Xylene	*	2.0		48.1	50.00	0	96.1	47.54	1.11	07/13/2021
Pentachloroethane	*	5.0		38.3	50.00	0	76.5	37.89	1.00	07/13/2021
p-Isopropyltoluene	*	2.0		49.4	50.00	0	98.8	48.99	0.83	07/13/2021
Propionitrile	*	10.0		558	500.0	0	111.6	551.4	1.20	07/13/2021
sec-Butylbenzene	*	2.0		48.5	50.00	0	97.0	48.18	0.66	07/13/2021
Styrene	*	2.0		50.9	50.00	0	101.9	50.28	1.30	07/13/2021
tert-Amyl methyl ether	*	2.0		57.0	50.00	0	114.0	55.43	2.79	07/13/2021
tert-Butyl alcohol	*	10.0		280	250.0	0	111.9	272.7	2.53	07/13/2021
tert-Butylbenzene	*	2.0		48.5	50.00	0	97.1	48.25	0.58	07/13/2021
Tetrachloroethene	*	0.5		53.0	50.00	0	106.1	52.94	0.19	07/13/2021
Tetrahydrofuran	*	5.0		46.8	50.00	0	93.6	46.22	1.29	07/13/2021
Toluene	*	2.0		46.9	50.00	0	93.8	46.51	0.81	07/13/2021
trans-1,2-Dichloroethene	*	2.0		51.8	50.00	0	103.5	51.79	0.08	07/13/2021
trans-1,3-Dichloropropene	*	2.0		51.1	50.00	0	102.3	50.40	1.46	07/13/2021
trans-1,4-Dichloro-2-butene	*	2.0		46.1	50.00	0	92.2	45.07	2.28	07/13/2021
Trichloroethene	*	2.0		55.3	50.00	0	110.6	55.04	0.44	07/13/2021
Trichlorofluoromethane	*	5.0		47.2	50.00	0	94.3	46.36	1.69	07/13/2021
Vinyl acetate	*	5.0		54.7	50.00	0	109.4	53.90	1.49	07/13/2021
Vinyl chloride	*	2.0		42.3	50.00	0	84.7	41.66	1.62	07/13/2021
Xylenes, Total	*	4.0		143	150.0	0	95.2	141.4	0.93	07/13/2021
1,2-Dichloroethene, Total	*	4.0		108	100.0	0	108.2	108.2	0.03	07/13/2021
1,3-Dichloropropene, Total	*	4.0		110	100.0	0	110.3	109.1	1.12	07/13/2021
1,4-Dichloro-2-butene, Total	*	4.0		94.0	100.0	0	94.0	91.67	2.55	07/13/2021
Surr: 1,2-Dichloroethane-d4	*			47.1	50.00		94.2			07/13/2021
Surr: 4-Bromofluorobenzene	*			47.6	50.00		95.3			07/13/2021
Surr: Toluene-d8	*			46.0	50.00		92.1			07/13/2021





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch 179692		SampType: LCSG		Units %REC						
SampID: LCSG-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			47.0	50.00		94.0	80	120	07/13/2021
Surr: 4-Bromofluorobenzene	*			47.3	50.00		94.6	80	120	07/13/2021
Surr: Toluene-d8	*			46.4	50.00		92.7	80	120	07/13/2021

Batch 179692		SampType: LCSGD		Units %REC		RPD Limit 0				
SampID: LCSGD-AK210713A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			47.0	50.00		94.1			07/13/2021
Surr: 4-Bromofluorobenzene	*			47.7	50.00		95.4			07/13/2021
Surr: Toluene-d8	*			46.2	50.00		92.4			07/13/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210714A-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						07/14/2021
1,1,1-Trichloroethane	*	2.0		ND						07/14/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						07/14/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						07/14/2021
1,1,2-Trichloroethane	*	0.5		ND						07/14/2021
1,1-Dichloro-2-propanone	*	30.0		ND						07/14/2021
1,1-Dichloroethane	*	2.0		ND						07/14/2021
1,1-Dichloroethene	*	2.0		ND						07/14/2021
1,1-Dichloropropene	*	2.0		ND						07/14/2021
1,2,3-Trichlorobenzene	*	2.0		ND						07/14/2021
1,2,3-Trichloropropane	*	2.0		ND						07/14/2021
1,2,3-Trimethylbenzene	*	2.0		ND						07/14/2021
1,2,4-Trichlorobenzene	*	2.0		ND						07/14/2021
1,2,4-Trimethylbenzene	*	2.0		ND						07/14/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						07/14/2021
1,2-Dibromoethane	*	2.0		ND						07/14/2021
1,2-Dichlorobenzene	*	2.0		ND						07/14/2021
1,2-Dichloroethane	*	2.0		ND						07/14/2021
1,2-Dichloropropane	*	2.0		ND						07/14/2021
1,3,5-Trimethylbenzene	*	2.0		ND						07/14/2021
1,3-Dichlorobenzene	*	2.0		ND						07/14/2021
1,3-Dichloropropane	*	2.0		ND						07/14/2021
1,4-Dichlorobenzene	*	2.0		ND						07/14/2021
1-Chlorobutane	*	5.0		ND						07/14/2021
2,2-Dichloropropane	*	2.0		ND						07/14/2021
2-Butanone	*	10.0		ND						07/14/2021
2-Chloroethyl vinyl ether	*	5.0		ND						07/14/2021
2-Chlorotoluene	*	2.0		ND						07/14/2021
2-Hexanone	*	10.0		ND						07/14/2021
2-Nitropropane	*	10.0		ND						07/14/2021
4-Chlorotoluene	*	2.0		ND						07/14/2021
4-Methyl-2-pentanone	*	10.0		ND						07/14/2021
Acetone	*	10.0		ND						07/14/2021
Acetonitrile	*	10.0		ND						07/14/2021
Acrolein	*	20.0		ND						07/14/2021
Acrylonitrile	*	5.0		ND						07/14/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						07/14/2021
Benzene	*	0.5		ND						07/14/2021
Bromobenzene	*	2.0		ND						07/14/2021
Bromochloromethane	*	2.0		ND						07/14/2021
Bromodichloromethane	*	2.0		ND						07/14/2021
Bromoform	*	2.0		ND						07/14/2021
Bromomethane	*	5.0		ND						07/14/2021
Carbon disulfide	*	2.0		ND						07/14/2021
Carbon tetrachloride	*	2.0		ND						07/14/2021
Chlorobenzene	*	2.0		ND						07/14/2021
Chloroethane	*	2.0		ND						07/14/2021
Chloroform	*	2.0		ND						07/14/2021
Chloromethane	*	5.0		ND						07/14/2021
Chloroprene	*	5.0		ND						07/14/2021
cis-1,2-Dichloroethene	*	2.0		ND						07/14/2021
cis-1,3-Dichloropropene	*	2.0		ND						07/14/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						07/14/2021
Cyclohexanone	*	20.0		ND						07/14/2021
Dibromochloromethane	*	2.0		ND						07/14/2021
Dibromomethane	*	2.0		ND						07/14/2021
Dichlorodifluoromethane	*	2.0		ND						07/14/2021
Diisopropyl ether	*	2.0		ND						07/14/2021
Ethyl acetate	*	10.0		ND						07/14/2021
Ethyl ether	*	5.0		ND						07/14/2021
Ethyl methacrylate	*	5.0		ND						07/14/2021
Ethylbenzene	*	2.0		ND						07/14/2021
Ethyl-tert-butyl ether	*	2.0		ND						07/14/2021
Hexachlorobutadiene	*	5.0		ND						07/14/2021
Hexachloroethane	*	5.0		ND						07/14/2021
Iodomethane	*	5.0		ND						07/14/2021
Isopropylbenzene	*	2.0		ND						07/14/2021
m,p-Xylenes	*	2.0		ND						07/14/2021
Methacrylonitrile	*	5.0		ND						07/14/2021
Methyl Methacrylate	*	5.0		ND						07/14/2021
Methyl tert-butyl ether	*	2.0		ND						07/14/2021
Methylacrylate	*	5.0		ND						07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						07/14/2021
Naphthalene	*	5.0		ND						07/14/2021
n-Butyl acetate	*	2.0		ND						07/14/2021
n-Butylbenzene	*	2.0		ND						07/14/2021
n-Heptane	*	5.0		ND						07/14/2021
n-Hexane	*	5.0		ND						07/14/2021
Nitrobenzene	*	50.0		ND						07/14/2021
n-Propylbenzene	*	2.0		ND						07/14/2021
o-Xylene	*	2.0		ND						07/14/2021
Pentachloroethane	*	5.0		ND						07/14/2021
p-Isopropyltoluene	*	2.0		ND						07/14/2021
Propionitrile	*	10.0		ND						07/14/2021
sec-Butylbenzene	*	2.0		ND						07/14/2021
Styrene	*	2.0		ND						07/14/2021
tert-Amyl methyl ether	*	2.0		ND						07/14/2021
tert-Butyl alcohol	*	10.0		ND						07/14/2021
tert-Butylbenzene	*	2.0		ND						07/14/2021
Tetrachloroethene	*	0.5		ND						07/14/2021
Tetrahydrofuran	*	5.0		ND						07/14/2021
Toluene	*	2.0		ND						07/14/2021
trans-1,2-Dichloroethene	*	2.0		ND						07/14/2021
trans-1,3-Dichloropropene	*	2.0		ND						07/14/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						07/14/2021
Trichloroethene	*	2.0		ND						07/14/2021
Trichlorofluoromethane	*	5.0		ND						07/14/2021
Vinyl acetate	*	5.0		ND						07/14/2021
Vinyl chloride	*	2.0		ND						07/14/2021
Xylenes, Total	*	4.0		ND						07/14/2021
1,2-Dichloroethene, Total	*	4.0		ND						07/14/2021
1,3-Dichloropropene, Total	*	4.0		ND						07/14/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						07/14/2021
Surr: 1,2-Dichloroethane-d4	*			48.7	50.00		97.3	80	120	07/14/2021
Surr: 4-Bromofluorobenzene	*			51.9	50.00		103.8	80	120	07/14/2021
Surr: Toluene-d8	*			46.6	50.00		93.1	80	120	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** LCS

Units µg/L

SampID: LCS-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>45.7</b>	50.00	0	91.5	82	113	07/14/2021
1,1,1-Trichloroethane	*	2.0		<b>49.3</b>	50.00	0	98.6	76.9	128	07/14/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>42.4</b>	50.00	0	84.9	76.7	113	07/14/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>49.1</b>	50.00	0	98.2	69.5	127	07/14/2021
1,1,2-Trichloroethane	*	0.5		<b>43.8</b>	50.00	0	87.6	83.8	111	07/14/2021
1,1-Dichloro-2-propanone	*	30.0		<b>107</b>	125.0	0	85.6	74.9	117	07/14/2021
1,1-Dichloroethane	*	2.0		<b>49.7</b>	50.00	0	99.4	77	129	07/14/2021
1,1-Dichloroethene	*	2.0		<b>47.8</b>	50.00	0	95.7	69.4	127	07/14/2021
1,1-Dichloropropene	*	2.0		<b>50.0</b>	50.00	0	100.0	75.1	123	07/14/2021
1,2,3-Trichlorobenzene	*	2.0		<b>52.7</b>	50.00	0	105.4	77.3	121	07/14/2021
1,2,3-Trichloropropane	*	2.0		<b>41.7</b>	50.00	0	83.4	75.3	109	07/14/2021
1,2,3-Trimethylbenzene	*	2.0		<b>48.0</b>	50.00	0	95.9	77	115	07/14/2021
1,2,4-Trichlorobenzene	*	2.0		<b>52.2</b>	50.00	0	104.4	76.8	124	07/14/2021
1,2,4-Trimethylbenzene	*	2.0		<b>49.7</b>	50.00	0	99.4	75	115	07/14/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>47.0</b>	50.00	0	93.9	71.9	119	07/14/2021
1,2-Dibromoethane	*	2.0		<b>44.9</b>	50.00	0	89.8	83.6	110	07/14/2021
1,2-Dichlorobenzene	*	2.0		<b>47.9</b>	50.00	0	95.7	72.1	113	07/14/2021
1,2-Dichloroethane	*	2.0		<b>50.0</b>	50.00	0	99.9	72.3	117	07/14/2021
1,2-Dichloropropane	*	2.0		<b>49.6</b>	50.00	0	99.3	76.5	119	07/14/2021
1,3,5-Trimethylbenzene	*	2.0		<b>47.5</b>	50.00	0	95.0	75.2	117	07/14/2021
1,3-Dichlorobenzene	*	2.0		<b>52.3</b>	50.00	0	104.6	75.2	115	07/14/2021
1,3-Dichloropropane	*	2.0		<b>43.7</b>	50.00	0	87.5	80.9	110	07/14/2021
1,4-Dichlorobenzene	*	2.0		<b>49.6</b>	50.00	0	99.2	73.9	112	07/14/2021
1-Chlorobutane	*	5.0		<b>53.1</b>	50.00	0	106.2	74.9	130	07/14/2021
2,2-Dichloropropane	*	2.0		<b>54.2</b>	50.00	0	108.4	66.5	138	07/14/2021
2-Butanone	*	10.0		<b>135</b>	125.0	0	108.0	68.8	134	07/14/2021
2-Chloroethyl vinyl ether	*	5.0		<b>71.6</b>	50.00	0	143.1	17.8	163	07/14/2021
2-Chlorotoluene	*	2.0		<b>46.5</b>	50.00	0	93.0	74.9	115	07/14/2021
2-Hexanone	*	10.0		<b>126</b>	125.0	0	100.7	73.2	117	07/14/2021
2-Nitropropane	*	10.0		<b>471</b>	500.0	0	94.3	67.1	140	07/14/2021
4-Chlorotoluene	*	2.0		<b>53.2</b>	50.00	0	106.3	75.7	113	07/14/2021
4-Methyl-2-pentanone	*	10.0		<b>119</b>	125.0	0	94.9	77	113	07/14/2021
Acetone	*	10.0		<b>117</b>	125.0	0	93.6	61.4	130	07/14/2021
Acetonitrile	*	10.0		<b>612</b>	500.0	0	122.4	68.8	136	07/14/2021
Acrolein	*	20.0		<b>408</b>	500.0	0	81.6	28.4	168	07/14/2021
Acrylonitrile	*	5.0		<b>49.7</b>	50.00	0	99.4	77.9	124	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** LCS      **Units** µg/L  
**SampID:** LCS-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>46.1</b>	50.00	0	92.2	75.8	130	07/14/2021
Benzene	*	0.5		<b>49.2</b>	50.00	0	98.4	78.5	119	07/14/2021
Bromobenzene	*	2.0		<b>51.0</b>	50.00	0	101.9	77.5	113	07/14/2021
Bromochloromethane	*	2.0		<b>47.8</b>	50.00	0	95.7	71.5	123	07/14/2021
Bromodichloromethane	*	2.0		<b>50.3</b>	50.00	0	100.7	75.7	123	07/14/2021
Bromoform	*	2.0		<b>47.7</b>	50.00	0	95.3	78.9	121	07/14/2021
Bromomethane	*	5.0		<b>53.2</b>	50.00	0	106.3	30.5	192	07/14/2021
Carbon disulfide	*	2.0		<b>44.7</b>	50.00	0	89.4	66.7	121	07/14/2021
Carbon tetrachloride	*	2.0		<b>50.0</b>	50.00	0	99.9	70.9	127	07/14/2021
Chlorobenzene	*	2.0		<b>47.9</b>	50.00	0	95.8	80	111	07/14/2021
Chloroethane	*	2.0		<b>42.6</b>	50.00	0	85.2	69.6	135	07/14/2021
Chloroform	*	2.0		<b>50.8</b>	50.00	0	101.5	76.2	120	07/14/2021
Chloromethane	*	5.0		<b>38.3</b>	50.00	0	76.5	50.9	138	07/14/2021
Chloroprene	*	5.0		<b>52.3</b>	50.00	0	104.6	68.4	127	07/14/2021
cis-1,2-Dichloroethene	*	2.0		<b>50.1</b>	50.00	0	100.3	79.5	121	07/14/2021
cis-1,3-Dichloropropene	*	2.0		<b>53.2</b>	50.00	0	106.4	79.8	123	07/14/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>43.8</b>	50.00	0	87.5	64.6	130	07/14/2021
Cyclohexanone	*	20.0		<b>438</b>	500.0	0	87.6	70.5	114	07/14/2021
Dibromochloromethane	*	2.0		<b>46.9</b>	50.00	0	93.8	84.5	114	07/14/2021
Dibromomethane	*	2.0		<b>47.5</b>	50.00	0	95.1	76	119	07/14/2021
Dichlorodifluoromethane	*	2.0		<b>30.5</b>	50.00	0	60.9	46.6	142	07/14/2021
Diisopropyl ether	*	2.0		<b>52.8</b>	50.00	0	105.6	72	128	07/14/2021
Ethyl acetate	*	10.0		<b>42.8</b>	50.00	0	85.5	70.3	115	07/14/2021
Ethyl ether	*	5.0		<b>53.8</b>	50.00	0	107.6	74.6	120	07/14/2021
Ethyl methacrylate	*	5.0		<b>46.4</b>	50.00	0	92.8	81.4	116	07/14/2021
Ethylbenzene	*	2.0		<b>49.5</b>	50.00	0	99.0	78.2	114	07/14/2021
Ethyl-tert-butyl ether	*	2.0		<b>50.9</b>	50.00	0	101.8	74.6	124	07/14/2021
Hexachlorobutadiene	*	5.0		<b>55.8</b>	50.00	0	111.7	73.9	129	07/14/2021
Hexachloroethane	*	5.0		<b>48.1</b>	50.00	0	96.2	78.3	123	07/14/2021
Iodomethane	*	5.0		<b>43.4</b>	50.00	0	86.8	50	151	07/14/2021
Isopropylbenzene	*	2.0		<b>48.6</b>	50.00	0	97.3	79.3	115	07/14/2021
m,p-Xylenes	*	2.0		<b>103</b>	100.0	0	103.3	77.2	116	07/14/2021
Methacrylonitrile	*	5.0		<b>47.0</b>	50.00	0	94.0	73.9	127	07/14/2021
Methyl Methacrylate	*	5.0		<b>54.9</b>	50.00	0	109.7	70.7	129	07/14/2021
Methyl tert-butyl ether	*	2.0		<b>48.3</b>	50.00	0	96.6	80.3	122	07/14/2021
Methylacrylate	*	5.0		<b>44.8</b>	50.00	0	89.7	75.2	124	07/14/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch** 179812      **SampType:** LCS

