Corrective Measures Effectiveness Report
Tenth Year Long-Term Monitoring
Former Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Prepared for:

McClellan Development Authority
Anniston, Alabama

Prepared by:

283 Rucker St
Anniston, AL 36205

(256) 847-0780
Fax (256) 847-0905

January 2021

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LIST OF ACRONYMS

1,1-DCE	1,1-dichloroethene
ADEM	Alabama Department of Environmental Management
ASTM	ASTM International
CA	*Cleanup Agreement*
cis-1,2-DCE	cis-1,2-dichloroethene
CMER	Corrective Measures Effectiveness Report
CMIR	Corrective Measures Implementation Report
COC	Chemical of concern
Draft CMIR	*Draft Corrective Measures Implementation Report, Former Small Weapons Repair Shop, Parcel 66(7)*
EBS	Environmental Baseline Study
ESE	Environmental Science & Engineering, Inc.
Final CMIP	*Final Corrective Measures Implementation Plan, Former Small Weapons Repair Shop, Parcel 66(7)*
Final CMIP Addendum	*Tech Memo Addendum* to the *Final CMIP*
GES	Groundwater & Environmental Services, Inc.
ISCO	In-Situ Chemical Oxidation
IT	IT Corporation
LTM	Long-term monitoring
LUC	Land use control
LUCER	Land use control effectiveness report
McClellan	Former Fort McClellan
MDA	McClellan Development Authority
MES	Matrix Environmental Services, LLC
PDB	Passive Diffusion Bag
QA	Quality Assurance
QAP	*Quality Assurance Plan*
RBTL	Risk-Based Target Level
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
SAP	*Installation-Wide Sampling and Analysis Plan*
Second Addendum to CMIP	*Second Addendum to Corrective Measures Implementation Plan, Former Small Weapons Repair Shop, Parcel 66(7)*
Shaw	Shaw Environmental, Inc.
SI	Site Investigation
Site	Former Small Weapons Repair Shop, Parcel 66(7)
TCE	Trichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
VOC	Volatile organic compound

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EXECUTIVE SUMMARY

The purpose of this Corrective Measures Effectiveness Report (CMER) is to document the effectiveness of the remedial action for contaminated groundwater at the Former Small Weapons Repair Shop, Parcel 66(7) (Site), located at the former Fort McClellan (McClellan) in Anniston, Alabama, during the tenth year of Long-Term Monitoring (LTM) from May 2020 to October 2020. This report was prepared by Matrix Environmental Services, LLC (MES) on behalf of the McClellan Development Authority (MDA).

Pursuant to the *Second Amendment to Corrective Measures Implementation Plan, Former Small Weapons Repair Shop, Parcel 66(7) McClellan, Anniston, Alabama (MES, 2018),* In-situ Chemical Oxidation (ISCO) using hydrogen peroxide with sodium persulfate injection was performed in December 2018. The ISCO was performed to further lower the concentrations of the chemicals of concern (COCs) (cis-1,2-dichloroethene (DCE), trichloroethene (TCE), and vinyl chloride) and their degradation products (1,1-DCE and trans-1,2-DCE). This reporting period covers the on-going monitoring events and post injection events.

Groundwater samples were collected from eight LTM wells (four residuum wells, three transition wells, and one bedrock well) and other select wells during the post-injection sampling events in between May 2020 and October 2020 and analyzed for one or more of the following: COCs, degradation products, sulfate, and iron. The groundwater sample results were compared to the groundskeeper risk-based target levels (RBTLs) to assess progress of the corrective measures at the Site.

Only vinyl chloride exceeded the groundskeeper RBTLs during the tenth year of LTM, in residuum wells PPMP-66-MW02RR and in transition well PPMP-66-MW23R. Both of these wells are located in the vicinity of the estimated source area, south and southwest of the former Building 335. The lateral extent of vinyl chloride remained static in both the residuum and transition groundwater zones, compared to the baseline sampling event.

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1.0 INTRODUCTION

The purpose of this CMER is to document the effectiveness of the remedial action for contaminated groundwater at the Former Small Weapons Repair Shop, Parcel 66(7) (Site), located at the former Fort McClellan (McClellan) in Anniston, Alabama, during the tenth year of LTM from May to October 2020. Figure 1-1 shows a site map of McClellan and Figure 1-2 shows a parcel location map of the Site. This report was prepared by MES on behalf of the MDA.