Units µg/L

SampID: LCS-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		<b>49.3</b>	50.00	0	98.6	71.8	115	07/14/2021
Naphthalene	*	5.0	B	<b>52.2</b>	50.00	0	104.5	75.6	121	07/14/2021
n-Butyl acetate	*	2.0		<b>48.6</b>	50.00	0	97.2	72.4	118	07/14/2021
n-Butylbenzene	*	2.0		<b>47.7</b>	50.00	0	95.5	70.8	118	07/14/2021
n-Heptane	*	5.0		<b>57.6</b>	50.00	0	115.2	50.4	143	07/14/2021
n-Hexane	*	5.0		<b>48.7</b>	50.00	0	97.5	60.6	139	07/14/2021
Nitrobenzene	*	50.0		<b>510</b>	500.0	0	102.0	49.4	129	07/14/2021
n-Propylbenzene	*	2.0		<b>48.6</b>	50.00	0	97.2	74	119	07/14/2021
o-Xylene	*	2.0		<b>48.4</b>	50.00	0	96.7	79.2	112	07/14/2021
Pentachloroethane	*	5.0		<b>44.2</b>	50.00	0	88.4	71.8	124	07/14/2021
p-Isopropyltoluene	*	2.0		<b>46.8</b>	50.00	0	93.5	74.4	119	07/14/2021
Propionitrile	*	10.0		<b>528</b>	500.0	0	105.6	76.2	127	07/14/2021
sec-Butylbenzene	*	2.0		<b>48.0</b>	50.00	0	96.1	74.4	119	07/14/2021
Styrene	*	2.0		<b>53.0</b>	50.00	0	106.1	80.4	117	07/14/2021
tert-Amyl methyl ether	*	2.0		<b>41.9</b>	50.00	0	83.8	80.8	125	07/14/2021
tert-Butyl alcohol	*	10.0		<b>255</b>	250.0	0	101.9	64.9	118	07/14/2021
tert-Butylbenzene	*	2.0		<b>46.1</b>	50.00	0	92.3	74	115	07/14/2021
Tetrachloroethene	*	0.5		<b>51.1</b>	50.00	0	102.2	70.1	120	07/14/2021
Tetrahydrofuran	*	5.0		<b>48.5</b>	50.00	0	97.0	63.5	122	07/14/2021
Toluene	*	2.0		<b>45.8</b>	50.00	0	91.6	78.6	112	07/14/2021
trans-1,2-Dichloroethene	*	2.0		<b>50.4</b>	50.00	0	100.9	75.7	130	07/14/2021
trans-1,3-Dichloropropene	*	2.0		<b>43.7</b>	50.00	0	87.3	80.3	116	07/14/2021
trans-1,4-Dichloro-2-butene	*	2.0		<b>39.0</b>	50.00	0	78.0	65.5	124	07/14/2021
Trichloroethene	*	2.0		<b>51.1</b>	50.00	0	102.2	76.2	121	07/14/2021
Trichlorofluoromethane	*	5.0		<b>41.0</b>	50.00	0	81.9	71.1	131	07/14/2021
Vinyl acetate	*	5.0		<b>46.7</b>	50.00	0	93.5	79.8	129	07/14/2021
Vinyl chloride	*	2.0		<b>37.9</b>	50.00	0	75.7	58.6	141	07/14/2021
Xylenes, Total	*	4.0		<b>152</b>	150.0	0	101.1	78.3	114	07/14/2021
1,2-Dichloroethene, Total	*	4.0		<b>101</b>	100.0	0	100.6	78.5	125	07/14/2021
1,3-Dichloropropene, Total	*	4.0		<b>96.9</b>	100.0	0	96.9	82.3	117	07/14/2021
1,4-Dichloro-2-butene, Total	*	4.0		<b>82.8</b>	100.0	0	82.8	65.9	126	07/14/2021
Surr: 1,2-Dichloroethane-d4	*			<b>49.1</b>	50.00		98.1	80	120	07/14/2021
Surr: 4-Bromofluorobenzene	*			<b>49.8</b>	50.00		99.7	80	120	07/14/2021
Surr: Toluene-d8	*			<b>46.5</b>	50.00		93.0	80	120	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch	SampType:	Units		RPD Limit						
179812	LCSD	µg/L		15.4						
SampID: LCSD-AM210714A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		45.6	50.00	0	91.3	45.74	0.24	07/14/2021
1,1,1-Trichloroethane	*	2.0		47.9	50.00	0	95.8	49.30	2.84	07/14/2021
1,1,2,2-Tetrachloroethane	*	2.0		41.9	50.00	0	83.8	42.43	1.21	07/14/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		45.3	50.00	0	90.6	49.10	8.07	07/14/2021
1,1,2-Trichloroethane	*	0.5		44.3	50.00	0	88.5	43.81	1.02	07/14/2021
1,1-Dichloro-2-propanone	*	30.0		114	125.0	0	91.2	107.0	6.38	07/14/2021
1,1-Dichloroethane	*	2.0		47.8	50.00	0	95.5	49.72	4.02	07/14/2021
1,1-Dichloroethene	*	2.0		44.1	50.00	0	88.2	47.83	8.14	07/14/2021
1,1-Dichloropropene	*	2.0		46.7	50.00	0	93.5	49.99	6.72	07/14/2021
1,2,3-Trichlorobenzene	*	2.0		51.6	50.00	0	103.1	52.71	2.19	07/14/2021
1,2,3-Trichloropropane	*	2.0		41.7	50.00	0	83.3	41.69	0.07	07/14/2021
1,2,3-Trimethylbenzene	*	2.0		47.5	50.00	0	94.9	47.95	1.01	07/14/2021
1,2,4-Trichlorobenzene	*	2.0		50.4	50.00	0	100.8	52.18	3.43	07/14/2021
1,2,4-Trimethylbenzene	*	2.0		47.6	50.00	0	95.2	49.72	4.36	07/14/2021
1,2-Dibromo-3-chloropropane	*	5.0		44.8	50.00	0	89.6	46.95	4.64	07/14/2021
1,2-Dibromoethane	*	2.0		44.0	50.00	0	88.1	44.88	1.87	07/14/2021
1,2-Dichlorobenzene	*	2.0		46.5	50.00	0	93.0	47.86	2.90	07/14/2021
1,2-Dichloroethane	*	2.0		48.3	50.00	0	96.6	49.95	3.32	07/14/2021
1,2-Dichloropropane	*	2.0		48.1	50.00	0	96.3	49.65	3.09	07/14/2021
1,3,5-Trimethylbenzene	*	2.0		46.1	50.00	0	92.1	47.51	3.08	07/14/2021
1,3-Dichlorobenzene	*	2.0		49.8	50.00	0	99.6	52.32	4.92	07/14/2021
1,3-Dichloropropane	*	2.0		43.3	50.00	0	86.5	43.73	1.06	07/14/2021
1,4-Dichlorobenzene	*	2.0		47.6	50.00	0	95.3	49.60	4.05	07/14/2021
1-Chlorobutane	*	5.0		50.6	50.00	0	101.1	53.12	4.92	07/14/2021
2,2-Dichloropropane	*	2.0		52.0	50.00	0	104.1	54.21	4.08	07/14/2021
2-Butanone	*	10.0		132	125.0	0	106.0	135.0	1.93	07/14/2021
2-Chloroethyl vinyl ether	*	5.0		74.2	50.00	0	148.5	71.56	3.69	07/14/2021
2-Chlorotoluene	*	2.0		43.9	50.00	0	87.8	46.49	5.75	07/14/2021
2-Hexanone	*	10.0		126	125.0	0	101.0	125.8	0.31	07/14/2021
2-Nitropropane	*	10.0		474	500.0	0	94.9	471.3	0.67	07/14/2021
4-Chlorotoluene	*	2.0		45.2	50.00	0	90.5	53.17	16.14	07/14/2021
4-Methyl-2-pentanone	*	10.0		119	125.0	0	95.2	118.6	0.40	07/14/2021
Acetone	*	10.0		114	125.0	0	91.1	117.0	2.70	07/14/2021
Acetonitrile	*	10.0		590	500.0	0	117.9	611.8	3.71	07/14/2021
Acrolein	*	20.0		402	500.0	0	80.5	408.1	1.44	07/14/2021
Acrylonitrile	*	5.0		48.7	50.00	0	97.4	49.70	1.99	07/14/2021



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch	SampType:	Units		RPD Limit						
179812	LCSD	µg/L		15.4						
SampID: LCSD-AM210714A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		40.9	50.00	0	81.8	46.09	11.88	07/14/2021
Benzene	*	0.5		47.8	50.00	0	95.6	49.20	2.93	07/14/2021
Bromobenzene	*	2.0		49.6	50.00	0	99.2	50.96	2.75	07/14/2021
Bromochloromethane	*	2.0		46.9	50.00	0	93.8	47.84	2.03	07/14/2021
Bromodichloromethane	*	2.0		49.2	50.00	0	98.3	50.33	2.37	07/14/2021
Bromoform	*	2.0		47.1	50.00	0	94.2	47.66	1.20	07/14/2021
Bromomethane	*	5.0		54.3	50.00	0	108.6	53.15	2.12	07/14/2021
Carbon disulfide	*	2.0		42.5	50.00	0	84.9	44.69	5.12	07/14/2021
Carbon tetrachloride	*	2.0		47.4	50.00	0	94.7	49.96	5.32	07/14/2021
Chlorobenzene	*	2.0		46.5	50.00	0	93.0	47.89	2.97	07/14/2021
Chloroethane	*	2.0		41.2	50.00	0	82.5	42.58	3.17	07/14/2021
Chloroform	*	2.0		48.6	50.00	0	97.2	50.77	4.33	07/14/2021
Chloromethane	*	5.0		36.3	50.00	0	72.6	38.26	5.29	07/14/2021
Chloroprene	*	5.0		47.2	50.00	0	94.3	52.30	10.36	07/14/2021
cis-1,2-Dichloroethene	*	2.0		47.2	50.00	0	94.4	50.13	6.00	07/14/2021
cis-1,3-Dichloropropene	*	2.0		52.4	50.00	0	104.9	53.19	1.40	07/14/2021
cis-1,4-Dichloro-2-butene	*	2.0		44.0	50.00	0	87.9	43.77	0.41	07/14/2021
Cyclohexanone	*	20.0		449	500.0	0	89.8	438.0	2.44	07/14/2021
Dibromochloromethane	*	2.0		46.4	50.00	0	92.7	46.91	1.18	07/14/2021
Dibromomethane	*	2.0		46.5	50.00	0	93.1	47.53	2.13	07/14/2021
Dichlorodifluoromethane	*	2.0		28.1	50.00	0	56.2	30.46	8.10	07/14/2021
Diisopropyl ether	*	2.0		51.1	50.00	0	102.2	52.81	3.25	07/14/2021
Ethyl acetate	*	10.0		49.0	50.00	0	97.9	42.76	13.54	07/14/2021
Ethyl ether	*	5.0		51.2	50.00	0	102.4	53.82	4.95	07/14/2021
Ethyl methacrylate	*	5.0		46.3	50.00	0	92.5	46.40	0.30	07/14/2021
Ethylbenzene	*	2.0		48.0	50.00	0	96.1	49.52	3.05	07/14/2021
Ethyl-tert-butyl ether	*	2.0		50.6	50.00	0	101.2	50.90	0.55	07/14/2021
Hexachlorobutadiene	*	5.0		52.2	50.00	0	104.4	55.84	6.74	07/14/2021
Hexachloroethane	*	5.0		46.6	50.00	0	93.3	48.12	3.10	07/14/2021
Iodomethane	*	5.0		41.8	50.00	0	83.6	43.40	3.80	07/14/2021
Isopropylbenzene	*	2.0		47.2	50.00	0	94.4	48.64	3.03	07/14/2021
m,p-Xylenes	*	2.0		100	100.0	0	100.0	103.3	3.16	07/14/2021
Methacrylonitrile	*	5.0		46.6	50.00	0	93.2	46.99	0.85	07/14/2021
Methyl Methacrylate	*	5.0		55.2	50.00	0	110.5	54.87	0.65	07/14/2021
Methyl tert-butyl ether	*	2.0		48.1	50.00	0	96.2	48.29	0.44	07/14/2021
Methylacrylate	*	5.0		48.1	50.00	0	96.2	44.84	7.02	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch 179812	SampType: LCSD	Units µg/L								RPD Limit 15.4	Date Analyzed
SampID: LCSD-AM210714A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Methylene chloride	*	2.0		47.4	50.00	0	94.8	49.31	3.93	07/14/2021	
Naphthalene	*	5.0	B	50.8	50.00	0	101.7	52.25	2.72	07/14/2021	
n-Butyl acetate	*	2.0		49.1	50.00	0	98.2	48.61	1.04	07/14/2021	
n-Butylbenzene	*	2.0		45.1	50.00	0	90.2	47.74	5.64	07/14/2021	
n-Heptane	*	5.0		53.7	50.00	0	107.5	57.59	6.92	07/14/2021	
n-Hexane	*	5.0		46.7	50.00	0	93.4	48.73	4.28	07/14/2021	
Nitrobenzene	*	50.0		487	500.0	0	97.4	509.8	4.54	07/14/2021	
n-Propylbenzene	*	2.0		46.3	50.00	0	92.7	48.62	4.80	07/14/2021	
o-Xylene	*	2.0		47.2	50.00	0	94.3	48.36	2.53	07/14/2021	
Pentachloroethane	*	5.0		43.9	50.00	0	87.9	44.20	0.59	07/14/2021	
p-Isopropyltoluene	*	2.0		44.7	50.00	0	89.3	46.77	4.59	07/14/2021	
Propionitrile	*	10.0		515	500.0	0	103.0	527.8	2.46	07/14/2021	
sec-Butylbenzene	*	2.0		45.6	50.00	0	91.2	48.04	5.19	07/14/2021	
Styrene	*	2.0		51.6	50.00	0	103.3	53.05	2.71	07/14/2021	
tert-Amyl methyl ether	*	2.0		42.0	50.00	0	83.9	41.92	0.10	07/14/2021	
tert-Butyl alcohol	*	10.0		258	250.0	0	103.2	254.6	1.26	07/14/2021	
tert-Butylbenzene	*	2.0		44.5	50.00	0	89.0	46.14	3.66	07/14/2021	
Tetrachloroethene	*	0.5		47.8	50.00	0	95.7	51.10	6.61	07/14/2021	
Tetrahydrofuran	*	5.0		48.0	50.00	0	96.0	48.49	1.06	07/14/2021	
Toluene	*	2.0		44.6	50.00	0	89.3	45.81	2.56	07/14/2021	
trans-1,2-Dichloroethene	*	2.0		48.1	50.00	0	96.2	50.43	4.73	07/14/2021	
trans-1,3-Dichloropropene	*	2.0		43.4	50.00	0	86.9	43.67	0.51	07/14/2021	
trans-1,4-Dichloro-2-butene	*	2.0		39.6	50.00	0	79.1	38.99	1.45	07/14/2021	
Trichloroethene	*	2.0		48.7	50.00	0	97.5	51.08	4.71	07/14/2021	
Trichlorofluoromethane	*	5.0		38.2	50.00	0	76.4	40.97	6.97	07/14/2021	
Vinyl acetate	*	5.0		49.8	50.00	0	99.5	46.73	6.30	07/14/2021	
Vinyl chloride	*	2.0		36.4	50.00	0	72.9	37.87	3.88	07/14/2021	
Xylenes, Total	*	4.0		147	150.0	0	98.1	151.6	2.96	07/14/2021	
1,2-Dichloroethene, Total	*	4.0		95.3	100.0	0	95.3	100.6	5.36	07/14/2021	
1,3-Dichloropropene, Total	*	4.0		95.9	100.0	0	95.9	96.86	1.00	07/14/2021	
1,4-Dichloro-2-butene, Total	*	4.0		83.5	100.0	0	83.5	82.76	0.90	07/14/2021	
Surr: 1,2-Dichloroethane-d4	*			48.9	50.00		97.9			07/14/2021	
Surr: 4-Bromofluorobenzene	*			49.6	50.00		99.2			07/14/2021	
Surr: Toluene-d8	*			46.4	50.00		92.7			07/14/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

**Batch 179812**      **SampType: LCSG**      Units %REC

SampID: LCSG-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			<b>50.0</b>	50.00		100.1	80	120	07/14/2021
Surr: 4-Bromofluorobenzene	*			<b>51.0</b>	50.00		101.9	80	120	07/14/2021
Surr: Toluene-d8	*			<b>47.1</b>	50.00		94.2	80	120	07/14/2021

**Batch 179812**      **SampType: LCSGD**      Units %REC

RPD Limit **0**

SampID: LCSGD-AM210714A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*			<b>50.4</b>	50.00		100.8			07/14/2021
Surr: 4-Bromofluorobenzene	*			<b>51.4</b>	50.00		102.8			07/14/2021
Surr: Toluene-d8	*			<b>47.1</b>	50.00		94.3			07/14/2021

**Batch 179812**      **SampType: MS**      Units µg/L

SampID: 21070648-003DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1-Dichloroethene		2.0		<b>42.1</b>	50.00	0	84.2	67.5	123	07/14/2021
Benzene		0.5		<b>50.1</b>	50.00	0	100.1	72	120	07/14/2021
Chlorobenzene		2.0		<b>50.8</b>	50.00	0	101.5	73.9	108	07/14/2021
Ethylbenzene		2.0		<b>50.8</b>	50.00	0	101.6	74.8	115	07/14/2021
m,p-Xylenes		2.0		<b>49.9</b>	50.00	0	99.8	69.7	115	07/14/2021
o-Xylene		2.0		<b>47.9</b>	50.00	0	95.7	72.9	111	07/14/2021
Toluene		2.0		<b>46.7</b>	50.00	0	93.5	70.6	109	07/14/2021
Trichloroethene		2.0		<b>51.8</b>	50.00	0	103.6	77.7	119	07/14/2021
Xylenes, Total		4.0		<b>97.8</b>	100.0	0	97.8	72.1	113	07/14/2021
Surr: 1,2-Dichloroethane-d4	*			<b>49.8</b>	50.00		99.5	80	120	07/14/2021
Surr: 4-Bromofluorobenzene	*			<b>51.4</b>	50.00		102.8	80	120	07/14/2021
Surr: Toluene-d8	*			<b>46.8</b>	50.00		93.6	80	120	07/14/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21070648

**Client Project:** 128487 GSA

**Report Date:** 19-Jul-21

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

Batch	SampType	MSD		Units µg/L				RPD Limit		40	Date
SampID: 21070648-003DMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
1,1-Dichloroethene		2.0		<b>37.3</b>	50.00	0	74.5	42.12	12.24	07/14/2021	
Benzene		0.5		<b>46.6</b>	50.00	0	93.2	50.07	7.16	07/14/2021	
Chlorobenzene		2.0		<b>47.5</b>	50.00	0	95.0	50.77	6.66	07/14/2021	
Ethylbenzene		2.0		<b>48.4</b>	50.00	0	96.7	50.81	4.92	07/14/2021	
m,p-Xylenes		2.0		<b>47.6</b>	50.00	0	95.2	49.89	4.70	07/14/2021	
o-Xylene		2.0		<b>45.2</b>	50.00	0	90.5	47.86	5.61	07/14/2021	
Toluene		2.0		<b>43.8</b>	50.00	0	87.6	46.73	6.45	07/14/2021	
Trichloroethene		2.0		<b>48.1</b>	50.00	0	96.1	51.78	7.45	07/14/2021	
Xylenes, Total		4.0		<b>92.8</b>	100.0	0	92.8	97.75	5.14	07/14/2021	
Surr: 1,2-Dichloroethane-d4	*			<b>50.4</b>	50.00		100.7			07/14/2021	
Surr: 4-Bromofluorobenzene	*			<b>51.6</b>	50.00		103.2			07/14/2021	
Surr: Toluene-d8	*			<b>46.5</b>	50.00		93.1			07/14/2021	



# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21070648

Client Project: 128487 GSA

Report Date: 19-Jul-21

Carrier: Alec Rebbe

Received By: ERH

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

12-Jul-21

12-Jul-21

Mary E. Kemp

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **1.6**
- Type of thermal preservation? None  Ice  Blue Ice  Dry Ice
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Reported field parameters measured: Field  Lab  NA
- Container/Temp Blank temperature in compliance? Yes  No

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

- Water – at least one vial per sample has zero headspace? Yes  No  No VOA vials
- Water - TOX containers have zero headspace? Yes  No  No TOX containers
- Water - pH acceptable upon receipt? Yes  No  NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes  No  NA

Any No responses must be detailed below or on the COC.

pH strip #75145 - MKemp - 7/12/2021 4:46:22 PM

Trip Blank collection date and time will be reported as the received date and time (end of trip). - MKemp - 7/12/2021 4:46:35 PM

Burns & McDonnell Engineering  
 425 South Woods Mill Road  
 Chesterfield, Missouri 63017  
 Phone: (314) 682-1500 Fax: (314) 682-1600  
 Attention: *JUSTIN CARTER*  
*SCARTER@Burnsmcd.com*

Laboratory: *TELLAP, Inc*  
 Address: *5445 HARBESIDE LAKE RD*  
 City/State/Zip: *COLLINGSVILLE, IL 62234*  
 Telephone: *618-344-1004*

Document Control No: *128487-011*  
 Lab. Reference No. or Episode No.: *21070648*

Project Number: *128487* Sample Type

Client Name: *GSA* Matrix

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Matrix			Number of Containers	Analysis	Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time	Liquid	Solid	Gas			
<i>MW-08</i>	<i>07092021</i>			<i>2021</i>			<i>7/9</i>	<i>1019</i>	<i>X</i>			<i>5</i>	<i>PHAS TPH-DRO ALO PCB METALS (TOTAL) VOLG</i>	<i>21070648-001</i>
<i>MW-19</i>	<i>07092021</i>			<i>2021</i>			<i>7/9</i>	<i>1412</i>	<i>Y</i>			<i>5</i>	<i>PHAS TPH-DRO ALO PCB METALS (TOTAL) VOLG</i>	<i>002</i>
<i>MW-15</i>	<i>07092021</i>			<i>2021</i>			<i>7/9</i>	<i>1630</i>	<i>X</i>			<i>5</i>	<i>PHAS TPH-DRO ALO PCB METALS (TOTAL) VOLG</i>	<i>003</i>
<i>MW-12</i>	<i>07092021</i>			<i>2021</i>			<i>7/9</i>	<i>1755</i>	<i>Y</i>			<i>5</i>	<i>PHAS TPH-DRO ALO PCB METALS (TOTAL) VOLG</i>	<i>004</i>
<i>Tap Blank 10 (T310)</i>									<i>X</i>			<i>2</i>	<i>PHAS TPH-DRO ALO PCB METALS (TOTAL) VOLG</i>	<i>005</i>



Sampler (signature): *(b) (6)* Sampler (signature): \_\_\_\_\_ Special Instructions: *SEE WORK ORDER COC LIST*

Relinquished By: *(b) (6)* Date/Time: *7/12* Received By: *(b) (6)* Date/Time: *7/12/2025* Ice Present in Container: Yes  No  Temperature Upon Receipt: \_\_\_\_\_  
 Relinquished By: *(b) (6)* Date/Time: *7/12/2025* Received By: *(b) (6)* Date/Time: *7/12/2025* Laboratory Comments: *1.6 LTG S KE pHV 75145 (b) (6)*  
*OK in T3*

August 10, 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:** 128487 GSA

**WorkOrder:** 21071732

Dear Justin Carter:

TEKLAB, INC received 2 samples on 7/29/2021 9:56:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,

(b) (6)

Emily Pohlman  
Project Manager  
(618)344-1004 ex 44  
[epohlman@teklabinc.com](mailto:epohlman@teklabinc.com)



## Report Contents

<http://www.teklabinc.com/>

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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**This reporting package includes the following:**

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Chain of Custody	Appended



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-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:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

### Qualifiers

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



# Case Narrative

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

**Cooler Receipt Temp:** 19.2 °C

This report was revised on 8/10/2021 per Justin Carter's request. The reason for the revision is to report GRO. Please replace report dated 8/5/2021 with this report. EEP 8/10/2021

## Locations

### Collinsville

**Address** 5445 Horseshoe Lake Road  
Collinsville, IL 62234-7425  
**Phone** (618) 344-1004  
**Fax** (618) 344-1005  
**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

### Springfield

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

### Chicago

**Address** 1319 Butterfield Rd.  
Downers Grove, IL 60515  
**Phone** (630) 324-6855  
**Fax**  
**Email** arenner@teklabinc.com

### Kansas City

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



## Accreditations

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-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	8/31/2021	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