1.1 Report Purpose and Objectives

This CMER summarizes groundwater monitoring data collected from May 2020 to October 2020, to evaluate the effectiveness of corrective measures as outlined in the *Final Corrective Measures Implementation Plan, Former Small Weapons Repair Shop, Parcel 66(7) (Final CMIP)* (MES, 2007) and the *Tech Memo Addendum* to the *Final CMIP (Final CMIP Addendum)* (MES, 2009) and the *Second Addendum to Corrective Measures Implementation Plan, Former Small Weapons Repair Shop (Second Addendum to CMIP), Parcel 66(7) McClellan, Anniston, Alabama (MES, 2018).*

Objectives for these monitoring events and this CMER include:

- Describe the activities performed at the Site during the tenth year of LTM.
- Summarize environmental sampling data from previous investigations and monitoring events and present analytical results for the May to October 2020 monitoring events.
- Compare the current results of the groundwater samples to historical groundwater results to evaluate the effectiveness of the corrective measures for COCs in groundwater at the Site.
- Compare the results to risk-based target levels (RBTLs) to assess whether continued monitoring of the corrective measures is necessary.

1.2 Report Organization

This CMER is organized as follows:

- Section 1.0 - summarizes the project background, purpose of the CMER, and report organization.
- Section 2.0 - presents a summary of the Site characterization.
- Section 3.0 - describes the activities conducted during the tenth year of LTM.
- Section 4.0 - presents the results of the tenth year of LTM.
- Section 5.0 - presents the summary, conclusions, and recommendations.
- Section 6.0 - provides the references cited in this report.
- Tables that support the CMER.
- Figures that support the CMER.
- Appendix A contains the Groundwater Sampling Documentation.
- Appendix B contains the Chain-of-Custody Forms.
- Appendix C contains the Data Quality Summary.

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2.0 SITE CHARACTERIZATION

This section summarizes the Site description and physical setting, land use, previous investigations, and corrective measures activities performed at the Site.

2.1 Site Description

The Site consists of 1.15 acres and is located in the central portion of McClellan at the intersection of Waverly Road and Fremont Road (Figure 1-2). Two buildings (Buildings 335 and 336) were formerly located within the parcel boundary of the Site. Building 335 formerly housed the Small Weapons Repair Shop where weapons used for training exercises were stored, disassembled, and cleaned using various solvents. It is reported that the main part of Building 335 was used primarily for Tank Repair (IT Corporation [IT], 2002). Building 336, located just east of Building 335, historically was used as boiler plant and as a paint storage area.

The Small Weapons Repair Shop was built in 1941, although it is not known when operations began at this location. The operation was moved to the Consolidated Maintenance Facility (Building 350) in approximately 1991. From 1991 to circa 2003, Building 335 was used by the Alabama National Guard for boiler plant storage (Environmental Science & Engineering, Inc. [ESE], 1998). The history of the Site is described in more detail in the *Final CMIP* (MES, 2007).

Drainage ditches border the Site along Waverly Road to the north and Fremont Road to the west. Buildings 335 and 336 were removed from the Site in 2007 (MES, 2012).

2.2 Land Use and Land Use Controls

The proposed future land use for the Site is a light industrial and business park. Based on the presence of volatile organic compounds (VOC) in groundwater, MDA has implemented land use controls (LUCs) to limit exposure to groundwater. LUCs include a prohibition on consumptive use or direct contact with groundwater and installation of any well for extraction of groundwater for purposes of consumptive or other uses within the covenant boundary. In accordance with the *Cleanup Agreement* (CA) and Alabama Uniform Environmental Covenants Act, Code of Alabama 1975, §§ 35-19-1 to 35-19-14 and the Alabama Department of Environmental Management (ADEM) Admin Code r. 335-5, effective May 26, 2009, MDA filed Environmental Covenant No. FY 12-07.00 in Calhoun County Probate on March 7, 2013, which documents the LUCs. A copy of the recorded Environmental Covenant No. FY 12-07.00 was included as a slip page to the Department for incorporation into the *Final Corrective Measures Implementation Report (CMIR)* dated January 10, 2013. MDA will administer and enforce the LUCs and certify, after inspection, that the LUCs are in place in an Annual Land Use Controls Effectiveness Report (LUCER).

2.3 Summary of Previous Investigations

Investigative activities at the Site were conducted in multiple phases from 1998 to 2004 by several contractors to the Army and the JPA, including: ESE, IT, (formerly Shaw Environmental, Inc. currently APTIM), and MES. The previous investigations included:

- *1998 Environmental Baseline Study (EBS)* (ESE, 1998)
- *1999 Site Investigation (SI)* (IT, 2002)
- *2002 Remedial Investigation (RI)* (IT, 2002)
- *2004 RCRA Facility Investigation (RFI)* (MES, 2006)

These investigations led to the development of a Corrective Measures Implementation Plan in 2007 to address VOCs in the groundwater.

2.4 2010/2011 Corrective Measures Implementation

Based on the data assessment presented in the *Final CMIP* (MES, 2007) and *Final CMIP Addendum* (MES, 2009), cis-1,2-DCE, TCE, and vinyl chloride in groundwater were determined to be human health COCs at the Site. No ecological COCs were identified in media at the Site.

From October 2010 to February 2011, corrective measures were implemented at the Site as outlined in the *Final CMIP* (MES, 2007) and *Final CMIP Addendum* (MES, 2009) to reduce concentrations of VOCs in groundwater at the Site to levels acceptable for industrial use. Details of the corrective measures activities are documented in the *Final Corrective Measures Implementation Report (CMIR), Former Small Weapons Repair Shop, Parcel 66(7)* (*Final CMIR*) (MES, 2013).

Corrective measures activities included: 1) the abandonment of groundwater monitoring wells PPMP-66-MW02, PPMP-66-MW06, PPMP-66-MW12, PPMP-66-MW18, PPMP-66-MW23, and PPMP-66-MW24 located in the target treatment area, 2) anhydrous quicklime blending into the soil of the target treatment area to reduce residual COCs concentrations in the soil that may provide a source of contaminants to the groundwater plume, 3) direct application of solid potassium permanganate to the exposed bedrock during quicklime mixing activities to promote the chemical oxidation of the COCs in groundwater, 4) site restoration and re-vegetation, and 5) replacement of the residuum and transition groundwater monitoring wells in the target treatment area, that were previously abandoned, for use in LTM.

2.5 2018 Corrective Measures Implementation

Based on the data assessment presented in the *Second Addendum to CMIP (MES, 2018)* cis-1,2-DCE, TCE, and vinyl chloride were determined to be human health COCs at the Site. No ecological COCs were identified in media at the Site.

In December 2018. Corrective measures were implemented at the Site as outlined in the *Second Addendum to CMIP* (MES, 2018) to reduce the VOCs further in groundwater at the Site to levels acceptable for industrial use. Details of the corrective measures activities are documented in the *Corrective Measures Implementation Report Addendum* (Groundwater & Environmental Services, Inc., 2019). Corrective measures consisted of in-situ chemical oxidation (ISCO) of strong oxidizing agents – hydrogen peroxide activated sodium persulfate into 13 shallow temporary injection points ranging in depth from 3 ft below ground surface (bgs) to 15 ft bgs and 13 deep temporary injection points ranging in depth from 11 ft bgs to 30 ft bgs.

3.0 SUMMARY OF TENTH YEAR OF LTM ACTIVITIES

To meet the recommended actions outlined in the *Final CMIP* (MES, 2007) and the *Final CMIP Addendum* (MES, 2009) and Second Addendum (MES, 2018), and provide data to evaluate the long-term performance of the corrective measures, the following activities were performed during the tenth year of LTM:

- Collected groundwater samples and groundwater level measurements from eight LTM wells (four residuum wells, three transition wells, and one bedrock well) during the 2020 quarterly sampling events. Samples were analyzed for the COCs (cis-1,2-DCE, TCE, and vinyl chloride) and their degradation products (1,1-DCE and trans-1,2-DCE) by EPA Method SW8260B.
- Collected groundwater samples from select wells and analyzed for one of more of the following; COCs, degradation products, sulfate, dissolved gases, and iron.

3.1 Groundwater Sampling

Since the completion of the corrective measures performed at the Site in 2010 (see Section 2.4 for details), groundwater samples have been collected from eight LTM wells (listed below).

Residuum Wells	Transition Wells	Bedrock Wells
PPMP-66-MW02RR	PPMP-66-MW17	PPMP-66-MW08
PPMP-66-MW06R	PPMP-66-MW23R	
PPMP-66-MW16	PPMP-66-MW24R	
PPMP-66-MW18R		

During the tenth year of LTM, groundwater samples were collected in May 2020 and October 2020.

3.1.1 Sampling Method

Groundwater samples were collected using low-flow sampling procedures, i.e., using an adjustable rate pump to remove water from the screened interval at a rate that produces minimal drawdown, as well as turbidity in the sample. Tubing leading from the discharge side of the submersible pump was connected to a flow-through cell equipped with a multiparameter meter to measure chemical and physical parameters. These measurements were used to indicate when groundwater quality stabilized and sampling could begin.

Laboratory-supplied sample bottles were filled, labeled, placed in a chilled cooler, and shipped under chain-of-custody procedures to TestAmerica Laboratories, Inc., Savannah, Georgia. The chain-of-custody forms for the groundwater samples collected during each sampling event are provided in Appendix B.

Groundwater levels were measured to the nearest hundredth of a foot using a Solinst™ water level indicator and recorded. The monitoring well sample collection documentation is provided in Appendix A.

3.2 Management of Investigation Derived Waste

The aqueous investigation derived waste generated during the groundwater sampling was collected in a 55-gallon drum stored on-site, including the left-over purged water.