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Lab ID: 21071732-001

Client Sample ID: MW-17

Matrix: GROUNDWATER

Collection Date: 07/29/2021 8:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/02/2021 11:07	180317
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	08/02/2021 11:07	180317
Copper	NELAP	0.0050		< 0.0050	mg/L	1	08/02/2021 11:07	180317
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/02/2021 11:07	180317
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	08/02/2021 11:07	180317
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/03/2021 17:43	180359
Surr: Decachlorobiphenyl	*	10-152		80.0	%REC	1	08/03/2021 17:43	180359
Surr: Tetrachloro-meta-xylene	*	9.73-128		101.6	%REC	1	08/03/2021 17:43	180359
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Acenaphthylene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Anthracene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Benzo(a)anthracene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Benzo(a)pyrene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Benzo(b)fluoranthene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Benzo(g,h,i)perylene	NELAP	0.00100		ND	mg/L	1	08/03/2021 13:08	180355
Benzo(k)fluoranthene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Chrysene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Dibenzo(a,h)anthracene	NELAP	0.00100		ND	mg/L	1	08/03/2021 13:08	180355
Fluoranthene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Fluorene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Indeno(1,2,3-cd)pyrene	NELAP	0.00100		ND	mg/L	1	08/03/2021 13:08	180355
Naphthalene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Phenanthrene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
Pyrene	NELAP	0.00100		ND	mg/L	1	08/03/2021 5:10	180355
TPH-DRO (C10 - C21)	*	0.500		ND	mg/L	1	08/03/2021 5:10	180355
TPH-ORO (C21 - C35)	*	0.700		ND	mg/L	1	08/03/2021 5:10	180355
Surr: 2-Fluorobiphenyl	*	1.39-137		66.5	%REC	1	08/03/2021 5:10	180355
Surr: Nitrobenzene-d5	*	29.1-125		72.5	%REC	1	08/03/2021 5:10	180355
Surr: p-Terphenyl-d14	*	35.2-164		90.3	%REC	1	08/03/2021 5:10	180355
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	08/02/2021 14:18	180354
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Lab ID: 21071732-001

Client Sample ID: MW-17

Matrix: GROUNDWATER

Collection Date: 07/29/2021 8:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:18	180354
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:18	180354
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:18	180354
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
2-Butanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
2-Hexanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
2-Nitropropane	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
Acetone	NELAP	10.0	B	ND	µg/L	1	08/02/2021 14:18	180354
Acetonitrile	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
Acrolein	NELAP	20.0		ND	µg/L	1	08/02/2021 14:18	180354
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Benzene	NELAP	0.5		ND	µg/L	1	08/02/2021 14:18	180354
Bromobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Bromochloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Bromoform	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Bromomethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Carbon disulfide	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Chlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Chloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Chloroform	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Chloromethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Chloroprene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Lab ID: 21071732-001

Client Sample ID: MW-17

Matrix: GROUNDWATER

Collection Date: 07/29/2021 8:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Cyclohexanone	*	20.0		ND	µg/L	1	08/02/2021 14:18	180354
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Dibromomethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Diisopropyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Ethyl acetate	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
Ethyl ether	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Ethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Hexachloroethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Iodomethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Methylacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Methylene chloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Naphthalene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
n-Butyl acetate	*	2.0		ND	µg/L	1	08/02/2021 14:18	180354
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
n-Heptane	*	5.0		ND	µg/L	1	08/02/2021 14:18	180354
n-Hexane	*	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Nitrobenzene	NELAP	50.0		ND	µg/L	1	08/02/2021 14:18	180354
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
o-Xylene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Pentachloroethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Propionitrile	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Styrene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:18	180354
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	08/02/2021 14:18	180354
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	08/02/2021 14:18	180354
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Toluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	08/02/2021 14:18	180354
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Trichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Vinyl acetate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:18	180354
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:18	180354



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

**Lab ID:** 21071732-001

**Client Sample ID:** MW-17

**Matrix:** GROUNDWATER

**Collection Date:** 07/29/2021 8:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Xylenes, Total	NELAP	4.0		ND	µg/L	1	08/02/2021 14:18	180354
Surr: 1,2-Dichloroethane-d4	*	80-120		101.8	%REC	1	08/02/2021 14:18	180354
Surr: 4-Bromofluorobenzene	*	80-120		103.2	%REC	1	08/02/2021 14:18	180354
Surr: Toluene-d8	*	80-120		93.2	%REC	1	08/02/2021 14:18	180354
<i>Allowable Marginal Exceedance of 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, Styrene &amp; m.p-Xylenes in the laboratory control sample is verified per the TNI Standard.</i>								
<i>Acetone was detected in the MBLK at a level between the MDL and the RL. Sample result is less than the RL. Data is reportable.</i>								



Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Lab ID: 21071732-002

Client Sample ID: Rinse-17

Matrix: GROUNDWATER

Collection Date: 07/29/2021 9:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 3005A, 6010B, METALS BY ICP (DISSOLVED)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	07/31/2021 1:55	180322
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/31/2021 1:55	180322
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/31/2021 1:55	180322
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/31/2021 1:55	180322
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	07/31/2021 1:55	180322
<b>SW-846 3005A, 6010B, METALS BY ICP (TOTAL)</b>								
Antimony	NELAP	0.0500		< 0.0500	mg/L	1	08/02/2021 11:19	180317
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	08/02/2021 11:19	180317
Copper	NELAP	0.0050		< 0.0050	mg/L	1	08/02/2021 11:19	180317
Lead	NELAP	0.0150		< 0.0150	mg/L	1	08/02/2021 11:19	180317
Zinc	NELAP	0.0100		< 0.0100	mg/L	1	08/02/2021 11:19	180317
<b>SW-846 3510C, 8082, POLYCHLORINATED BIPHENYLS (PCBS) BY GC/ECD</b>								
Aroclor 1016	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1221	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1232	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1242	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1248	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1254	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Aroclor 1260	NELAP	1.00		ND	µg/L	1	08/03/2021 18:00	180359
Surr: Decachlorobiphenyl	*	10-152		44.4	%REC	1	08/03/2021 18:00	180359
Surr: Tetrachloro-meta-xylene	*	9.73-128		66.8	%REC	1	08/03/2021 18:00	180359
<b>SW-846 3510C, 8270C, SEMI-VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Acenaphthene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Acenaphthylene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Anthracene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Benzo(a)anthracene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Benzo(a)pyrene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Benzo(b)fluoranthene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Benzo(g,h,i)perylene	NELAP	0.00400		ND	mg/L	1	08/03/2021 13:46	180355
Benzo(k)fluoranthene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Chrysene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Dibenzo(a,h)anthracene	NELAP	0.00400		ND	mg/L	1	08/03/2021 13:46	180355
Fluoranthene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Fluorene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Indeno(1,2,3-cd)pyrene	NELAP	0.00400		ND	mg/L	1	08/03/2021 13:46	180355
Naphthalene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Phenanthrene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
Pyrene	NELAP	0.00400		ND	mg/L	1	08/03/2021 5:49	180355
TPH-DRO (C10 - C21)	*	2.00		ND	mg/L	1	08/03/2021 5:49	180355
TPH-ORO (C21 - C35)	*	2.80		ND	mg/L	1	08/03/2021 5:49	180355
Surr: 2-Fluorobiphenyl	*	1.39-137		65.9	%REC	1	08/03/2021 5:49	180355
Surr: Nitrobenzene-d5	*	29.1-125		71.5	%REC	1	08/03/2021 5:49	180355
Surr: p-Terphenyl-d14	*	35.2-164		94.5	%REC	1	08/03/2021 5:49	180355
<i>Elevated reporting limit due to sample composition.</i>								
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,1,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1,1-Trichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354



# Laboratory Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Lab ID: 21071732-002

Client Sample ID: Rinse-17

Matrix: GROUNDWATER

Collection Date: 07/29/2021 9:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
1,1,2,2-Tetrachloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1,2-Trichloroethane	NELAP	0.5		ND	µg/L	1	08/02/2021 14:44	180354
1,1-Dichloro-2-propanone	NELAP	30.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1-Dichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,1-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2,3-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2,3-Trichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2,3-Trimethylbenzene	*	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2,4-Trichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2,4-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dibromo-3-chloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dibromoethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dichloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dichloroethene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:44	180354
1,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,3,5-Trimethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,3-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,3-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1,3-Dichloropropene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:44	180354
1,4-Dichloro-2-butene, Total	*	4.0		ND	µg/L	1	08/02/2021 14:44	180354
1,4-Dichlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
1-Chlorobutane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
2,2-Dichloropropane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
2-Butanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
2-Chloroethyl vinyl ether	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
2-Chlorotoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
2-Hexanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
2-Nitropropane	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
4-Chlorotoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
4-Methyl-2-pentanone	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
Acetone	NELAP	10.0		ND	µg/L	1	08/03/2021 10:50	180416
Acetonitrile	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
Acrolein	NELAP	20.0		ND	µg/L	1	08/02/2021 14:44	180354
Acrylonitrile	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Allyl chloride	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Benzene	NELAP	0.5		ND	µg/L	1	08/02/2021 14:44	180354
Bromobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Bromochloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Bromodichloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Bromoform	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Bromomethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Carbon disulfide	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Carbon tetrachloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Chlorobenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

**Lab ID:** 21071732-002

**Client Sample ID:** Rinse-17

**Matrix:** GROUNDWATER

**Collection Date:** 07/29/2021 9:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
Chloroethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Chloroform	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Chloromethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Chloroprene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
cis-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
cis-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
cis-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Cyclohexanone	*	20.0		ND	µg/L	1	08/02/2021 14:44	180354
Dibromochloromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Dibromomethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Dichlorodifluoromethane	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Diisopropyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Ethyl acetate	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
Ethyl ether	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Ethyl methacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Ethylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Ethyl-tert-butyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Hexachlorobutadiene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Hexachloroethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Iodomethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Isopropylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
m,p-Xylenes	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Methacrylonitrile	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Methyl Methacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Methyl tert-butyl ether	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Methylacrylate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Methylene chloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Naphthalene	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
n-Butyl acetate	*	2.0		ND	µg/L	1	08/02/2021 14:44	180354
n-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
n-Heptane	*	5.0		ND	µg/L	1	08/02/2021 14:44	180354
n-Hexane	*	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Nitrobenzene	NELAP	50.0		ND	µg/L	1	08/02/2021 14:44	180354
n-Propylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
o-Xylene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Pentachloroethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
p-Isopropyltoluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Propionitrile	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
sec-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Styrene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
tert-Amyl methyl ether	*	2.0		ND	µg/L	1	08/02/2021 14:44	180354
tert-Butyl alcohol	NELAP	10.0		ND	µg/L	1	08/02/2021 14:44	180354
tert-Butylbenzene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Tetrachloroethene	NELAP	0.5		ND	µg/L	1	08/02/2021 14:44	180354
Tetrahydrofuran	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Toluene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
TPH - GRO (C6 - C10)	*	500		ND	µg/L	1	08/02/2021 14:44	180354



## Laboratory Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

**Lab ID:** 21071732-002

**Client Sample ID:** Rinse-17

**Matrix:** GROUNDWATER

**Collection Date:** 07/29/2021 9:10

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
<b>SW-846 5030, 8260B, VOLATILE ORGANIC COMPOUNDS BY GC/MS</b>								
trans-1,2-Dichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
trans-1,3-Dichloropropene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
trans-1,4-Dichloro-2-butene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Trichloroethene	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Trichlorofluoromethane	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Vinyl acetate	NELAP	5.0		ND	µg/L	1	08/02/2021 14:44	180354
Vinyl chloride	NELAP	2.0		ND	µg/L	1	08/02/2021 14:44	180354
Xylenes, Total	NELAP	4.0		ND	µg/L	1	08/02/2021 14:44	180354
Surr: 1,2-Dichloroethane-d4	*	80-120		103.5	%REC	1	08/02/2021 14:44	180354
Surr: 4-Bromofluorobenzene	*	80-120		105.2	%REC	1	08/02/2021 14:44	180354
Surr: Toluene-d8	*	80-120		93.0	%REC	1	08/02/2021 14:44	180354

*Allowable Marginal Exceedance of 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, Styrene & m,p-Xylenes in the laboratory control sample is verified per the TNI Standard.*



## Sample Summary

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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Lab Sample ID	Client Sample ID	Matrix	Fractions	Collection Date
21071732-001	MW-17	Groundwater	4	07/29/2021 8:45
21071732-002	Rinse-17	Groundwater	5	07/29/2021 9:10

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## Dates Report

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

Sample ID	Client Sample ID	Collection Date	Received Date	Prep Date/Time	Analysis Date/Time
Test Name					
21071732-001A	MW-17	07/29/2021 8:45	07/29/2021 9:56		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD					
				08/03/2021 9:24	08/03/2021 17:43
21071732-001B	MW-17	07/29/2021 8:45	07/29/2021 9:56		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS					
				08/02/2021 11:30	08/03/2021 5:10
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS					
				08/02/2021 11:30	08/03/2021 13:08
21071732-001C	MW-17	07/29/2021 8:45	07/29/2021 9:56		
SW-846 3005A, 6010B, Metals by ICP (Total)					
				07/30/2021 11:02	08/02/2021 11:07
21071732-001D	MW-17	07/29/2021 8:45	07/29/2021 9:56		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					
					08/02/2021 14:18
21071732-002A	Rinse-17	07/29/2021 9:10	07/29/2021 9:56		
SW-846 3510C, 8082, PolyChlorinated Biphenyls (PCBs) by GC/ECD					
				08/03/2021 9:24	08/03/2021 18:00
21071732-002B	Rinse-17	07/29/2021 9:10	07/29/2021 9:56		
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS					
				08/02/2021 11:30	08/03/2021 5:49
SW-846 3510C, 8270C, Semi-Volatile Organic Compounds by GC/MS					
				08/02/2021 11:30	08/03/2021 13:46
21071732-002C	Rinse-17	07/29/2021 9:10	07/29/2021 9:56		
SW-846 3005A, 6010B, Metals by ICP (Total)					
				07/30/2021 11:02	08/02/2021 11:19
21071732-002D	Rinse-17	07/29/2021 9:10	07/29/2021 9:56		
SW-846 3005A, 6010B, Metals by ICP (Dissolved)					
				07/30/2021 11:54	07/31/2021 1:55
21071732-002E	Rinse-17	07/29/2021 9:10	07/29/2021 9:56		
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					
					08/02/2021 14:44
SW-846 5030, 8260B, Volatile Organic Compounds by GC/MS					
					08/03/2021 10:50



## Quality Control Results

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

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

**Batch 180322**    **SampType: MBLK**    Units mg/L  
 SampID: MBLK-180322

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	07/31/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	07/31/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	07/31/2021
Lead		0.0150		< 0.0150	0.0014	0	0	-100	100	07/31/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	07/31/2021

**Batch 180322**    **SampType: LCS**    Units mg/L  
 SampID: LCS-180322

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.440	0.5000	0	88.0	85	115	07/31/2021
Arsenic		0.0250		0.479	0.5000	0	95.8	85	115	07/31/2021
Copper		0.0050		0.233	0.2500	0	93.2	85	115	07/31/2021
Lead		0.0150		0.449	0.5000	0	89.8	85	115	07/31/2021
Zinc		0.0100		0.465	0.5000	0	93.0	85	115	07/31/2021

**Batch 180322**    **SampType: MS**    Units mg/L  
 SampID: 21071732-002DMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.422	0.5000	0.007000	83.1	75	125	07/31/2021
Arsenic		0.0250		0.465	0.5000	0	93.0	75	125	07/31/2021
Copper		0.0050		0.228	0.2500	0	91.1	75	125	07/31/2021
Lead		0.0150		0.438	0.5000	0	87.7	75	125	07/31/2021
Zinc		0.0100		0.454	0.5000	0	90.8	75	125	07/31/2021

**Batch 180322**    **SampType: MSD**    Units mg/L  
 SampID: 21071732-002DMSD

RPD Limit 20

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		0.424	0.5000	0.007000	83.5	0.4223	0.52	07/31/2021
Arsenic		0.0250		0.466	0.5000	0	93.1	0.4649	0.17	07/31/2021
Copper		0.0050		0.227	0.2500	0	90.7	0.2277	0.40	07/31/2021
Lead		0.0150		0.434	0.5000	0	86.8	0.4384	0.99	07/31/2021
Zinc		0.0100		0.449	0.5000	0	89.9	0.4539	1.00	07/31/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch 180317**      **SampType: MBLK**      Units mg/L  
 SampID: MBLK-180317

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	08/03/2021
Antimony		0.0500		< 0.0500	0.0068	0	0	-100	100	08/02/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	08/03/2021
Arsenic		0.0250		< 0.0250	0.0087	0	0	-100	100	08/02/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	08/03/2021
Copper		0.0050		< 0.0050	0.0013	0	0	-100	100	08/02/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	08/03/2021
Lead		0.0150		< 0.0150	0.0040	0	0	-100	100	08/02/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	08/02/2021
Zinc		0.0100		< 0.0100	0.0050	0	0	-100	100	08/03/2021

**Batch 180317**      **SampType: LCS**      Units mg/L  
 SampID: LCS-180317

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.507	0.5000	0	101.3	85	115	08/02/2021
Antimony		0.0500		0.501	0.5000	0	100.2	85	115	08/03/2021
Arsenic		0.0250		0.544	0.5000	0	108.8	85	115	08/03/2021
Arsenic		0.0250		0.534	0.5000	0	106.8	85	115	08/02/2021
Copper		0.0050		0.261	0.2500	0	104.4	85	115	08/03/2021
Copper		0.0050		0.256	0.2500	0	102.2	85	115	08/02/2021
Lead		0.0150		0.502	0.5000	0	100.5	85	115	08/03/2021
Lead		0.0150		0.499	0.5000	0	99.8	85	115	08/02/2021
Zinc		0.0100		0.521	0.5000	0	104.2	85	115	08/03/2021
Zinc		0.0100		0.517	0.5000	0	103.4	85	115	08/02/2021

**Batch 180317**      **SampType: MS**      Units mg/L  
 SampID: 21071732-001CMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Antimony		0.0500		0.509	0.5000	0	101.7	75	125	08/02/2021
Arsenic		0.0250		0.533	0.5000	0	106.6	75	125	08/02/2021
Copper		0.0050		0.257	0.2500	0	102.8	75	125	08/02/2021
Lead		0.0150		0.480	0.5000	0	96.0	75	125	08/02/2021
Zinc		0.0100		0.499	0.5000	0	99.8	75	125	08/02/2021





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180317		SampType: MSD		Units mg/L			RPD Limit 20			
SampID: 21071732-001CMSD										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Antimony		0.0500		<b>0.527</b>	0.5000	0	105.4	0.5086	3.59	08/02/2021
Arsenic		0.0250		<b>0.539</b>	0.5000	0	107.9	0.5328	1.21	08/02/2021
Copper		0.0050		<b>0.266</b>	0.2500	0	106.6	0.2570	3.63	08/02/2021
Lead		0.0150		<b>0.496</b>	0.5000	0	99.3	0.4802	3.30	08/02/2021
Zinc		0.0100		<b>0.515</b>	0.5000	0	103.0	0.4989	3.16	08/02/2021

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

Batch 180359		SampType: MBLK		Units µg/L						
SampID: MBLK-180359										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Aroclor 1016		0.095		<b>ND</b>						08/02/2021
Aroclor 1016		1.00		<b>ND</b>						08/02/2021
Aroclor 1221		0.095		<b>ND</b>						08/02/2021
Aroclor 1221		1.00		<b>ND</b>						08/02/2021
Aroclor 1232		0.095		<b>ND</b>						08/02/2021
Aroclor 1232		1.00		<b>ND</b>						08/02/2021
Aroclor 1242		0.095		<b>ND</b>						08/02/2021
Aroclor 1242		1.00		<b>ND</b>						08/02/2021
Aroclor 1248		1.00		<b>ND</b>						08/02/2021
Aroclor 1248		0.095		<b>ND</b>						08/02/2021
Aroclor 1254		1.00		<b>ND</b>						08/02/2021
Aroclor 1254		0.095		<b>ND</b>						08/02/2021
Aroclor 1260		1.00		<b>ND</b>						08/02/2021
Aroclor 1260		0.095		<b>ND</b>						08/02/2021
Surr: Decachlorobiphenyl	*			<b>0.046</b>	0.1250		36.5	31.2	141	08/04/2021
Surr: Decachlorobiphenyl	*			<b>0.093</b>	0.1250		74.5	31.2	141	08/02/2021
Surr: Decachlorobiphenyl	*			<b>0.09</b>	0.1250		74.5	27.5	143	08/02/2021
Surr: Tetrachloro-meta-xylene	*			<b>0.09</b>	0.1250		68.9	35.2	135	08/02/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180359		SampType: LCS		Units µg/L							
SampID: LCSPCB-180359											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Aroclor 1016		1.00		<b>2.21</b>	2.500	0	88.5	56.2	136	08/02/2021	
Aroclor 1016		0.095		<b>2.21</b>	2.500	0	88.5	50	140	08/02/2021	
Aroclor 1260		1.00		<b>1.91</b>	2.500	0	76.3	42.1	125	08/02/2021	
Aroclor 1260		0.095		<b>1.91</b>	2.500	0	76.3	8	140	08/02/2021	
Surr: Decachlorobiphenyl	*			<b>0.09</b>	0.1250		69.8	27.5	143	08/02/2021	
Surr: Decachlorobiphenyl	*			<b>0.087</b>	0.1250		69.8	31.2	141	08/02/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.10</b>	0.1250		77.6	35.2	135	08/02/2021	

Batch 180359		SampType: LCSD		Units µg/L							
SampID: LCSPCBD-180359											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Aroclor 1016		0.095		<b>2.75</b>	2.500	0	109.8	2.211	21.56	08/02/2021	
Aroclor 1016		1.00		<b>2.75</b>	2.500	0	109.8	2.211	21.56	08/02/2021	
Aroclor 1260		0.095		<b>2.73</b>	2.500	0	109.2	1.908	35.50	08/02/2021	
Aroclor 1260		1.00		<b>2.73</b>	2.500	0	109.2	1.908	35.50	08/02/2021	
Surr: Decachlorobiphenyl	*			<b>0.135</b>	0.1250		107.9			08/02/2021	
Surr: Decachlorobiphenyl	*			<b>0.13</b>	0.1250		107.9			08/02/2021	
Surr: Tetrachloro-meta-xylene	*			<b>0.11</b>	0.1250		89.1			08/02/2021	

Batch 180359		SampType: LCS		Units %REC							
SampID: LCSPST-180359											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.124</b>	0.1250		99.2	31.2	141	08/02/2021	

Batch 180359		SampType: LCSD		Units %REC							
SampID: LCSPSTD-180359											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
Surr: Decachlorobiphenyl	*			<b>0.115</b>	0.1250		91.9			08/02/2021	



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180355    **SampType:** MBLK    **Units** mg/L  
**SampID:** MBLK-180355

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Acenaphthene		0.00100		ND						08/02/2021
Acenaphthylene		0.00100		ND						08/02/2021
Anthracene		0.00100		ND						08/02/2021
Benzo(a)anthracene		0.00100		ND						08/02/2021
Benzo(a)pyrene		0.00100		ND						08/02/2021
Benzo(b)fluoranthene		0.00100		ND						08/02/2021
Benzo(g,h,i)perylene		0.00100		ND						08/03/2021
Benzo(k)fluoranthene		0.00100		ND						08/02/2021
Chrysene		0.00100		ND						08/02/2021
Dibenzo(a,h)anthracene		0.00100		ND						08/03/2021
Fluoranthene		0.00100		ND						08/02/2021
Fluorene		0.00100		ND						08/02/2021
Indeno(1,2,3-cd)pyrene		0.00100		ND						08/03/2021
Indeno(1,2,3-cd)pyrene		0.00100		ND						08/02/2021
Naphthalene		0.00100		ND						08/02/2021
Phenanthrene		0.00100		ND						08/02/2021
Pyrene		0.00100		ND						08/02/2021
TPH-DRO (C10 - C21)	*	0.500		ND						08/02/2021
TPH-ORO (C21 - C35)	*	0.700		ND						08/02/2021
Surr: 2-Fluorobiphenyl	*			0.0101	0.0125		81.0	1.09	175	08/02/2021
Surr: Nitrobenzene-d5	*			0.0104	0.0125		83.3	35.5	156	08/02/2021
Surr: p-Terphenyl-d14	*			0.0144	0.0125		115.4	35	222	08/02/2021



## Quality Control Results

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**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180355		SampType: LCS		Units mg/L							
SampID: LCS-180355											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Acenaphthene		0.00100		<b>0.00708</b>	0.0100	0	70.8	39.6	145	08/02/2021	
Acenaphthylene		0.00100		<b>0.00706</b>	0.0100	0	70.6	38.3	147	08/02/2021	
Anthracene		0.00100		<b>0.00743</b>	0.0100	0	74.3	47.7	153	08/02/2021	
Benzo(a)anthracene		0.00100		<b>0.00778</b>	0.0100	0	77.8	45	136	08/02/2021	
Benzo(a)pyrene		0.00100		<b>0.00684</b>	0.0100	0	68.4	49.8	164	08/02/2021	
Benzo(b)fluoranthene		0.00100		<b>0.00793</b>	0.0100	0	79.3	45.7	167	08/02/2021	
Benzo(g,h,i)perylene		0.00100		<b>0.00762</b>	0.0100	0	76.2	41	157	08/03/2021	
Benzo(k)fluoranthene		0.00100		<b>0.00841</b>	0.0100	0	84.1	46.7	166	08/02/2021	
Chrysene		0.00100		<b>0.00765</b>	0.0100	0	76.5	45.5	162	08/02/2021	
Dibenzo(a,h)anthracene		0.00100		<b>0.00730</b>	0.0100	0	73.0	40.4	154	08/03/2021	
Fluoranthene		0.00100		<b>0.00813</b>	0.0100	0	81.3	47.3	168	08/02/2021	
Fluorene		0.00100		<b>0.00773</b>	0.0100	0	77.3	45.2	153	08/02/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00777</b>	0.0100	0	77.7	44.6	166	08/03/2021	
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00698</b>	0.0100	0	69.8	44.6	166	08/02/2021	
Naphthalene		0.00100		<b>0.00651</b>	0.0100	0	65.1	16.6	137	08/02/2021	
Phenanthrene		0.00100		<b>0.00792</b>	0.0100	0	79.2	50.8	149	08/02/2021	
Pyrene		0.00100		<b>0.00804</b>	0.0100	0	80.4	44.9	163	08/02/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.00846</b>	0.0125		67.6	1.09	175	08/02/2021	
Surr: Nitrobenzene-d5	*			<b>0.00881</b>	0.0125		70.5	35.5	156	08/02/2021	
Surr: p-Terphenyl-d14	*			<b>0.0123</b>	0.0125		98.3	35	222	08/02/2021	



## Quality Control Results

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**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180355		SampType: LCSD		Units mg/L				RPD Limit 40		
SampID: LCSD-180355										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Acenaphthene		0.00100		<b>0.00726</b>	0.0100	0	72.6	0.007081	2.43	08/02/2021
Acenaphthylene		0.00100		<b>0.00708</b>	0.0100	0	70.8	0.007064	0.27	08/02/2021
Anthracene		0.00100		<b>0.00775</b>	0.0100	0	77.5	0.007428	4.23	08/02/2021
Benzo(a)anthracene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.007781	4.98	08/02/2021
Benzo(a)pyrene		0.00100		<b>0.00733</b>	0.0100	0	73.3	0.006836	6.99	08/02/2021
Benzo(b)fluoranthene		0.00100		<b>0.00830</b>	0.0100	0	83.0	0.007934	4.53	08/02/2021
Benzo(g,h,i)perylene		0.00100		<b>0.00803</b>	0.0100	0	80.3	0.006874	15.46	08/03/2021
Benzo(k)fluoranthene		0.00100		<b>0.00869</b>	0.0100	0	86.9	0.008412	3.26	08/02/2021
Chrysene		0.00100		<b>0.00805</b>	0.0100	0	80.5	0.007646	5.13	08/02/2021
Dibenzo(a,h)anthracene		0.00100		<b>0.00761</b>	0.0100	0	76.1	0.007022	8.03	08/03/2021
Fluoranthene		0.00100		<b>0.00853</b>	0.0100	0	85.3	0.008128	4.83	08/02/2021
Fluorene		0.00100		<b>0.00792</b>	0.0100	0	79.2	0.007734	2.38	08/02/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00816</b>	0.0100	0	81.6	0.006985	15.54	08/03/2021
Indeno(1,2,3-cd)pyrene		0.00100		<b>0.00723</b>	0.0100	0	72.3	0.006985	3.45	08/02/2021
Naphthalene		0.00100		<b>0.00656</b>	0.0100	0	65.6	0.006509	0.79	08/02/2021
Phenanthrene		0.00100		<b>0.00818</b>	0.0100	0	81.8	0.007922	3.27	08/02/2021
Pyrene		0.00100		<b>0.00834</b>	0.0100	0	83.4	0.008035	3.74	08/02/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00924</b>	0.0125		73.9			08/02/2021
Surr: Nitrobenzene-d5	*			<b>0.00920</b>	0.0125		73.6			08/02/2021
Surr: p-Terphenyl-d14	*			<b>0.0126</b>	0.0125		101.1			08/02/2021

Batch 180355		SampType: LCSG		Units mg/L						
SampID: LCSG-180355										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH-DRO (C10 - C21)	*	0.500		<b>1.77</b>	2.000	0	88.5	17.1	195	08/02/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00960</b>	0.0125		76.8	1.09	175	08/02/2021
Surr: Nitrobenzene-d5	*			<b>0.00926</b>	0.0125		74.1	35.5	156	08/02/2021
Surr: p-Terphenyl-d14	*			<b>0.0128</b>	0.0125		102.6	35	222	08/02/2021

Batch 180355		SampType: LCSGD		Units mg/L				RPD Limit 40		
SampID: LCSGD-180355										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH-DRO (C10 - C21)	*	0.500		<b>1.61</b>	2.000	0	80.6	1.770	9.32	08/02/2021
Surr: 2-Fluorobiphenyl	*			<b>0.00909</b>	0.0125		72.7			08/02/2021
Surr: Nitrobenzene-d5	*			<b>0.00865</b>	0.0125		69.2			08/02/2021
Surr: p-Terphenyl-d14	*			<b>0.0122</b>	0.0125		97.8			08/02/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180355		SampType: MS		Units mg/L							
SampID: 21071732-002BMS											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>5.97</b>	8.000	0	74.6	50	175	08/03/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0329</b>	0.0500		65.7	1.39	137	08/03/2021	
Surr: Nitrobenzene-d5	*			<b>0.0326</b>	0.0500		65.2	29.1	125	08/03/2021	
Surr: p-Terphenyl-d14	*			<b>0.0493</b>	0.0500		98.6	35.2	164	08/03/2021	

Batch 180355		SampType: MSD		Units mg/L						RPD Limit 40	
SampID: 21071732-002BMSD											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
TPH-DRO (C10 - C21)	*	2.00		<b>6.45</b>	8.000	0	80.6	5.966	7.80	08/03/2021	
Surr: 2-Fluorobiphenyl	*			<b>0.0365</b>	0.0500		73.0			08/03/2021	
Surr: Nitrobenzene-d5	*			<b>0.0351</b>	0.0500		70.2			08/03/2021	
Surr: p-Terphenyl-d14	*			<b>0.0496</b>	0.0500		99.1			08/03/2021	

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch 180354**      **SampType: MBLK**      Units µg/L

SampID: MBLK-AM210802A-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						08/02/2021
1,1,1-Trichloroethane	*	2.0		ND						08/02/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						08/02/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						08/02/2021
1,1,2-Trichloroethane	*	0.5		ND						08/02/2021
1,1-Dichloro-2-propanone	*	30.0		ND						08/02/2021
1,1-Dichloroethane	*	2.0		ND						08/02/2021
1,1-Dichloroethene	*	2.0		ND						08/02/2021
1,1-Dichloropropene	*	2.0		ND						08/02/2021
1,2,3-Trichlorobenzene	*	2.0		ND						08/02/2021
1,2,3-Trichloropropane	*	2.0		ND						08/02/2021
1,2,3-Trimethylbenzene	*	2.0		ND						08/02/2021
1,2,4-Trichlorobenzene	*	2.0		ND						08/02/2021
1,2,4-Trimethylbenzene	*	2.0		ND						08/02/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						08/02/2021
1,2-Dibromoethane	*	2.0		ND						08/02/2021
1,2-Dichlorobenzene	*	2.0		ND						08/02/2021
1,2-Dichloroethane	*	2.0		ND						08/02/2021
1,2-Dichloropropane	*	2.0		ND						08/02/2021
1,3,5-Trimethylbenzene	*	2.0		ND						08/02/2021
1,3-Dichlorobenzene	*	2.0		ND						08/02/2021
1,3-Dichloropropane	*	2.0		ND						08/02/2021
1,4-Dichlorobenzene	*	2.0		ND						08/02/2021
1-Chlorobutane	*	5.0		ND						08/02/2021
2,2-Dichloropropane	*	2.0		ND						08/02/2021
2-Butanone	*	10.0		ND						08/02/2021
2-Chloroethyl vinyl ether	*	5.0		ND						08/02/2021
2-Chlorotoluene	*	2.0		ND						08/02/2021
2-Hexanone	*	10.0		ND						08/02/2021
2-Nitropropane	*	10.0		ND						08/02/2021
4-Chlorotoluene	*	2.0		ND						08/02/2021
4-Methyl-2-pentanone	*	10.0		ND						08/02/2021
Acetone	*	10.0		ND						08/02/2021
Acetonitrile	*	10.0		ND						08/02/2021
Acrolein	*	20.0		ND						08/02/2021
Acrylonitrile	*	5.0		ND						08/02/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180354      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						08/02/2021
Benzene	*	0.5		ND						08/02/2021
Bromobenzene	*	2.0		ND						08/02/2021
Bromochloromethane	*	2.0		ND						08/02/2021
Bromodichloromethane	*	2.0		ND						08/02/2021
Bromoform	*	2.0		ND						08/02/2021
Bromomethane	*	5.0		ND						08/02/2021
Carbon disulfide	*	2.0		ND						08/02/2021
Carbon tetrachloride	*	2.0		ND						08/02/2021
Chlorobenzene	*	2.0		ND						08/02/2021
Chloroethane	*	2.0		ND						08/02/2021
Chloroform	*	2.0		ND						08/02/2021
Chloromethane	*	5.0		ND						08/02/2021
Chloroprene	*	5.0		ND						08/02/2021
cis-1,2-Dichloroethene	*	2.0		ND						08/02/2021
cis-1,3-Dichloropropene	*	2.0		ND						08/02/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						08/02/2021
Cyclohexanone	*	20.0		ND						08/02/2021
Dibromochloromethane	*	2.0		ND						08/02/2021
Dibromomethane	*	2.0		ND						08/02/2021
Dichlorodifluoromethane	*	2.0		ND						08/02/2021
Diisopropyl ether	*	2.0		ND						08/02/2021
Ethyl acetate	*	10.0		ND						08/02/2021
Ethyl ether	*	5.0		ND						08/02/2021
Ethyl methacrylate	*	5.0		ND						08/02/2021
Ethylbenzene	*	2.0		ND						08/02/2021
Ethyl-tert-butyl ether	*	2.0		ND						08/02/2021
Hexachlorobutadiene	*	5.0		ND						08/02/2021
Hexachloroethane	*	5.0		ND						08/02/2021
Iodomethane	*	5.0		ND						08/02/2021
Isopropylbenzene	*	2.0		ND						08/02/2021
m,p-Xylenes	*	2.0		ND						08/02/2021
Methacrylonitrile	*	5.0		ND						08/02/2021
Methyl Methacrylate	*	5.0		ND						08/02/2021
Methyl tert-butyl ether	*	2.0		ND						08/02/2021
Methylacrylate	*	5.0		ND						08/02/2021





## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180354      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						08/02/2021
Naphthalene	*	5.0		ND						08/02/2021
n-Butyl acetate	*	2.0		ND						08/02/2021
n-Butylbenzene	*	2.0		ND						08/02/2021
n-Heptane	*	5.0		ND						08/02/2021
n-Hexane	*	5.0		ND						08/02/2021
Nitrobenzene	*	50.0		ND						08/02/2021
n-Propylbenzene	*	2.0		ND						08/02/2021
o-Xylene	*	2.0		ND						08/02/2021
Pentachloroethane	*	5.0		ND						08/02/2021
p-Isopropyltoluene	*	2.0		ND						08/02/2021
Propionitrile	*	10.0		ND						08/02/2021
sec-Butylbenzene	*	2.0		ND						08/02/2021
Styrene	*	2.0		ND						08/02/2021
tert-Amyl methyl ether	*	2.0		ND						08/02/2021
tert-Butyl alcohol	*	10.0		ND						08/02/2021
tert-Butylbenzene	*	2.0		ND						08/02/2021
Tetrachloroethene	*	0.5		ND						08/02/2021
Tetrahydrofuran	*	5.0		ND						08/02/2021
Toluene	*	2.0		ND						08/02/2021
trans-1,2-Dichloroethene	*	2.0		ND						08/02/2021
trans-1,3-Dichloropropene	*	2.0		ND						08/02/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						08/02/2021
Trichloroethene	*	2.0		ND						08/02/2021
Trichlorofluoromethane	*	5.0		ND						08/02/2021
Vinyl acetate	*	5.0		ND						08/02/2021
Vinyl chloride	*	2.0		ND						08/02/2021
Xylenes, Total	*	4.0		ND						08/02/2021
1,2-Dichloroethene, Total	*	4.0		ND						08/02/2021
1,3-Dichloropropene, Total	*	4.0		ND						08/02/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						08/02/2021
TPH - GRO (C6 - C10)	*	500		ND						08/02/2021
Surr: 1,2-Dichloroethane-d4	*			51.5	50.00		103.0	80	120	08/02/2021
Surr: 4-Bromofluorobenzene	*			52.4	50.00		104.9	80	120	08/02/2021
Surr: Toluene-d8	*			46.5	50.00		93.0	80	120	08/02/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch 180354**      **SampType: LCS**

Units µg/L

SampID: LCS-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>44.9</b>	50.00	0	89.8	82	113	08/02/2021
1,1,1-Trichloroethane	*	2.0		<b>51.0</b>	50.00	0	102.1	76.9	128	08/02/2021
1,1,2,2-Tetrachloroethane	*	2.0	S	<b>38.3</b>	50.00	0	76.6	76.7	113	08/02/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>49.2</b>	50.00	0	98.3	69.5	127	08/02/2021
1,1,2-Trichloroethane	*	0.5		<b>42.4</b>	50.00	0	84.8	83.8	111	08/02/2021
1,1-Dichloro-2-propanone	*	30.0		<b>115</b>	125.0	0	92.0	74.9	117	08/02/2021
1,1-Dichloroethane	*	2.0		<b>50.6</b>	50.00	0	101.3	77	129	08/02/2021
1,1-Dichloroethene	*	2.0		<b>50.7</b>	50.00	0	101.5	69.4	127	08/02/2021
1,1-Dichloropropene	*	2.0		<b>50.6</b>	50.00	0	101.1	75.1	123	08/02/2021
1,2,3-Trichlorobenzene	*	2.0		<b>47.2</b>	50.00	0	94.4	77.3	121	08/02/2021
1,2,3-Trichloropropane	*	2.0	S	<b>37.4</b>	50.00	0	74.8	75.3	109	08/02/2021
1,2,3-Trimethylbenzene	*	2.0		<b>46.1</b>	50.00	0	92.1	77	115	08/02/2021
1,2,4-Trichlorobenzene	*	2.0		<b>47.4</b>	50.00	0	94.8	76.8	124	08/02/2021
1,2,4-Trimethylbenzene	*	2.0		<b>46.5</b>	50.00	0	93.0	75	115	08/02/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>42.4</b>	50.00	0	84.8	71.9	119	08/02/2021
1,2-Dibromoethane	*	2.0		<b>44.5</b>	50.00	0	88.9	83.6	110	08/02/2021
1,2-Dichlorobenzene	*	2.0		<b>44.3</b>	50.00	0	88.6	72.1	113	08/02/2021
1,2-Dichloroethane	*	2.0		<b>51.4</b>	50.00	0	102.8	72.3	117	08/02/2021
1,2-Dichloropropane	*	2.0		<b>49.5</b>	50.00	0	98.9	76.5	119	08/02/2021
1,3,5-Trimethylbenzene	*	2.0		<b>43.8</b>	50.00	0	87.7	75.2	117	08/02/2021
1,3-Dichlorobenzene	*	2.0		<b>47.9</b>	50.00	0	95.8	75.2	115	08/02/2021
1,3-Dichloropropane	*	2.0		<b>42.8</b>	50.00	0	85.6	80.9	110	08/02/2021
1,4-Dichlorobenzene	*	2.0		<b>47.9</b>	50.00	0	95.8	73.9	112	08/02/2021
1-Chlorobutane	*	5.0		<b>57.4</b>	50.00	0	114.7	74.9	130	08/02/2021
2,2-Dichloropropane	*	2.0		<b>58.4</b>	50.00	0	116.7	66.5	138	08/02/2021
2-Butanone	*	10.0		<b>144</b>	125.0	0	115.2	68.8	134	08/02/2021
2-Chloroethyl vinyl ether	*	5.0		<b>60.3</b>	50.00	0	120.7	17.8	163	08/02/2021
2-Chlorotoluene	*	2.0		<b>43.1</b>	50.00	0	86.2	74.9	115	08/02/2021
2-Hexanone	*	10.0		<b>133</b>	125.0	0	106.0	73.2	117	08/02/2021
2-Nitropropane	*	10.0		<b>532</b>	500.0	0	106.5	67.1	140	08/02/2021
4-Chlorotoluene	*	2.0		<b>51.7</b>	50.00	0	103.3	75.7	113	08/02/2021
4-Methyl-2-pentanone	*	10.0		<b>116</b>	125.0	0	92.5	77	113	08/02/2021
Acetone	*	10.0	B	<b>125</b>	125.0	0	100.2	61.4	130	08/02/2021
Acetonitrile	*	10.0		<b>628</b>	500.0	0	125.6	68.8	136	08/02/2021
Acrolein	*	20.0		<b>192</b>	500.0	0	38.4	28.4	168	08/02/2021
Acrylonitrile	*	5.0		<b>51.8</b>	50.00	0	103.5	77.9	124	08/02/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180354      **SampType:** LCS      **Units** µg/L  
**SampID:** LCS-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>52.5</b>	50.00	0	105.0	75.8	130	08/02/2021
Benzene	*	0.5		<b>48.9</b>	50.00	0	97.9	78.5	119	08/02/2021
Bromobenzene	*	2.0		<b>48.3</b>	50.00	0	96.5	77.5	113	08/02/2021
Bromochloromethane	*	2.0		<b>50.1</b>	50.00	0	100.2	71.5	123	08/02/2021
Bromodichloromethane	*	2.0		<b>49.8</b>	50.00	0	99.6	75.7	123	08/02/2021
Bromoform	*	2.0		<b>45.6</b>	50.00	0	91.1	78.9	121	08/02/2021
Bromomethane	*	5.0		<b>45.4</b>	50.00	0	90.7	30.5	192	08/02/2021
Carbon disulfide	*	2.0		<b>50.2</b>	50.00	0	100.5	66.7	121	08/02/2021
Carbon tetrachloride	*	2.0		<b>50.4</b>	50.00	0	100.8	70.9	127	08/02/2021
Chlorobenzene	*	2.0		<b>47.4</b>	50.00	0	94.7	80	111	08/02/2021
Chloroethane	*	2.0		<b>45.9</b>	50.00	0	91.8	69.6	135	08/02/2021
Chloroform	*	2.0		<b>47.8</b>	50.00	0	95.5	76.2	120	08/02/2021
Chloromethane	*	5.0		<b>42.4</b>	50.00	0	84.8	50.9	138	08/02/2021
Chloroprene	*	5.0		<b>58.0</b>	50.00	0	115.9	68.4	127	08/02/2021
cis-1,2-Dichloroethene	*	2.0		<b>49.0</b>	50.00	0	98.1	79.5	121	08/02/2021
cis-1,3-Dichloropropene	*	2.0		<b>55.1</b>	50.00	0	110.3	79.8	123	08/02/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>52.4</b>	50.00	0	104.8	64.6	130	08/02/2021
Cyclohexanone	*	20.0		<b>431</b>	500.0	0	86.3	70.5	114	08/02/2021
Dibromochloromethane	*	2.0		<b>45.9</b>	50.00	0	91.7	84.5	114	08/02/2021
Dibromomethane	*	2.0		<b>47.4</b>	50.00	0	94.7	76	119	08/02/2021
Dichlorodifluoromethane	*	2.0		<b>40.6</b>	50.00	0	81.2	46.6	142	08/02/2021
Diisopropyl ether	*	2.0		<b>58.3</b>	50.00	0	116.6	72	128	08/02/2021
Ethyl acetate	*	10.0		<b>52.9</b>	50.00	0	105.8	70.3	115	08/02/2021
Ethyl ether	*	5.0		<b>55.9</b>	50.00	0	111.9	74.6	120	08/02/2021
Ethyl methacrylate	*	5.0		<b>45.7</b>	50.00	0	91.4	81.4	116	08/02/2021
Ethylbenzene	*	2.0		<b>49.2</b>	50.00	0	98.4	78.2	114	08/02/2021
Ethyl-tert-butyl ether	*	2.0		<b>55.4</b>	50.00	0	110.8	74.6	124	08/02/2021
Hexachlorobutadiene	*	5.0		<b>50.1</b>	50.00	0	100.3	73.9	129	08/02/2021
Hexachloroethane	*	5.0		<b>43.2</b>	50.00	0	86.3	78.3	123	08/02/2021
Iodomethane	*	5.0		<b>40.6</b>	50.00	0	81.2	50	151	08/02/2021
Isopropylbenzene	*	2.0		<b>47.6</b>	50.00	0	95.1	79.3	115	08/02/2021
m,p-Xylenes	*	2.0		<b>105</b>	100.0	0	105.2	77.2	116	08/02/2021
Methacrylonitrile	*	5.0		<b>47.8</b>	50.00	0	95.6	73.9	127	08/02/2021
Methyl Methacrylate	*	5.0		<b>61.0</b>	50.00	0	122.0	70.7	129	08/02/2021
Methyl tert-butyl ether	*	2.0		<b>50.9</b>	50.00	0	101.7	80.3	122	08/02/2021
Methylacrylate	*	5.0		<b>44.2</b>	50.00	0	88.4	75.2	124	08/02/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180354		SampType: LCS		Units µg/L							Date Analyzed
SampID: LCS-AM210802A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed	
Methylene chloride	*	2.0		53.3	50.00	0	106.6	71.8	115	08/02/2021	
Naphthalene	*	5.0		47.0	50.00	0	93.9	75.6	121	08/02/2021	
n-Butyl acetate	*	2.0		51.0	50.00	0	102.0	72.4	118	08/02/2021	
n-Butylbenzene	*	2.0		44.7	50.00	0	89.5	70.8	118	08/02/2021	
n-Heptane	*	5.0		65.4	50.00	0	130.8	50.4	143	08/02/2021	
n-Hexane	*	5.0		55.6	50.00	0	111.2	60.6	139	08/02/2021	
Nitrobenzene	*	50.0		496	500.0	0	99.1	49.4	129	08/02/2021	
n-Propylbenzene	*	2.0		45.9	50.00	0	91.8	74	119	08/02/2021	
o-Xylene	*	2.0		48.4	50.00	0	96.7	79.2	112	08/02/2021	
Pentachloroethane	*	5.0		45.1	50.00	0	90.2	71.8	124	08/02/2021	
p-Isopropyltoluene	*	2.0		42.2	50.00	0	84.4	74.4	119	08/02/2021	
Propionitrile	*	10.0		536	500.0	0	107.1	76.2	127	08/02/2021	
sec-Butylbenzene	*	2.0		44.4	50.00	0	88.9	74.4	119	08/02/2021	
Styrene	*	2.0		55.2	50.00	0	110.4	80.4	117	08/02/2021	
tert-Amyl methyl ether	*	2.0		44.7	50.00	0	89.5	80.8	125	08/02/2021	
tert-Butyl alcohol	*	10.0		271	250.0	0	108.3	64.9	118	08/02/2021	
tert-Butylbenzene	*	2.0		43.6	50.00	0	87.2	74	115	08/02/2021	
Tetrachloroethene	*	0.5		44.7	50.00	0	89.3	70.1	120	08/02/2021	
Tetrahydrofuran	*	5.0		50.9	50.00	0	101.7	63.5	122	08/02/2021	
Toluene	*	2.0		45.2	50.00	0	90.5	78.6	112	08/02/2021	
trans-1,2-Dichloroethene	*	2.0		52.5	50.00	0	104.9	75.7	130	08/02/2021	
trans-1,3-Dichloropropene	*	2.0		45.3	50.00	0	90.5	80.3	116	08/02/2021	
trans-1,4-Dichloro-2-butene	*	2.0		44.5	50.00	0	89.0	65.5	124	08/02/2021	
Trichloroethene	*	2.0		49.9	50.00	0	99.9	76.2	121	08/02/2021	
Trichlorofluoromethane	*	5.0		45.5	50.00	0	90.9	71.1	131	08/02/2021	
Vinyl acetate	*	5.0		52.4	50.00	0	104.8	79.8	129	08/02/2021	
Vinyl chloride	*	2.0		40.5	50.00	0	80.9	58.6	141	08/02/2021	
Xylenes, Total	*	4.0		154	150.0	0	102.4	78.3	114	08/02/2021	
1,2-Dichloroethene, Total	*	4.0		102	100.0	0	101.5	78.5	125	08/02/2021	
1,3-Dichloropropene, Total	*	4.0		100	100.0	0	100.4	82.3	117	08/02/2021	
1,4-Dichloro-2-butene, Total	*	4.0		96.9	100.0	0	96.9	65.9	126	08/02/2021	
Surr: 1,2-Dichloroethane-d4	*			52.8	50.00		105.5	80	120	08/02/2021	
Surr: 4-Bromofluorobenzene	*			48.5	50.00		97.0	80	120	08/02/2021	
Surr: Toluene-d8	*			45.5	50.00		91.0	80	120	08/02/2021	

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch	SampType:	Units µg/L			RPD Limit 15.4					Date
180354	LCSD									Analyzed
SampID: LCSD-AM210802A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	
1,1,1,2-Tetrachloroethane	*	2.0		50.0	50.00	0	100.0	44.89	10.79	08/02/2021
1,1,1-Trichloroethane	*	2.0		56.2	50.00	0	112.3	51.04	9.55	08/02/2021
1,1,2,2-Tetrachloroethane	*	2.0		40.4	50.00	0	80.8	38.30	5.31	08/02/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		55.3	50.00	0	110.6	49.17	11.75	08/02/2021
1,1,2-Trichloroethane	*	0.5		45.0	50.00	0	90.0	42.41	5.90	08/02/2021
1,1-Dichloro-2-propanone	*	30.0		118	125.0	0	94.6	115.0	2.77	08/02/2021
1,1-Dichloroethane	*	2.0		55.0	50.00	0	110.1	50.63	8.33	08/02/2021
1,1-Dichloroethene	*	2.0		57.2	50.00	0	114.4	50.74	11.95	08/02/2021
1,1-Dichloropropene	*	2.0		55.4	50.00	0	110.9	50.57	9.17	08/02/2021
1,2,3-Trichlorobenzene	*	2.0		49.1	50.00	0	98.1	47.19	3.89	08/02/2021
1,2,3-Trichloropropane	*	2.0		39.4	50.00	0	78.8	37.39	5.21	08/02/2021
1,2,3-Trimethylbenzene	*	2.0		50.0	50.00	0	100.0	46.07	8.16	08/02/2021
1,2,4-Trichlorobenzene	*	2.0		49.3	50.00	0	98.7	47.41	3.97	08/02/2021
1,2,4-Trimethylbenzene	*	2.0		50.1	50.00	0	100.2	46.51	7.39	08/02/2021
1,2-Dibromo-3-chloropropane	*	5.0		44.9	50.00	0	89.8	42.38	5.77	08/02/2021
1,2-Dibromoethane	*	2.0		46.6	50.00	0	93.2	44.47	4.66	08/02/2021
1,2-Dichlorobenzene	*	2.0		47.8	50.00	0	95.6	44.32	7.60	08/02/2021
1,2-Dichloroethane	*	2.0		54.9	50.00	0	109.9	51.42	6.60	08/02/2021
1,2-Dichloropropane	*	2.0		53.2	50.00	0	106.3	49.47	7.21	08/02/2021
1,3,5-Trimethylbenzene	*	2.0		47.7	50.00	0	95.4	43.83	8.48	08/02/2021
1,3-Dichlorobenzene	*	2.0		52.7	50.00	0	105.4	47.90	9.52	08/02/2021
1,3-Dichloropropane	*	2.0		45.8	50.00	0	91.6	42.79	6.80	08/02/2021
1,4-Dichlorobenzene	*	2.0		51.7	50.00	0	103.4	47.88	7.71	08/02/2021
1-Chlorobutane	*	5.0		62.6	50.00	0	125.3	57.35	8.83	08/02/2021
2,2-Dichloropropane	*	2.0		63.7	50.00	0	127.3	58.35	8.70	08/02/2021
2-Butanone	*	10.0		152	125.0	0	121.2	144.0	5.09	08/02/2021
2-Chloroethyl vinyl ether	*	5.0		71.1	50.00	0	142.2	60.34	16.40	08/02/2021
2-Chlorotoluene	*	2.0		46.3	50.00	0	92.7	43.09	7.27	08/02/2021
2-Hexanone	*	10.0		140	125.0	0	112.2	132.6	5.67	08/02/2021
2-Nitropropane	*	10.0		558	500.0	0	111.7	532.3	4.80	08/02/2021
4-Chlorotoluene	*	2.0		50.3	50.00	0	100.6	51.67	2.73	08/02/2021
4-Methyl-2-pentanone	*	10.0		125	125.0	0	99.7	115.6	7.49	08/02/2021
Acetone	*	10.0	B	134	125.0	0	107.4	125.2	7.01	08/02/2021
Acetonitrile	*	10.0		652	500.0	0	130.4	628.0	3.75	08/02/2021
Acrolein	*	20.0	R	522	500.0	0	104.5	191.9	92.53	08/02/2021
Acrylonitrile	*	5.0		54.6	50.00	0	109.1	51.77	5.25	08/02/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch	SampType:	Units		RPD Limit						
180354	LCSD	µg/L		15.4						
SampID: LCSD-AM210802A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Allyl chloride	*	5.0		58.1	50.00	0	116.2	52.52	10.09	08/02/2021
Benzene	*	0.5		53.8	50.00	0	107.7	48.94	9.53	08/02/2021
Bromobenzene	*	2.0		51.2	50.00	0	102.4	48.27	5.89	08/02/2021
Bromochloromethane	*	2.0		54.5	50.00	0	109.0	50.09	8.43	08/02/2021
Bromodichloromethane	*	2.0		53.9	50.00	0	107.8	49.81	7.89	08/02/2021
Bromoform	*	2.0		47.6	50.00	0	95.1	45.57	4.27	08/02/2021
Bromomethane	*	5.0		50.0	50.00	0	100.0	45.36	9.71	08/02/2021
Carbon disulfide	*	2.0		54.5	50.00	0	109.0	50.25	8.15	08/02/2021
Carbon tetrachloride	*	2.0		56.0	50.00	0	111.9	50.39	10.46	08/02/2021
Chlorobenzene	*	2.0		51.4	50.00	0	102.8	47.36	8.16	08/02/2021
Chloroethane	*	2.0		47.6	50.00	0	95.3	45.88	3.78	08/02/2021
Chloroform	*	2.0		51.4	50.00	0	102.8	47.76	7.34	08/02/2021
Chloromethane	*	5.0		44.9	50.00	0	89.9	42.41	5.77	08/02/2021
Chloroprene	*	5.0		63.2	50.00	0	126.5	57.96	8.70	08/02/2021
cis-1,2-Dichloroethene	*	2.0		50.8	50.00	0	101.6	49.04	3.51	08/02/2021
cis-1,3-Dichloropropene	*	2.0		58.3	50.00	0	116.6	55.14	5.54	08/02/2021
cis-1,4-Dichloro-2-butene	*	2.0		55.5	50.00	0	111.0	52.41	5.76	08/02/2021
Cyclohexanone	*	20.0		460	500.0	0	92.1	431.4	6.52	08/02/2021
Dibromochloromethane	*	2.0		48.0	50.00	0	95.9	45.87	4.45	08/02/2021
Dibromomethane	*	2.0		50.5	50.00	0	101.1	47.37	6.46	08/02/2021
Dichlorodifluoromethane	*	2.0		42.9	50.00	0	85.7	40.61	5.41	08/02/2021
Diisopropyl ether	*	2.0		60.3	50.00	0	120.5	58.32	3.29	08/02/2021
Ethyl acetate	*	10.0		55.7	50.00	0	111.4	52.89	5.19	08/02/2021
Ethyl ether	*	5.0		58.4	50.00	0	116.8	55.94	4.30	08/02/2021
Ethyl methacrylate	*	5.0		48.6	50.00	0	97.2	45.69	6.19	08/02/2021
Ethylbenzene	*	2.0		53.9	50.00	0	107.8	49.19	9.12	08/02/2021
Ethyl-tert-butyl ether	*	2.0		57.8	50.00	0	115.7	55.42	4.26	08/02/2021
Hexachlorobutadiene	*	5.0		53.0	50.00	0	105.9	50.13	5.51	08/02/2021
Hexachloroethane	*	5.0		47.7	50.00	0	95.4	43.15	10.04	08/02/2021
Iodomethane	*	5.0		44.2	50.00	0	88.4	40.61	8.47	08/02/2021
Isopropylbenzene	*	2.0		52.5	50.00	0	104.9	47.55	9.82	08/02/2021
m,p-Xylenes	*	2.0	S	117	100.0	0	116.9	105.2	10.49	08/02/2021
Methacrylonitrile	*	5.0		50.1	50.00	0	100.2	47.82	4.66	08/02/2021
Methyl Methacrylate	*	5.0		64.4	50.00	0	128.8	60.98	5.44	08/02/2021
Methyl tert-butyl ether	*	2.0		52.9	50.00	0	105.9	50.87	3.97	08/02/2021
Methylacrylate	*	5.0		46.2	50.00	0	92.5	44.19	4.51	08/02/2021



## Quality Control Results

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**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch	SampType:	Units		RPD Limit						
180354	LCSD	µg/L		15.4						
SampID: LCSD-AM210802A-1										
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Methylene chloride	*	2.0		56.6	50.00	0	113.1	53.29	5.97	08/02/2021
Naphthalene	*	5.0		49.0	50.00	0	98.1	46.97	4.29	08/02/2021
n-Butyl acetate	*	2.0		54.0	50.00	0	108.0	50.99	5.70	08/02/2021
n-Butylbenzene	*	2.0		48.2	50.00	0	96.4	44.74	7.45	08/02/2021
n-Heptane	*	5.0		70.9	50.00	0	141.9	65.40	8.11	08/02/2021
n-Hexane	*	5.0		60.2	50.00	0	120.3	55.62	7.83	08/02/2021
Nitrobenzene	*	50.0		514	500.0	0	102.8	495.7	3.66	08/02/2021
n-Propylbenzene	*	2.0		50.3	50.00	0	100.6	45.90	9.11	08/02/2021
o-Xylene	*	2.0		53.2	50.00	0	106.4	48.37	9.49	08/02/2021
Pentachloroethane	*	5.0		48.2	50.00	0	96.5	45.08	6.77	08/02/2021
p-Isopropyltoluene	*	2.0		46.1	50.00	0	92.2	42.20	8.79	08/02/2021
Propionitrile	*	10.0		563	500.0	0	112.6	535.5	5.01	08/02/2021
sec-Butylbenzene	*	2.0		48.4	50.00	0	96.7	44.43	8.47	08/02/2021
Styrene	*	2.0	S	60.9	50.00	0	121.8	55.21	9.83	08/02/2021
tert-Amyl methyl ether	*	2.0		46.1	50.00	0	92.2	44.73	3.04	08/02/2021
tert-Butyl alcohol	*	10.0		288	250.0	0	115.2	270.8	6.17	08/02/2021
tert-Butylbenzene	*	2.0		47.8	50.00	0	95.6	43.62	9.12	08/02/2021
Tetrachloroethene	*	0.5		49.3	50.00	0	98.5	44.67	9.77	08/02/2021
Tetrahydrofuran	*	5.0		54.6	50.00	0	109.3	50.86	7.18	08/02/2021
Toluene	*	2.0		49.6	50.00	0	99.3	45.23	9.32	08/02/2021
trans-1,2-Dichloroethene	*	2.0		58.8	50.00	0	117.6	52.47	11.34	08/02/2021
trans-1,3-Dichloropropene	*	2.0		48.2	50.00	0	96.4	45.27	6.25	08/02/2021
trans-1,4-Dichloro-2-butene	*	2.0		46.8	50.00	0	93.6	44.49	5.02	08/02/2021
Trichloroethene	*	2.0		54.2	50.00	0	108.4	49.94	8.20	08/02/2021
Trichlorofluoromethane	*	5.0		47.4	50.00	0	94.8	45.46	4.16	08/02/2021
Vinyl acetate	*	5.0		53.6	50.00	0	107.2	52.40	2.26	08/02/2021
Vinyl chloride	*	2.0		43.8	50.00	0	87.7	40.46	8.02	08/02/2021
Xylenes, Total	*	4.0		170	150.0	0	113.4	153.6	10.18	08/02/2021
1,2-Dichloroethene, Total	*	4.0		110	100.0	0	109.6	101.5	7.64	08/02/2021
1,3-Dichloropropene, Total	*	4.0		106	100.0	0	106.5	100.4	5.86	08/02/2021
1,4-Dichloro-2-butene, Total	*	4.0		102	100.0	0	102.3	96.90	5.42	08/02/2021
Surr: 1,2-Dichloroethane-d4	*			52.5	50.00		104.9			08/02/2021
Surr: 4-Bromofluorobenzene	*			48.8	50.00		97.7			08/02/2021
Surr: Toluene-d8	*			46.4	50.00		92.7			08/02/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch 180354**      **SampType: LCSG**      Units  $\mu\text{g/L}$

SampID: LCSG-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1840</b>	2000	0	92.2	70	130	08/02/2021
Surr: 1,2-Dichloroethane-d4	*			<b>53.1</b>	50.00		106.1	80	120	08/02/2021
Surr: 4-Bromofluorobenzene	*			<b>52.1</b>	50.00		104.1	80	120	08/02/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.5	80	120	08/02/2021

**Batch 180354**      **SampType: LCSGD**      Units  $\mu\text{g/L}$

RPD Limit **20**

SampID: LCSGD-AM210802A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1770</b>	2000	0	88.3	1845	4.30	08/02/2021
Surr: 1,2-Dichloroethane-d4	*			<b>53.2</b>	50.00		106.4			08/02/2021
Surr: 4-Bromofluorobenzene	*			<b>51.6</b>	50.00		103.1			08/02/2021
Surr: Toluene-d8	*			<b>46.2</b>	50.00		92.4			08/02/2021





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AE210803A-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						08/03/2021
1,1,1-Trichloroethane	*	2.0		ND						08/03/2021
1,1,2,2-Tetrachloroethane	*	2.0		ND						08/03/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		ND						08/03/2021
1,1,2-Trichloroethane	*	0.5		ND						08/03/2021
1,1-Dichloro-2-propanone	*	30.0		ND						08/03/2021
1,1-Dichloroethane	*	2.0		ND						08/03/2021
1,1-Dichloroethene	*	2.0		ND						08/03/2021
1,1-Dichloropropene	*	2.0		ND						08/03/2021
1,2,3-Trichlorobenzene	*	2.0		ND						08/03/2021
1,2,3-Trichloropropane	*	2.0		ND						08/03/2021
1,2,3-Trimethylbenzene	*	2.0		ND						08/03/2021
1,2,4-Trichlorobenzene	*	2.0		ND						08/03/2021
1,2,4-Trimethylbenzene	*	2.0		ND						08/03/2021
1,2-Dibromo-3-chloropropane	*	5.0		ND						08/03/2021
1,2-Dibromoethane	*	2.0		ND						08/03/2021
1,2-Dichlorobenzene	*	2.0		ND						08/03/2021
1,2-Dichloroethane	*	2.0		ND						08/03/2021
1,2-Dichloropropane	*	2.0		ND						08/03/2021
1,3,5-Trimethylbenzene	*	2.0		ND						08/03/2021
1,3-Dichlorobenzene	*	2.0		ND						08/03/2021
1,3-Dichloropropane	*	2.0		ND						08/03/2021
1,4-Dichlorobenzene	*	2.0		ND						08/03/2021
1-Chlorobutane	*	5.0		ND						08/03/2021
2,2-Dichloropropane	*	2.0		ND						08/03/2021
2-Butanone	*	10.0		ND						08/03/2021
2-Chloroethyl vinyl ether	*	5.0		ND						08/03/2021
2-Chlorotoluene	*	2.0		ND						08/03/2021
2-Hexanone	*	10.0		ND						08/03/2021
2-Nitropropane	*	10.0		ND						08/03/2021
4-Chlorotoluene	*	2.0		ND						08/03/2021
4-Methyl-2-pentanone	*	10.0		ND						08/03/2021
Acetone	*	10.0		ND						08/03/2021
Acetonitrile	*	10.0		ND						08/03/2021
Acrolein	*	20.0		ND						08/03/2021
Acrylonitrile	*	5.0		ND						08/03/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** MBLK      **Units** µg/L

SampID: MBLK-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		ND						08/03/2021
Benzene	*	0.5		ND						08/03/2021
Bromobenzene	*	2.0		ND						08/03/2021
Bromochloromethane	*	2.0		ND						08/03/2021
Bromodichloromethane	*	2.0		ND						08/03/2021
Bromoform	*	2.0		ND						08/03/2021
Bromomethane	*	5.0		ND						08/03/2021
Carbon disulfide	*	2.0		ND						08/03/2021
Carbon tetrachloride	*	2.0		ND						08/03/2021
Chlorobenzene	*	2.0		ND						08/03/2021
Chloroethane	*	2.0		ND						08/03/2021
Chloroform	*	2.0		ND						08/03/2021
Chloromethane	*	5.0		ND						08/03/2021
Chloroprene	*	5.0		ND						08/03/2021
cis-1,2-Dichloroethene	*	2.0		ND						08/03/2021
cis-1,3-Dichloropropene	*	2.0		ND						08/03/2021
cis-1,4-Dichloro-2-butene	*	2.0		ND						08/03/2021
Cyclohexanone	*	20.0		ND						08/03/2021
Dibromochloromethane	*	2.0		ND						08/03/2021
Dibromomethane	*	2.0		ND						08/03/2021
Dichlorodifluoromethane	*	2.0		ND						08/03/2021
Diisopropyl ether	*	2.0		ND						08/03/2021
Ethyl acetate	*	10.0		ND						08/03/2021
Ethyl ether	*	5.0		ND						08/03/2021
Ethyl methacrylate	*	5.0		ND						08/03/2021
Ethylbenzene	*	2.0		ND						08/03/2021
Ethyl-tert-butyl ether	*	2.0		ND						08/03/2021
Hexachlorobutadiene	*	5.0		ND						08/03/2021
Hexachloroethane	*	5.0		ND						08/03/2021
Iodomethane	*	5.0		ND						08/03/2021
Isopropylbenzene	*	2.0		ND						08/03/2021
m,p-Xylenes	*	2.0		ND						08/03/2021
Methacrylonitrile	*	5.0		ND						08/03/2021
Methyl Methacrylate	*	5.0		ND						08/03/2021
Methyl tert-butyl ether	*	2.0		ND						08/03/2021
Methylacrylate	*	5.0		ND						08/03/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** MBLK      **Units** µg/L  
**SampID:** MBLK-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		ND						08/03/2021
Naphthalene	*	5.0		ND						08/03/2021
n-Butyl acetate	*	2.0		ND						08/03/2021
n-Butylbenzene	*	2.0		ND						08/03/2021
n-Heptane	*	5.0		ND						08/03/2021
n-Hexane	*	5.0		ND						08/03/2021
Nitrobenzene	*	50.0		ND						08/03/2021
n-Propylbenzene	*	2.0		ND						08/03/2021
o-Xylene	*	2.0		ND						08/03/2021
Pentachloroethane	*	5.0		ND						08/03/2021
p-Isopropyltoluene	*	2.0		ND						08/03/2021
Propionitrile	*	10.0		ND						08/03/2021
sec-Butylbenzene	*	2.0		ND						08/03/2021
Styrene	*	2.0		ND						08/03/2021
tert-Amyl methyl ether	*	2.0		ND						08/03/2021
tert-Butyl alcohol	*	10.0		ND						08/03/2021
tert-Butylbenzene	*	2.0		ND						08/03/2021
Tetrachloroethene	*	0.5		ND						08/03/2021
Tetrahydrofuran	*	5.0		ND						08/03/2021
Toluene	*	2.0		ND						08/03/2021
trans-1,2-Dichloroethene	*	2.0		ND						08/03/2021
trans-1,3-Dichloropropene	*	2.0		ND						08/03/2021
trans-1,4-Dichloro-2-butene	*	2.0		ND						08/03/2021
Trichloroethene	*	2.0		ND						08/03/2021
Trichlorofluoromethane	*	5.0		ND						08/03/2021
Vinyl acetate	*	5.0		ND						08/03/2021
Vinyl chloride	*	2.0		ND						08/03/2021
Xylenes, Total	*	4.0		ND						08/03/2021
1,2-Dichloroethene, Total	*	4.0		ND						08/03/2021
1,3-Dichloropropene, Total	*	4.0		ND						08/03/2021
1,4-Dichloro-2-butene, Total	*	4.0		ND						08/03/2021
TPH - GRO (C6 - C10)	*	500		ND						08/03/2021
Surr: 1,2-Dichloroethane-d4	*			51.9	50.00		103.7	80	120	08/03/2021
Surr: 4-Bromofluorobenzene	*			49.2	50.00		98.5	80	120	08/03/2021
Surr: Toluene-d8	*			50.0	50.00		100.1	80	120	08/03/2021

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** LCS

Units µg/L

SampID: LCS-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
1,1,1,2-Tetrachloroethane	*	2.0		<b>52.6</b>	50.00	0	105.3	82	113	08/03/2021
1,1,1-Trichloroethane	*	2.0		<b>50.6</b>	50.00	0	101.2	76.9	128	08/03/2021
1,1,2,2-Tetrachloroethane	*	2.0		<b>48.8</b>	50.00	0	97.6	76.7	113	08/03/2021
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		<b>47.9</b>	50.00	0	95.8	69.5	127	08/03/2021
1,1,2-Trichloroethane	*	0.5		<b>50.8</b>	50.00	0	101.7	83.8	111	08/03/2021
1,1-Dichloro-2-propanone	*	30.0		<b>131</b>	125.0	0	104.5	74.9	117	08/03/2021
1,1-Dichloroethane	*	2.0		<b>50.1</b>	50.00	0	100.2	77	129	08/03/2021
1,1-Dichloroethene	*	2.0		<b>51.0</b>	50.00	0	101.9	69.4	127	08/03/2021
1,1-Dichloropropene	*	2.0		<b>48.2</b>	50.00	0	96.5	75.1	123	08/03/2021
1,2,3-Trichlorobenzene	*	2.0		<b>55.7</b>	50.00	0	111.4	77.3	121	08/03/2021
1,2,3-Trichloropropane	*	2.0		<b>49.1</b>	50.00	0	98.3	75.3	109	08/03/2021
1,2,3-Trimethylbenzene	*	2.0		<b>49.0</b>	50.00	0	98.0	77	115	08/03/2021
1,2,4-Trichlorobenzene	*	2.0		<b>53.7</b>	50.00	0	107.4	76.8	124	08/03/2021
1,2,4-Trimethylbenzene	*	2.0		<b>49.6</b>	50.00	0	99.2	75	115	08/03/2021
1,2-Dibromo-3-chloropropane	*	5.0		<b>52.8</b>	50.00	0	105.6	71.9	119	08/03/2021
1,2-Dibromoethane	*	2.0		<b>51.0</b>	50.00	0	102.0	83.6	110	08/03/2021
1,2-Dichlorobenzene	*	2.0		<b>49.4</b>	50.00	0	98.7	72.1	113	08/03/2021
1,2-Dichloroethane	*	2.0		<b>50.2</b>	50.00	0	100.4	72.3	117	08/03/2021
1,2-Dichloropropane	*	2.0		<b>48.1</b>	50.00	0	96.2	76.5	119	08/03/2021
1,3,5-Trimethylbenzene	*	2.0		<b>50.1</b>	50.00	0	100.3	75.2	117	08/03/2021
1,3-Dichlorobenzene	*	2.0		<b>51.4</b>	50.00	0	102.8	75.2	115	08/03/2021
1,3-Dichloropropane	*	2.0		<b>48.9</b>	50.00	0	97.8	80.9	110	08/03/2021
1,4-Dichlorobenzene	*	2.0		<b>49.8</b>	50.00	0	99.6	73.9	112	08/03/2021
1-Chlorobutane	*	5.0		<b>50.2</b>	50.00	0	100.5	74.9	130	08/03/2021
2,2-Dichloropropane	*	2.0		<b>56.1</b>	50.00	0	112.2	66.5	138	08/03/2021
2-Butanone	*	10.0		<b>117</b>	125.0	0	93.8	68.8	134	08/03/2021
2-Chloroethyl vinyl ether	*	5.0		<b>47.0</b>	50.00	0	94.0	17.8	163	08/03/2021
2-Chlorotoluene	*	2.0		<b>48.8</b>	50.00	0	97.7	74.9	115	08/03/2021
2-Hexanone	*	10.0		<b>122</b>	125.0	0	97.3	73.2	117	08/03/2021
2-Nitropropane	*	10.0		<b>555</b>	500.0	0	111.1	67.1	140	08/03/2021
4-Chlorotoluene	*	2.0		<b>49.4</b>	50.00	0	98.8	75.7	113	08/03/2021
4-Methyl-2-pentanone	*	10.0		<b>121</b>	125.0	0	96.4	77	113	08/03/2021
Acetone	*	10.0		<b>110</b>	125.0	0	87.9	61.4	130	08/03/2021
Acetonitrile	*	10.0		<b>525</b>	500.0	0	104.9	68.8	136	08/03/2021
Acrolein	*	20.0		<b>619</b>	500.0	0	123.8	28.4	168	08/03/2021
Acrylonitrile	*	5.0		<b>51.1</b>	50.00	0	102.2	77.9	124	08/03/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** LCS      **Units** µg/L

**SampID:** LCS-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Allyl chloride	*	5.0		<b>53.5</b>	50.00	0	106.9	75.8	130	08/03/2021
Benzene	*	0.5		<b>47.4</b>	50.00	0	94.7	78.5	119	08/03/2021
Bromobenzene	*	2.0		<b>52.0</b>	50.00	0	104.0	77.5	113	08/03/2021
Bromochloromethane	*	2.0		<b>49.8</b>	50.00	0	99.6	71.5	123	08/03/2021
Bromodichloromethane	*	2.0		<b>53.7</b>	50.00	0	107.3	75.7	123	08/03/2021
Bromoform	*	2.0		<b>58.8</b>	50.00	0	117.7	78.9	121	08/03/2021
Bromomethane	*	5.0		<b>45.2</b>	50.00	0	90.4	30.5	192	08/03/2021
Carbon disulfide	*	2.0		<b>49.2</b>	50.00	0	98.4	66.7	121	08/03/2021
Carbon tetrachloride	*	2.0		<b>52.7</b>	50.00	0	105.5	70.9	127	08/03/2021
Chlorobenzene	*	2.0		<b>51.3</b>	50.00	0	102.6	80	111	08/03/2021
Chloroethane	*	2.0		<b>48.8</b>	50.00	0	97.6	69.6	135	08/03/2021
Chloroform	*	2.0		<b>52.1</b>	50.00	0	104.2	76.2	120	08/03/2021
Chloromethane	*	5.0		<b>41.9</b>	50.00	0	83.7	50.9	138	08/03/2021
Chloroprene	*	5.0		<b>49.9</b>	50.00	0	99.8	68.4	127	08/03/2021
cis-1,2-Dichloroethene	*	2.0		<b>51.2</b>	50.00	0	102.4	79.5	121	08/03/2021
cis-1,3-Dichloropropene	*	2.0		<b>50.9</b>	50.00	0	101.8	79.8	123	08/03/2021
cis-1,4-Dichloro-2-butene	*	2.0		<b>52.7</b>	50.00	0	105.5	64.6	130	08/03/2021
Cyclohexanone	*	20.0		<b>486</b>	500.0	0	97.3	70.5	114	08/03/2021
Dibromochloromethane	*	2.0		<b>55.9</b>	50.00	0	111.8	84.5	114	08/03/2021
Dibromomethane	*	2.0		<b>51.3</b>	50.00	0	102.5	76	119	08/03/2021
Dichlorodifluoromethane	*	2.0		<b>43.7</b>	50.00	0	87.4	46.6	142	08/03/2021
Diisopropyl ether	*	2.0		<b>48.2</b>	50.00	0	96.5	72	128	08/03/2021
Ethyl acetate	*	10.0		<b>49.3</b>	50.00	0	98.6	70.3	115	08/03/2021
Ethyl ether	*	5.0		<b>48.4</b>	50.00	0	96.9	74.6	120	08/03/2021
Ethyl methacrylate	*	5.0		<b>49.0</b>	50.00	0	97.9	81.4	116	08/03/2021
Ethylbenzene	*	2.0		<b>49.6</b>	50.00	0	99.2	78.2	114	08/03/2021
Ethyl-tert-butyl ether	*	2.0		<b>49.3</b>	50.00	0	98.6	74.6	124	08/03/2021
Hexachlorobutadiene	*	5.0		<b>51.8</b>	50.00	0	103.7	73.9	129	08/03/2021
Hexachloroethane	*	5.0		<b>56.3</b>	50.00	0	112.6	78.3	123	08/03/2021
Iodomethane	*	5.0		<b>53.0</b>	50.00	0	106.0	50	151	08/03/2021
Isopropylbenzene	*	2.0		<b>50.7</b>	50.00	0	101.4	79.3	115	08/03/2021
m,p-Xylenes	*	2.0		<b>101</b>	100.0	0	101.1	77.2	116	08/03/2021
Methacrylonitrile	*	5.0		<b>49.6</b>	50.00	0	99.1	73.9	127	08/03/2021
Methyl Methacrylate	*	5.0		<b>47.8</b>	50.00	0	95.5	70.7	129	08/03/2021
Methyl tert-butyl ether	*	2.0		<b>49.9</b>	50.00	0	99.8	80.3	122	08/03/2021
Methylacrylate	*	5.0		<b>50.3</b>	50.00	0	100.6	75.2	124	08/03/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch** 180416      **SampType:** LCS

Units µg/L

SampID: LCS-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Methylene chloride	*	2.0		45.6	50.00	0	91.2	71.8	115	08/03/2021
Naphthalene	*	5.0		59.0	50.00	0	118.0	75.6	121	08/03/2021
n-Butyl acetate	*	2.0		49.1	50.00	0	98.2	72.4	118	08/03/2021
n-Butylbenzene	*	2.0		44.2	50.00	0	88.4	70.8	118	08/03/2021
n-Heptane	*	5.0		49.4	50.00	0	98.8	50.4	143	08/03/2021
n-Hexane	*	5.0		44.8	50.00	0	89.7	60.6	139	08/03/2021
Nitrobenzene	*	50.0		503	500.0	0	100.5	49.4	129	08/03/2021
n-Propylbenzene	*	2.0		48.2	50.00	0	96.4	74	119	08/03/2021
o-Xylene	*	2.0		51.6	50.00	0	103.1	79.2	112	08/03/2021
Pentachloroethane	*	5.0		56.4	50.00	0	112.7	71.8	124	08/03/2021
p-Isopropyltoluene	*	2.0		49.1	50.00	0	98.2	74.4	119	08/03/2021
Propionitrile	*	10.0		519	500.0	0	103.8	76.2	127	08/03/2021
sec-Butylbenzene	*	2.0		48.4	50.00	0	96.8	74.4	119	08/03/2021
Styrene	*	2.0		52.5	50.00	0	104.9	80.4	117	08/03/2021
tert-Amyl methyl ether	*	2.0		48.6	50.00	0	97.2	80.8	125	08/03/2021
tert-Butyl alcohol	*	10.0		237	250.0	0	94.6	64.9	118	08/03/2021
tert-Butylbenzene	*	2.0		49.1	50.00	0	98.2	74	115	08/03/2021
Tetrachloroethene	*	0.5		49.7	50.00	0	99.5	70.1	120	08/03/2021
Tetrahydrofuran	*	5.0		47.4	50.00	0	94.8	63.5	122	08/03/2021
Toluene	*	2.0		48.8	50.00	0	97.6	78.6	112	08/03/2021
trans-1,2-Dichloroethene	*	2.0		49.2	50.00	0	98.5	75.7	130	08/03/2021
trans-1,3-Dichloropropene	*	2.0		53.2	50.00	0	106.4	80.3	116	08/03/2021
trans-1,4-Dichloro-2-butene	*	2.0		50.1	50.00	0	100.1	65.5	124	08/03/2021
Trichloroethene	*	2.0		49.0	50.00	0	97.9	76.2	121	08/03/2021
Trichlorofluoromethane	*	5.0		47.3	50.00	0	94.6	71.1	131	08/03/2021
Vinyl acetate	*	5.0		53.2	50.00	0	106.4	79.8	129	08/03/2021
Vinyl chloride	*	2.0		45.4	50.00	0	90.8	58.6	141	08/03/2021
Xylenes, Total	*	4.0		153	150.0	0	101.8	78.3	114	08/03/2021
1,2-Dichloroethene, Total	*	4.0		100	100.0	0	100.4	78.5	125	08/03/2021
1,3-Dichloropropene, Total	*	4.0		104	100.0	0	104.1	82.3	117	08/03/2021
1,4-Dichloro-2-butene, Total	*	4.0		103	100.0	0	102.8	65.9	126	08/03/2021
Surr: 1,2-Dichloroethane-d4	*			51.2	50.00		102.4	80	120	08/03/2021
Surr: 4-Bromofluorobenzene	*			47.9	50.00		95.8	80	120	08/03/2021
Surr: Toluene-d8	*			49.7	50.00		99.3	80	120	08/03/2021



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch	SampType:	LCSD	Units µg/L				RPD Limit 15.4				
SampID: LCSD-AE210803A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed	
1,1,1,2-Tetrachloroethane	*	2.0	S	56.5	50.00	0	113.1	52.65	7.11	08/03/2021	
1,1,1-Trichloroethane	*	2.0		57.4	50.00	0	114.9	50.61	12.62	08/03/2021	
1,1,2,2-Tetrachloroethane	*	2.0		49.5	50.00	0	98.9	48.80	1.36	08/03/2021	
1,1,2-Trichloro-1,2,2-trifluoroethane	*	5.0		56.4	50.00	0	112.7	47.90	16.23	08/03/2021	
1,1,2-Trichloroethane	*	0.5		54.0	50.00	0	107.9	50.83	5.97	08/03/2021	
1,1-Dichloro-2-propanone	*	30.0		136	125.0	0	108.7	130.7	3.90	08/03/2021	
1,1-Dichloroethane	*	2.0		55.3	50.00	0	110.6	50.11	9.83	08/03/2021	
1,1-Dichloroethene	*	2.0		58.8	50.00	0	117.5	50.97	14.20	08/03/2021	
1,1-Dichloropropene	*	2.0		55.9	50.00	0	111.7	48.24	14.64	08/03/2021	
1,2,3-Trichlorobenzene	*	2.0		58.7	50.00	0	117.5	55.72	5.26	08/03/2021	
1,2,3-Trichloropropane	*	2.0		52.0	50.00	0	103.9	49.13	5.62	08/03/2021	
1,2,3-Trimethylbenzene	*	2.0		53.4	50.00	0	106.7	48.98	8.54	08/03/2021	
1,2,4-Trichlorobenzene	*	2.0		56.9	50.00	0	113.8	53.71	5.79	08/03/2021	
1,2,4-Trimethylbenzene	*	2.0		54.2	50.00	0	108.5	49.60	8.94	08/03/2021	
1,2-Dibromo-3-chloropropane	*	5.0		56.3	50.00	0	112.6	52.81	6.40	08/03/2021	
1,2-Dibromoethane	*	2.0		53.7	50.00	0	107.4	51.01	5.14	08/03/2021	
1,2-Dichlorobenzene	*	2.0		53.1	50.00	0	106.2	49.36	7.32	08/03/2021	
1,2-Dichloroethane	*	2.0		53.4	50.00	0	106.8	50.19	6.16	08/03/2021	
1,2-Dichloropropane	*	2.0		52.3	50.00	0	104.5	48.08	8.35	08/03/2021	
1,3,5-Trimethylbenzene	*	2.0		54.3	50.00	0	108.6	50.13	7.97	08/03/2021	
1,3-Dichlorobenzene	*	2.0		56.7	50.00	0	113.4	51.41	9.77	08/03/2021	
1,3-Dichloropropane	*	2.0		50.3	50.00	0	100.6	48.91	2.80	08/03/2021	
1,4-Dichlorobenzene	*	2.0		53.6	50.00	0	107.2	49.78	7.41	08/03/2021	
1-Chlorobutane	*	5.0		56.5	50.00	0	113.0	50.24	11.73	08/03/2021	
2,2-Dichloropropane	*	2.0		62.9	50.00	0	125.8	56.09	11.41	08/03/2021	
2-Butanone	*	10.0		122	125.0	0	98.0	117.3	4.31	08/03/2021	
2-Chloroethyl vinyl ether	*	5.0		49.8	50.00	0	99.6	47.00	5.74	08/03/2021	
2-Chlorotoluene	*	2.0		53.9	50.00	0	107.7	48.83	9.81	08/03/2021	
2-Hexanone	*	10.0		126	125.0	0	100.8	121.6	3.49	08/03/2021	
2-Nitropropane	*	10.0		581	500.0	0	116.3	555.3	4.60	08/03/2021	
4-Chlorotoluene	*	2.0		54.3	50.00	0	108.5	49.39	9.40	08/03/2021	
4-Methyl-2-pentanone	*	10.0		125	125.0	0	99.9	120.5	3.59	08/03/2021	
Acetone	*	10.0		115	125.0	0	91.7	109.9	4.15	08/03/2021	
Acetonitrile	*	10.0		541	500.0	0	108.2	524.6	3.06	08/03/2021	
Acrolein	*	20.0		661	500.0	0	132.2	618.9	6.62	08/03/2021	
Acrylonitrile	*	5.0		52.1	50.00	0	104.2	51.10	1.90	08/03/2021	





## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180416	SampType: LCSD	Units µg/L								RPD Limit 15.4	Date Analyzed
SampID: LCSD-AE210803A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD		
Allyl chloride	*	5.0		<b>57.6</b>	50.00	0	115.2	53.46	7.42	08/03/2021	
Benzene	*	0.5		<b>52.0</b>	50.00	0	104.1	47.37	9.41	08/03/2021	
Bromobenzene	*	2.0		<b>56.2</b>	50.00	0	112.3	51.98	7.75	08/03/2021	
Bromochloromethane	*	2.0		<b>52.9</b>	50.00	0	105.9	49.80	6.09	08/03/2021	
Bromodichloromethane	*	2.0		<b>57.4</b>	50.00	0	114.8	53.67	6.72	08/03/2021	
Bromoform	*	2.0	S	<b>60.6</b>	50.00	0	121.3	58.83	3.01	08/03/2021	
Bromomethane	*	5.0		<b>50.8</b>	50.00	0	101.5	45.18	11.65	08/03/2021	
Carbon disulfide	*	2.0		<b>57.0</b>	50.00	0	114.0	49.21	14.70	08/03/2021	
Carbon tetrachloride	*	2.0		<b>60.7</b>	50.00	0	121.4	52.73	14.05	08/03/2021	
Chlorobenzene	*	2.0	S	<b>55.7</b>	50.00	0	111.4	51.30	8.21	08/03/2021	
Chloroethane	*	2.0		<b>55.5</b>	50.00	0	111.0	48.80	12.81	08/03/2021	
Chloroform	*	2.0		<b>57.2</b>	50.00	0	114.4	52.10	9.31	08/03/2021	
Chloromethane	*	5.0		<b>46.4</b>	50.00	0	92.9	41.87	10.33	08/03/2021	
Chloroprene	*	5.0		<b>56.9</b>	50.00	0	113.8	49.91	13.05	08/03/2021	
cis-1,2-Dichloroethene	*	2.0		<b>56.0</b>	50.00	0	112.1	51.19	9.05	08/03/2021	
cis-1,3-Dichloropropene	*	2.0		<b>54.7</b>	50.00	0	109.4	50.91	7.21	08/03/2021	
cis-1,4-Dichloro-2-butene	*	2.0		<b>55.1</b>	50.00	0	110.2	52.74	4.34	08/03/2021	
Cyclohexanone	*	20.0		<b>498</b>	500.0	0	99.6	486.4	2.34	08/03/2021	
Dibromochloromethane	*	2.0	S	<b>59.3</b>	50.00	0	118.5	55.89	5.87	08/03/2021	
Dibromomethane	*	2.0		<b>54.0</b>	50.00	0	107.9	51.27	5.13	08/03/2021	
Dichlorodifluoromethane	*	2.0		<b>53.4</b>	50.00	0	106.8	43.71	19.96	08/03/2021	
Diisopropyl ether	*	2.0		<b>52.2</b>	50.00	0	104.5	48.25	7.92	08/03/2021	
Ethyl acetate	*	10.0		<b>49.7</b>	50.00	0	99.4	49.30	0.79	08/03/2021	
Ethyl ether	*	5.0		<b>50.6</b>	50.00	0	101.3	48.43	4.48	08/03/2021	
Ethyl methacrylate	*	5.0		<b>51.6</b>	50.00	0	103.3	48.96	5.35	08/03/2021	
Ethylbenzene	*	2.0		<b>54.3</b>	50.00	0	108.7	49.61	9.10	08/03/2021	
Ethyl-tert-butyl ether	*	2.0		<b>53.3</b>	50.00	0	106.6	49.32	7.74	08/03/2021	
Hexachlorobutadiene	*	5.0		<b>57.8</b>	50.00	0	115.7	51.85	10.90	08/03/2021	
Hexachloroethane	*	5.0		<b>60.6</b>	50.00	0	121.2	56.32	7.35	08/03/2021	
Iodomethane	*	5.0		<b>61.2</b>	50.00	0	122.3	52.99	14.33	08/03/2021	
Isopropylbenzene	*	2.0		<b>56.5</b>	50.00	0	113.0	50.72	10.75	08/03/2021	
m,p-Xylenes	*	2.0		<b>112</b>	100.0	0	111.7	101.1	10.00	08/03/2021	
Methacrylonitrile	*	5.0		<b>52.8</b>	50.00	0	105.6	49.56	6.31	08/03/2021	
Methyl Methacrylate	*	5.0		<b>51.4</b>	50.00	0	102.8	47.75	7.38	08/03/2021	
Methyl tert-butyl ether	*	2.0		<b>52.5</b>	50.00	0	105.0	49.90	5.08	08/03/2021	
Methylacrylate	*	5.0		<b>53.0</b>	50.00	0	106.0	50.29	5.25	08/03/2021	



**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

Batch 180416	SampType: LCSD	Units µg/L							RPD Limit 15.4		Date
SampID: LCSD-AE210803A-1											
Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Analyzed	
Methylene chloride	*	2.0		49.9	50.00	0	99.8	45.62	8.96	08/03/2021	
Naphthalene	*	5.0	S	62.8	50.00	0	125.6	59.01	6.19	08/03/2021	
n-Butyl acetate	*	2.0		51.4	50.00	0	102.9	49.11	4.62	08/03/2021	
n-Butylbenzene	*	2.0		51.1	50.00	0	102.2	44.21	14.46	08/03/2021	
n-Heptane	*	5.0		58.5	50.00	0	117.0	49.39	16.85	08/03/2021	
n-Hexane	*	5.0		53.3	50.00	0	106.6	44.84	17.26	08/03/2021	
Nitrobenzene	*	50.0		525	500.0	0	105.1	502.6	4.45	08/03/2021	
n-Propylbenzene	*	2.0		53.9	50.00	0	107.8	48.22	11.16	08/03/2021	
o-Xylene	*	2.0		55.9	50.00	0	111.8	51.56	8.06	08/03/2021	
Pentachloroethane	*	5.0		59.6	50.00	0	119.3	56.35	5.69	08/03/2021	
p-Isopropyltoluene	*	2.0		54.1	50.00	0	108.2	49.12	9.69	08/03/2021	
Propionitrile	*	10.0		540	500.0	0	107.9	519.1	3.87	08/03/2021	
sec-Butylbenzene	*	2.0		54.5	50.00	0	108.9	48.42	11.76	08/03/2021	
Styrene	*	2.0		56.4	50.00	0	112.9	52.47	7.29	08/03/2021	
tert-Amyl methyl ether	*	2.0		52.2	50.00	0	104.4	48.60	7.18	08/03/2021	
tert-Butyl alcohol	*	10.0		253	250.0	0	101.3	236.6	6.83	08/03/2021	
tert-Butylbenzene	*	2.0		54.6	50.00	0	109.3	49.09	10.72	08/03/2021	
Tetrachloroethene	*	0.5		56.3	50.00	0	112.6	49.73	12.41	08/03/2021	
Tetrahydrofuran	*	5.0		49.7	50.00	0	99.4	47.38	4.74	08/03/2021	
Toluene	*	2.0		53.6	50.00	0	107.2	48.80	9.34	08/03/2021	
trans-1,2-Dichloroethene	*	2.0		55.4	50.00	0	110.7	49.23	11.72	08/03/2021	
trans-1,3-Dichloropropene	*	2.0		55.3	50.00	0	110.7	53.18	3.98	08/03/2021	
trans-1,4-Dichloro-2-butene	*	2.0		51.7	50.00	0	103.4	50.06	3.18	08/03/2021	
Trichloroethene	*	2.0		55.0	50.00	0	109.9	48.95	11.55	08/03/2021	
Trichlorofluoromethane	*	5.0		56.9	50.00	0	113.7	47.28	18.42	08/03/2021	
Vinyl acetate	*	5.0		54.8	50.00	0	109.6	53.20	3.00	08/03/2021	
Vinyl chloride	*	2.0		53.7	50.00	0	107.4	45.41	16.73	08/03/2021	
Xylenes, Total	*	4.0		168	150.0	0	111.7	152.6	9.35	08/03/2021	
1,2-Dichloroethene, Total	*	4.0		111	100.0	0	111.4	100.4	10.37	08/03/2021	
1,3-Dichloropropene, Total	*	4.0		110	100.0	0	110.1	104.1	5.58	08/03/2021	
1,4-Dichloro-2-butene, Total	*	4.0		107	100.0	0	106.8	102.8	3.78	08/03/2021	
Surr: 1,2-Dichloroethane-d4	*			51.4	50.00		102.8			08/03/2021	
Surr: 4-Bromofluorobenzene	*			48.4	50.00		96.9			08/03/2021	
Surr: Toluene-d8	*			49.6	50.00		99.3			08/03/2021	



## Quality Control Results

<http://www.teklabinc.com/>

**Client:** Burns & McDonnell Waste Consultants

**Work Order:** 21071732

**Client Project:** 128487 GSA

**Report Date:** 10-Aug-21

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

**Batch 180416**    **SampType:** LCSG    Units µg/L

SampID: LCSG-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>2130</b>	2000	0	106.4	70	130	08/03/2021
Surr: 1,2-Dichloroethane-d4	*			<b>52.1</b>	50.00		104.3	80	120	08/03/2021
Surr: 4-Bromofluorobenzene	*			<b>49.1</b>	50.00		98.1	80	120	08/03/2021
Surr: Toluene-d8	*			<b>50.5</b>	50.00		100.9	80	120	08/03/2021

**Batch 180416**    **SampType:** LCSGD    Units µg/L

RPD Limit **20**

SampID: LCSGD-AE210803A-1

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
TPH - GRO (C6 - C10)	*	500		<b>1880</b>	2000	0	93.8	2127	12.56	08/03/2021
Surr: 1,2-Dichloroethane-d4	*			<b>52.5</b>	50.00		105.0			08/03/2021
Surr: 4-Bromofluorobenzene	*			<b>48.2</b>	50.00		96.3			08/03/2021
Surr: Toluene-d8	*			<b>50.2</b>	50.00		100.3			08/03/2021



# Receiving Check List

<http://www.teklabinc.com/>

Client: Burns & McDonnell Waste Consultants

Work Order: 21071732

Client Project: 128487 GSA

Report Date: 10-Aug-21

Carrier: Ben Lockwood

Received By: PRY

Completed by: (b) (6)

Reviewed by: (b) (6)

On:

On:

29-Jul-21

29-Jul-21

Marvin L. Darling

Elizabeth A. Hurley

Pages to follow: Chain of custody

Extra pages included

- Shipping container/cooler in good condition? Yes  No  Not Present  Temp °C **19.2**
- 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.**

pH strip# 77626. PRY 7/29/21



# Request for Chemical Analysis and Chain of Custody Record

021618 Form WCD-KC1-STL

Burns & McDonnell Engineering  
 425 South Woods Mill Road  
 Chesterfield, Missouri 63017  
 Phone: (314) 682-1500 Fax: (314) 682-1600  
 Attention: *Justin Carter*  
*Justin.Carter@burnsmcd.com*

Laboratory: *FERRAZ, Inc.*  
 Address: *5445 Horsehoe Lake RD*  
 City/State/Zip: *Collinsville IL 62234*  
 Telephone: *618-344-1004*

Document Control No: *128487-003*  
 Lab. Reference No. or Episode No.:

Project Number: *128487* Sample Type:  
 Client Name: *GSA* Matrix:

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas	Number of Containers	Analysis						Remarks
Group or SWMU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time					PNAs	TPH-ORO	ORO	PCBs	Metals (TOTAL)	VOCs	
<i>MW-17</i>	<i>07292021</i>	<i>21071732-09</i>		<i>2021</i>			<i>7/29</i>	<i>045</i>	<i>X</i>			<i>5</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>		
<i>Rwse-17</i>		<i>-002</i>		<i>2021</i>			<i>7/29</i>	<i>910</i>	<i>X</i>			<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>		

*Metals: Sb As Cu Pb Zn  
 per bottle order 66612  
 MURR 7/29/21*

Sampler (signature): *(b) (6)*  
 Relinquished By (signature): *(b) (6)*  
 Relinquished By (signature): *(b) (6)*

Sampler (signature): *(b) (6)*  
 Received By (signature): *(b) (6)*  
 Received By (signature): *(b) (6)*

Special Instructions: *SEE WORK ORDER COC LIST.*  
 Ice Present in Container: Yes  No   
 Temperature Upon Receipt: *19.20C*  
 Laboratory Comments: *PHV 77626.045.PAF 7/29/21*

**Burns & McDonnell - KS**

Sample Delivery Group: L1376801  
Samples Received: 07/10/2021  
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](http://www.pacenational.com)

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# SAMPLE SUMMARY

## MW-08 07092021 L1376801-01 GW

Collected by: B. Lockwood  
 Collected date/time: 07/09/21 10:19  
 Received date/time: 07/10/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1704081	1	07/14/21 17:52	07/15/21 14:06	GKM	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

## MW-08 07092021/DUP L1376801-02 GW

Collected by: B. Lockwood  
 Collected date/time: 07/09/21 10:19  
 Received date/time: 07/10/21 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (HPLC) by Method 8330	WG1704081	1	07/14/21 17:52	07/15/21 14:33	GKM	Mt. Juliet, TN

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

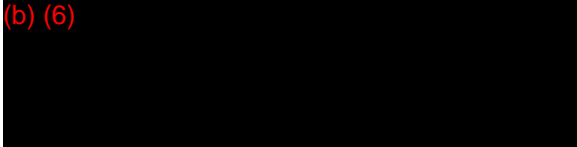
<sup>8</sup> Al

<sup>9</sup> Sc

# CASE NARRATIVE

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

(b) (6)



Jeff Carr  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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	07/15/2021 14:06	<a href="#">WG1704081</a>
2,4-Dinitrotoluene	ND		0.00200	1	07/15/2021 14:06	<a href="#">WG1704081</a>
4-Nitrotoluene (4-NT)	ND		0.00200	1	07/15/2021 14:06	<a href="#">WG1704081</a>
RDX	ND		0.00200	1	07/15/2021 14:06	<a href="#">WG1704081</a>
Nitrobenzene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
2,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
2-Nitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
3-Nitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
1,3,5-Trinitrobenzene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
1,3-Dinitrobenzene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
2,4,6-Trinitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
HMX	ND		0.00200	1	07/15/2021 14:06	<a href="#">WG1704081</a>
PETN	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
Nitroglycerine	ND		0.000500	1	07/15/2021 14:06	<a href="#">WG1704081</a>
(S) 1,3-Dimethyl-2-NB	95.2		57.0-120		07/15/2021 14:06	<a href="#">WG1704081</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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	07/15/2021 14:33	<a href="#">WG1704081</a>
2,4-Dinitrotoluene	ND		0.00200	1	07/15/2021 14:33	<a href="#">WG1704081</a>
4-Nitrotoluene (4-NT)	ND		0.00200	1	07/15/2021 14:33	<a href="#">WG1704081</a>
RDX	ND		0.00200	1	07/15/2021 14:33	<a href="#">WG1704081</a>
Nitrobenzene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
2,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
2-Nitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
3-Nitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
1,3,5-Trinitrobenzene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
1,3-Dinitrobenzene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
2,4,6-Trinitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
4-Amino-2,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
2-Amino-4,6-Dinitrotoluene	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
HMX	ND		0.00200	1	07/15/2021 14:33	<a href="#">WG1704081</a>
PETN	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
Nitroglycerine	ND		0.000500	1	07/15/2021 14:33	<a href="#">WG1704081</a>
(S) 1,3-Dimethyl-2-NB	94.7		57.0-120		07/15/2021 14:33	<a href="#">WG1704081</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3680461-1 07/15/21 11:24

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	87.0			57.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3680461-2 07/15/21 11:51 • (LCSD) R3680461-3 07/15/21 12:18

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	0.0203	0.0198	102	99.0	80.0-120			2.49	20
2,4-Dinitrotoluene	0.0200	0.0201	0.0204	101	102	80.0-120			1.48	20
4-Nitrotoluene (4-NT)	0.0200	0.0190	0.0190	95.0	95.0	80.0-120			0.000	20
RDX	0.0200	0.0184	0.0184	92.0	92.0	79.0-120			0.000	20
Nitrobenzene	0.0200	0.0190	0.0194	95.0	97.0	80.0-120			2.08	20
2,6-Dinitrotoluene	0.0200	0.0201	0.0202	101	101	78.0-120			0.496	20
2-Nitrotoluene	0.0200	0.0186	0.0187	93.0	93.5	80.0-120			0.536	20
3-Nitrotoluene	0.0200	0.0186	0.0188	93.0	94.0	80.0-120			1.07	20
1,3,5-Trinitrobenzene	0.0200	0.0195	0.0197	97.5	98.5	80.0-120			1.02	20
1,3-Dinitrobenzene	0.0200	0.0211	0.0190	106	95.0	80.0-120			10.5	20
2,4,6-Trinitrotoluene	0.0200	0.0189	0.0192	94.5	96.0	80.0-120			1.57	20
4-Amino-2,6-Dinitrotoluene	0.0200	0.0187	0.0192	93.5	96.0	79.0-120			2.64	20
2-Amino-4,6-Dinitrotoluene	0.0200	0.0182	0.0187	91.0	93.5	80.0-122			2.71	20
HMX	0.0200	0.0179	0.0183	89.5	91.5	73.0-120			2.21	20
PETN	0.0200	0.0181	0.0188	90.5	94.0	80.0-120			3.79	20
Nitroglycerine	0.0200	0.0191	0.0206	95.5	103	70.0-120			7.56	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3680461-2 07/15/21 11:51 • (LCSD) R3680461-3 07/15/21 12:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
(S) 1,3-Dimethyl-2-NB				89.0	92.2	57.0-120				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# 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.

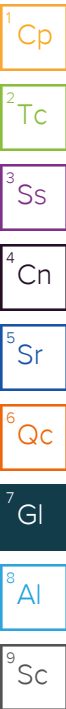
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

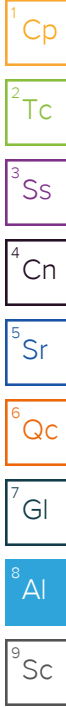
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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

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

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

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






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									

Chain of Custody Page \_\_\_ of \_\_\_  
  
 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>

Report to:  
**Justin Carter**

Email To: **jcarter@burnsmcd.com**

Project Description:  
**GSA Goodfellow - St. Louis, MO**

City/State Collected:

Please Circle:  
 PT MT CT ET

Phone: **816-333-9400**

Client Project #  
**MW/128487-1ENS-KCM20**

Lab Project #  
**BURNMCKC-GSA**

Collected by (print): *B. Lockwood*

Site/Facility ID #

P.O. #  
**183149**

Collected by (signature):  
 (b) (6)  
 Immediately Packed on Ice N \_\_\_ Y X

**Rush?** (Lab MUST Be Notified)  
 \_\_\_ Same Day \_\_\_ Five Day  
 \_\_\_ Next Day \_\_\_ 5 Day (Rad Only)  
 \_\_\_ Two Day \_\_\_ 10 Day (Rad Only)  
 \_\_\_ Three Day

Quote #  
 Date Results Needed  
**STAT**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs												
<i>MW-08 07092021</i>		GW		<i>7/9/21</i>	<i>1019</i>	<i>3</i>	X											
<i>MW-08 07092021/Dup</i>		GW		<i>7/9/21</i>	<i>1019</i>	<i>3</i>	X											
		GW				<i>2</i>	X											

SV8330 1L-Amb NoPres

SDG # *1376801*  
**H095**  
 Acctnum: **BURNMCKC**  
 Template: **T190414**  
 Prelogin: **P857946**  
 PM: **206 - Jeff Carr**  
 PB:

Remarks	Sample # (lab only)
	<i>-01</i>
	<i>-02</i>

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

Remarks:  
 pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_  
 Samples returned via:  
 \_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier  
 Tracking # **5016 1225 4080**

**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) *[Signature]*  
 (b) (6)  
 Date: *7/9/21*  
 Time: *12:54*

Date: *7/9/21*  
 Time: *12:54*

Received by: (Signature) *[Signature]*  
 (b) (6)  
 Received by: (Signature) *[Signature]*  
 (b) (6)  
 Received for Lab by: (Signature) *[Signature]*  
 (b) (6)

Trip Blank Received: Yes / No  
 HCL / MeOH  
 TBR  
 Temp: \_\_\_\_\_ °C  
 Bottles Received: *230*  
*413+0=413*  
 Date: *7/10/21* Time: *915*

If preservation required by Login: Date/Time  
 Hold:  
 Condition:  
 NCF / OK

## **APPENDIX C – DATA VALIDATION MEMORANDUM**





September 8, 2021

**Review of Analytical Data**  
**Quarterly Groundwater Sampling Event - July 2021**  
**Remedial Investigation for**  
**Goodfellow Federal Complex, St. Louis, Missouri**

**SDG(s):** 21060366, 21060675, 21060830, 21061101, 21061576, 21070532R, 21070533R, 21070534R, 21070535R, 21070648, 21071732R, and L1376801

Groundwater samples were collected at the Goodfellow Federal Complex in St. Louis, Missouri during July 2021 as part of the quarterly groundwater monitoring program. In addition, rinsate blank samples were collected during the soil boring drilling and well installation activities conducted in June 2021. Analyses were performed by Teklab, Inc., located in Collinsville, Illinois, with the exception of explosives analyses, which were performed by Pace Analytical Services in Mt. Juliet, Tennessee.

This data validation report presents the data quality review for the methods and samples listed below. The analytical data were reviewed in accordance with the *Final Quality Assurance Project Plan, Goodfellow Federal Complex (QAPP)*, the *U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review (EPA NFGs)*, and *Test Methods for Evaluating Solid Waste-Physical Chemical Methods (SW846)* which details the specifics of quality assurance (QA) and quality control (QC) with respect to data evaluation.

**Level of Review:** Level II for 100% of the data

**Methods Reviewed:**

- Volatile Organic Compounds (VOCs) by SW8260B
- Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics (GRO) by SW8260B
- Polycyclic Aromatic Hydrocarbons (PAHs) by SW8270C
- TPH – Diesel Range Organics (DRO) and Oil Range Organics (ORO) 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 Tot	6010B Diss	8082	8260B	GRO	8270C	DRO/ORO	8330
21060366	Rinse-01	21060366-001	6/2/21	X	--	X	X	X	X	--	--
21060366	Rinse-02	21060366-002	6/3/21	X	--	X	X	X	X	--	--
21060366	Rinse-03	21060366-003	6/4/21	X	--	X	X	X	X	--	--
21060366	TB-01	21060366-004	6/4/21	--	--	--	X	--	--	--	--
21060675	TB-02	21060675-001	6/9/21	--	--	--	X	--	--	--	--
21060675	RINSE-04	21060675-002	6/7/21	X	--	X	X	X	X	--	--
21060675	RINSE-05	21060675-003	6/8/21	X	--	X	X	X	X	--	--

SDG	Sample ID	Lab ID	Sample Date	6010B Tot	6010B Diss	8082	8260B	GRO	8270C	DRO/ORO	8330
21060830	TB-03	21060830-001	6/11/21	--	--	--	X	--	--	--	--
21060830	RINSE-06	21060830-002	6/9/21	X	--	X	X	X	X	--	--
21060830	RINSE-07	21060830-003	6/10/21	X	--	X	X	X	X	--	--
21060830	RINSE-08	21060830-004	6/11/21	X	--	X	X	X	X	--	--
21061101	TB-01	21061101-001	6/16/21	--	--	--	X	--	--	--	--
21061101	Rinse-09	21061101-002	6/14/21	X	--	X	X	X	X	--	--
21061101	Rinse-10	21061101-003	6/15/21	X	--	X	X	X	X	--	--
21061101	Rinse-11	21061101-004	6/16/21	X	--	X	X	X	X	--	--
21061576	Rinse-12	21061576-001	6/21/21	X	--	X	X	X	X	--	--
21061576	Rinse-13	21061576-002	6/22/21	X	--	X	X	X	X	--	--
21061576	Rinse-14	21061576-003	6/23/21	X	--	X	X	X	X	--	--
21061576	Rinse-15	21061576-004	6/24/21	X	--	X	X	X	X	--	--
21061576	TB-06	21061576-005	6/24/21	--	--	--	X	--	--	--	--
21070532R	TB-07	21070532-001	7/9/21	--	--	--	X	--	--	--	--
21070532R	MW-01 07062021	21070532-002	7/6/21	X	--	X	X	X	X	X	--
21070532R	MW-02 07072021	21070532-003	7/7/21	X	X	X	X	X	X	X	--
21070532R	MW-02 07072021/DUP	21070532-004	7/7/21	X	X	X	X	X	X	X	--
21070532R	MW-03 07072021	21070532-005	7/7/21	X	--	X	X	X	X	X	--
21070533R	MW-18 07082021	21070533-001	7/8/21	X	X	X	X	X	X	X	--
21070533R	MW-10 07082021	21070533-002	7/8/21	X	--	X	X	X	X	X	--
21070533R	MW-13 07082021	21070533-003	7/8/21	X	X	X	X	X	X	X	--
21070534R	TB-08	21070534-001	7/9/21	--	--	--	X	--	--	--	--
21070534R	MW-04 07072021	21070534-002	7/7/21	X	--	X	X	X	X	X	--
21070534R	MW-05 07072021	21070534-003	7/7/21	X	X	X	X	X	X	X	--
21070534R	MW-06 07072021	21070534-004	7/7/21	X	--	X	X	X	X	X	--
21070534R	RINSE-16	21070534-005	7/7/21	X	X	X	X	X	X	X	--
21070535R	TB-09	21070535-001	7/9/21	--	--	--	X	--	--	--	--
21070535R	MW-16 07082021	21070535-002	7/8/21	X	--	X	X	X	X	X	--
21070535R	MW-07 07082021	21070535-003	7/8/21	X	--	X	X	X	X	X	--
21070535R	MW-09 07092021	21070535-004	7/9/21	X	--	X	X	X	X	X	--
21070648	MW-08 07092021	21070648-001	7/9/21	X	--	X	X	--	X	X	--
21070648	MW-19 07092021	21070648-002	7/9/21	X	--	X	X	--	X	X	--
21070648	MW-15 07092021	21070648-003	7/9/21	X	--	X	X	--	X	X	--
21070648	MW-12 07092021	21070648-004	7/9/21	X	--	X	X	--	X	X	--
21070648	Trip Blank 10 (TB-10)	21070648-005	7/12/21	--	--	--	X	--	--	--	--
21071732R	MW-17	21071732-001	7/29/21	X	--	X	X	X	X	X	--
21071732R	Rinse-17	21071732-002	7/29/21	X	X	X	X	X	X	X	--
L1376801	MW-08 07092021	L1376801-01	7/9/2021	--	--	--	--	--	--	--	X
L1376801	MW-08 07092021/DUP	L1376801-02	7/9/2021	--	--	--	--	--	--	--	X

To evaluate the data quality, the results were compared to the *QAPP*, *EPA NFGs*, and analytical method requirements. 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.). Note: Only the reportable sample data and associated laboratory QC data were included in the data validation review. Any laboratory flagged data that do not apply to the reportable client sample data are not discussed in this data review report.

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 complete and accurate, sample containers were not broken, custody seals were intact, the pH met method-specific criteria, and cooler temperatures were received at  $\leq 6$  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 with the following exceptions:

- The Receiving Checklist forms indicated that all VOA vials for trip blank samples TB-07 (SDG 21070532R), TB-08 (SDG 21070534R), and TB-09 (SDG 21070535R) contained headspace, but did not indicate the amount of headspace. The affected trip blank samples were non-detect for VOCs, and there was no evidence in the associated samples indicating cross-contamination was a concern; therefore, no data qualifiers were required.
- The collection dates and times were not documented by field personnel for trip blank samples. The laboratory assigned the end of trip (e.g. received date and time) as the sample time.
- The cooler temperature for SDG 21071732R was 19.2 degrees centigrade ( $^{\circ}\text{C}$ ), well above the 6  $^{\circ}\text{C}$  criteria. The laboratory noted on the Receiving Check List that there was ice present in the cooler upon receipt. Samples were delivered to the laboratory the same morning as the sample collection, leaving insufficient time for the samples to cool. Therefore, data quality is not considered to be affected and no data qualifiers were necessary.

**2. Requested Analyses Completed** – Samples were analyzed as requested on the COCs, with the following exceptions:

- For SDG 21070532R, dissolved metals analysis was not requested for sample MW02 07072021, but was analyzed by the laboratory. It was noted in the Receiving Check List that a dissolved metals sample was received by the laboratory for MW02 07072021; therefore, the analysis was added. The data reviewer further notes that although the COC did not request the dissolved metals analysis for sample MW02 07072021, it was requested for its field duplicate sample (MW02 07072021/Dup).
- GRO was not specifically requested on the COCs for the monitoring well samples, however, GRO was analyzed by the laboratory for monitoring wells MW-01 to MW-03 in SDG 21070532R; MW-04 to MW-06 in SDG 21070534R; MW-07, MW-09, and MW-16 in SDG 21070535R; and MW-10, MW-13, & MW-18 in SDG 21070533R.
- GRO was not specifically requested on the COC for samples MW-17 or Rinse-17 in SDG 21071732R, however, as noted in the Case Narrative for SDG 21071732R, GRO analyses for these samples were added upon request by Justin Carter.

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 possible contamination in the analytical system. No target analytes were detected at or above the reporting limits (RLs) in the method blanks, with one exception:

- For SDG 21061101, total zinc was detected in the method blank associated with metals Batch 179031 at a concentration of 0.0110 mg/L, which was slightly greater than the 0.01 mg/L reporting limit. However, because zinc in the associated samples was either not detected or reported at concentrations greater than 10 times the method blank amount, no data qualifiers were required.

The reviewer also noted:

- For SDGs 21060830, 21070532R, 21070533R, 21070534R, 21070535R, and 21070648, the naphthalene results associated with VOC Batches 178875, 179692, and 179812 were flagged with a “B” by the laboratory, indicating naphthalene was detected in the method blank between the method detection limit (MDL) and the reporting limit (RL). Because naphthalene was not detected at or above the RL in either the method blank or associated samples, no data qualifiers were required.
  - For SDG 21071732R, the acetone result for sample MW-17 associated with VOC Batch 180354 was flagged with a “B” by the laboratory, indicating acetone was detected in the method blank at a concentration greater than the method detection limit (MDL). Because acetone was not detected at or above the RL in the method blank and associated sample, no data qualifiers were required.
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.

Fifteen rinsate blanks were collected during the soil boring drilling and well installation activities conducted in June 2021 and analyzed for total metals, PCBs, PAHs, VOCs, and GRO. Although the data review for these rinsate blanks are included in this report, they are not associated with the groundwater samples included in this review. The laboratory results for the soil samples associated with these rinsate blanks are provided under separate cover. Therefore, no data qualifiers were applied to the groundwater samples included in this review based on the results of these rinsate blanks. No target analytes were detected at or above the RL in the rinsate blanks, with the following exceptions:

- Rinse-01 (SDG 21060366): total zinc = 0.0190 mg/L, fluoranthene = 0.00166 mg/L, and pyrene = 0.00122 mg/L
- Rinse-06 (SDG 21060830): total copper = 0.0085 mg/L, total zinc = 0.0562 mg/L
- Rinse-10 (SDG 21061101): total zinc = 0.132 mg/L
- Rinse-11 (SDG 21061101): total zinc = 0.0518 mg/L
- Rinse-15 (SDG 21061576): chloroform = 5.2 ug/L

Two rinsate blanks were collected during the groundwater sampling event and analyzed for the same methods as the investigative groundwater samples. No target analytes were detected at or above the RL in the rinsate blanks, with the following exception:

- Rinse-16 (SDG 21070534R): bromodichloromethane = 2.2 ug/L, chloroform = 9.2 ug/L, total zinc = 0.011 mg/L.

Because these analytes were not detected in the associated investigative samples MW-04, MW-05, and MW-06 (reported in SDG 21070534R), no qualifiers were required based on detections in the rinsate blank.

See Item 12 (Deviations from the QAPP) 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 sampling, transportation, and storage procedures. Nine trip blanks were analyzed during this sampling event. No target analytes were detected at or above the RL in the trip blanks, with the following exception:
  - SDG 21061576, TB-06: chloroform = 6.5 ug/L. Sample TB-06 is associated with samples Rinse-12, Rinse-13, Rinse-14, and Rinse-15. Only rinsate blank sample Rinse-15 contained a detection of chloroform at a concentration of 5.2 ug/L. Therefore, the chloroform result for Rinse-15 is qualified as non-detect (U) at the sample concentration.

See Item 12 (Deviations from the QAPP) below regarding the QAPP-specified criteria for trip blanks.

7. **Surrogates** – Surrogate spike compounds were added to investigative samples during organic analyses to assess the individual matrix effect of investigative samples and to monitor overall analytical system performance. The surrogate percent recoveries (%Rs) were compared to laboratory control limits. The surrogate %Rs met criteria, with the following exception:
  - For sample MW-18 (Lab ID 21070533-001): The percent recovery (%R) for PCB surrogate tetrachloro-meta-xylene (327%) was above the 9.73%-128% laboratory control limits. Concentrations of PCBs were not detected in sample MW-18. Results are not affected by the high bias indicated by the surrogate; therefore, no data qualifiers were required.
8. **Laboratory Control Samples (LCS)/ Laboratory Control Sample Duplicates (LCSD)** – The Laboratory analyzed a LCS or LCS/LCSD pairs with each analytical batch of field samples to assess internal precision and accuracy. LCS/LCSDs consisted of analyte-free water spiked with selected target constituents of known concentration. For this sampling event, a LCS was analyzed for Method 6010B, and LCS/LCSD pairs were analyzed for Methods 8082, 8270C, 8260B, and 8330. The LCS/LCSD %Rs were compared to laboratory control limits. The LCS/LCSD relative percent differences (RPDs) were compared to the project QAPP-specified criteria of  $\pm 25\%$ . The LCS/LCSD %Rs and RPDs met criteria, with the following exceptions:
  - For VOC Batch 178656 in SDG 21060366, the LCS/LCSD %Rs for iodomethane (31.9%/40.9%) were below the 50%-151% laboratory criteria. The laboratory subsequently re-analyzed iodomethane in Batch 178673. The LCS/LCSD %Rs for iodomethane in this batch met criteria. The iodomethane results for the associated samples Rinse-01, Rinse-02, Rinse-03, and TB-01 were reported from Batch 178673, therefore, no qualifiers were required. The remaining VOC analytes were reported from Batch 178656 which met criteria.
  - For VOC Batch 178875 in SDG 21060830, the LCS %R for chloroethane (67.2%) was below the 69.6%-135% laboratory criteria and the LCS/LCSD RPD (31.57%) was above the 15.4% laboratory and 25% QAPP criteria. The LCSD for chloroethane (92.3%) met criteria. Because the LCS %R was below criteria, the chloroethane results for associated samples TB-03, Rinse-06, Rinse-07, and Rinse-08 were qualified as estimated at the reporting limit (UJ).
  - For VOC Batch 178954 in SDG 21061101, the LCS %Rs for acetonitrile (136.7%) and n-heptane (143.1%) were slightly above the 68.8%-136% and 50.4%-143% laboratory criteria, respectively.

Because acetonitrile and n-heptane were not detected in the associated samples and not affected by the slight high bias indicated by the LCS %Rs, no qualifiers were required.

- For VOC Batch 179215 in SDG 21061576, the LCSD %R for 1,1-dichloro-2-propanone (74.2%) was slightly below the 74.9%-117% laboratory criteria. The LCS %R for 1,1-dichloro-2-propanone (76.1%) met criteria. Because the LCS %R met criteria and the LCSD %R was only slightly below the lower control limit, no qualifiers were applied using reviewer judgement.
  - The LCS/LCSD RPD for the PAH, naphthalene, was 26.26% in Batch 179663 associated with samples in SDGs 21070532R, 21070533R, and 21070534R. The RPD was below the laboratory's 40% criteria, but above the 25% criteria specified in the QAPP. Because naphthalene was not detected in the associated samples, no data qualifiers were required.
  - In Batch 179680 associated with samples in SDGs 21070534R, 21070535R, and 21070532R, the LCSD %R for tert-amyl methyl ether (80.6%) was less than the laboratory's limits (80.8%-125%). The LCSD %R was only slightly below the lower control limit and the corresponding LCS %R (86.2%) met criteria; therefore, no data qualifiers were applied using reviewer judgement.
  - The LCS/LCSD RPD for the PAH, naphthalene, was 61.64% in Batch 179772 associated with samples in SDG 21070648. The RPD exceeded both the 40% laboratory criteria and the 25% criteria specified in the QAPP. Because naphthalene was not detected in the associated samples, no data qualifiers were required.
  - For PCB Batch 180359 associated with samples in SDG 21071732R, the LCS/LCSD RPD for Arclor-1260 (35.5%), was below the laboratory criteria (36%), but above the 25% criteria specified in the QAPP. No concentrations of Arclor-1260 were detected in the associated samples; therefore, no data qualifiers were required.
  - For the VOC LCS/LCSD in Batch 180354 associated with samples in SDG 21071732R, the following %Rs and/or RPDs did not meet criteria:
    - The LCS %Rs for 1,1,2,2-tetrachloroethane (76.6%) and 1,2,3-trichloropropane (74.8%) were slightly less than the 76.7%-113% and 75.3%-109% laboratory limits, respectively. Because the LCSD %Rs met criteria and the LCS %Rs were only slightly below the lower control limits, no data qualifiers were applied using reviewer judgement.
    - The LCSD %Rs for m,p-xylenes (116.9%) and styrene (121.8%) were above the 77.2%-116% and 80.4%-117% laboratory limits, respectively. Because m,p-xylenes and styrene were not detected in the associated samples and not affected by the slight high bias indicated by the LCSD %Rs, no qualifiers were required.
    - The LCS/LCSD RPD for acrolein (92.53%) was above the 25% criteria specified in the QAPP. Concentrations of acrolein were not detected in the associated samples; therefore, no data qualifiers were required.
9. **Matrix Spike/Matrix Spike Duplicates (MS/MSDs)** – MS and MSD samples are investigative samples spiked by the laboratory with known concentrations of target analytes. MS and MSD sample results are used to evaluate possible matrix interferences. Accuracy was assessed by calculating the MS and MSD %Rs of the concentrations of the target analytes added to the investigative sample. Precision was assessed by calculating the RPDs for the MS/MSD sample pairs.

Additional sample volume was collected from MW-13 (SDG 21070533R) to be used for the MS/MSD for total and dissolved metals, PCBs, PAHs, DRO, ORO, and VOCs. However, no MS/MSD analyses were



performed for PAH, GRO or ORO. The reviewer notes that the VOCs MS/MSDs were analyzed for 9 out of the 103 target analytes in accordance with the laboratory SOP and as specified in the QAPP.

The following samples were used for batch MS/MSDs, selected by the laboratory:

- Dissolved metals: MW-02 (SDG 21070532R), MW-05 (SDG 21070534R), Rinse-17 (SDG 21071732R).
- Total metals: MW-01 (SDG 21070532R), MW-04 (SDG 21070534R), MW-06 (SDG 21070534R), MW-08 (SDG 21070648), MW-16 (SDG 21070535R), Rinse-03 (SDG 21060366), Rinse-04 (SDG 21060675), Rinse-06 (SDG 21060830), Rinse-10 (SDG 21061101), Rinse-12 (SDG 21061576), and Rinse-17 (SDG 21071732R).
- DRO: MW-02Dup (SDG 21070532R), MW-19 (SDG 21070648), Rinse-17 (SDG 21071732R).
- VOCs: MW-15 (SDG 21070648).

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  $\pm 30\%$  for values  $\geq$  the LOQ in both samples, in accordance with the QAPP. Two FDs were collected for this sampling event. Sample MW-02 07072021/DUP is the FD for parent sample MW-02 07072021 for all methods except explosives; and MW-08 07092021/DUP is the FD for parent sample MW-08 07092021 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. See details related to QAPP deviations in Item 12.
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  $\leq \frac{1}{2}$  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, GRO or ORO.
13. **Conclusion** – The data were acceptable with the following qualifications:
  - Due to contamination in the trip blank, the chloroform result for sample Rinse-15 is qualified as non-detect (U) at the sample concentration.
  - The VOC, chloroethane results, in samples TB-03, Rinse-06, Rinse-07, and Rinse-08 were qualified “UJ” as estimated non-detects due to LCS %R and LCS/LCSD RPD outside laboratory and QAPP criteria.



Based on this review, the analytical data generated for this sampling event are of sufficient quality to fulfill program objectives and may be used for its intended purpose.

**Summary of Qualified Data:**

SDG	Lab Sample ID	Client Sample ID	Matrix	Parameter	Lab Result	Lab Flag	Units	DV Qual	Reason
21061576	21061576-004	Rinse-15	water	Chloroform	5.2		ug/L	U	TB detect
21060830	21060830-001	TB-03	water	Chloroethane	2	U	ug/L	UJ	LCS/LCSD
21060830	21060830-002	RINSE-06	water	Chloroethane	2	U	ug/L	UJ	LCS/LCSD
21060830	21060830-003	RINSE-07	water	Chloroethane	2	U	ug/L	UJ	LCS/LCSD
21060830	21060830-004	RINSE-08	water	Chloroethane	2	U	ug/L	UJ	LCS/LCSD

DV Qual (Validation Qualifier):

U = The analyte was qualified as not detected due to non-conformances discovered during data validation.

UJ = Estimated at the reporting limit; the analyte was reported as not detected by the laboratory, however, the reported quantitation limit is estimated due to non-conformances discovered during data validation.

**REFERENCES**

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Burns & McDonnell World Headquarters  
9400 Ward Parkway  
Kansas City, MO 64114  
O 816-333-9400  
F 816-333-3690  
[www.burnsmcd.com](http://www.burnsmcd.com)