3.3 Data Quality Review

MES reviewed the analytical data for the groundwater samples collected during the May to October 2020 sampling events. The data quality review was performed in accordance with the *Quality Assurance Plan (QAP)* (MES, 2004) to assess compliance with the Quality Assurance (QA) objectives, and to assess hard copy and electronic deliverable consistency and integrity and is included in Appendix C along with the analytical data packages for the May to October 2020 monitoring events.

3.4 Deviations from Planned LTM

LTM activities were performed in accordance with the *Final CMIP Addendum* (MES, 2009) and *Second Amendment to Corrective Measures Implementation Plan* (MES, 2018). No deviations occurred during the sampling events.

4.0 RESULTS OF TENTH YEAR OF LTM ACTIVITIES

The activities conducted at the Site during the tenth year of LTM from May 2020 to October 2020 are presented in the following subsections.

4.1 Groundwater Sampling

This section discusses the results of the groundwater sampling events at the Site.

4.1.1 Groundwater Elevations

Groundwater elevations measured during the May to October 2020 groundwater sampling events are presented in Table 4-1. Figures 4-1 to 4-4 show groundwater elevations and potentiometric elevations for the residuum groundwater zone for the May to October 2020 sampling events. Transition groundwater wells are located only in the source area and additionally are co-located with residuum wells, thus not providing any additional potentiometric elevation information. For this reason, no transition potentiometric maps were constructed. Furthermore, potentiometric groundwater maps were not constructed for the bedrock zone due to the limited number of LTM wells.

Groundwater was encountered at the Site at shallow depths for both semi-annual monitoring events during the tenth year of LTM. During the tenth year of LTM, groundwater in the residuum and transition zones appeared to flow radially from the site (Figures 4-1 to 4-4) and is consistent with past data.

To further aid in assessing groundwater flow at the Site, horizontal and vertical hydraulic gradients were calculated using the groundwater measurements during the tenth year of LTM, and are presented in Tables 4-2 and 4-3, respectively. The hydraulic gradients in the residuum, bedrock, and transition zones were low indicating a relatively flat water table, which is consistent with historical horizontal gradients calculated at the Site.

4.1.2 Groundwater Field Parameter Results

Field screening parameters, i.e., pH, conductivity, dissolved oxygen, turbidity, etc., are typically used by field personnel to assess when a well has been adequately purged and a representative groundwater sample can be collected. Field parameters are presented in Table 4-4.

4.1.3 Analytical Data and Data Quality Review

The analytical data for the May to October 2020 monitoring events is included in Appendix C. Samples were analyzed for VOCs by Method SW8260B, metals by Method SW6020A, sulfate by SW9056A and dissolved gases by RSK-175. MES reviewed the analytical data in accordance with the *QAP* (MES, 2004). Based on the data quality review, the analytical data generated for these monitoring events are adequate to fulfill program objectives and are suitable for preparation of this report.

4.1.4 Summary of Groundwater Analytical Results

The analytical results for the groundwater samples collected during the tenth year of LTM are shown in Tables 4-5a through 4-5c. The historical analytical results for COCs from previous sampling events are also shown in the Tables.

VOC concentrations detected in the groundwater samples were compared to the groundskeeper RBTLs in Table 4-5a. One COC (vinyl chloride) exceeded the groundskeeper RBTL in two groundwater wells from samples collected during the tenth year of LTM.

Samples collected from the wells were used to 1) evaluate the effectiveness of the corrective measures, and 2) evaluate contaminant concentration changes over time that occurred in response to the corrective measures, and 3) assess the long-term performance of the corrective measures in reducing contaminant concentrations.

4.1.5 Concentration Trends Over Time

Figures 4-3 to 4-6 show the trends in concentrations over time for the COCs. As indicated in the trend figures and Table 4-5a, wells PPMP-66-MW02RR and PPMP-66-MW23R showed a decrease in concentrations during the tenth year of monitoring compared to the prior years.

The COC concentrations in wells PPMP-66-MW08, PPMP-66-MW16, PPMP-66-MW17, PPMP-66-MW18R, PPMP-66-MW24R, and PMP-66-MW24R were less than the groundskeeper RBTLs during this reporting period.

4.1.6 Distribution of Corrective Action COCs in Groundwater

Figures 4-7 and 4-8 present the estimated lateral extent of TCE and vinyl chloride concentrations exceeding the groundskeeper RBTLs for the residuum and transition groundwater zones at the Site for the baseline September/October 2010 sampling event. Figures 4-9 to 4-12 present the estimated lateral extent of TCE and vinyl chloride concentrations for the residuum and transition groundwater zones at the Site for the tenth year of LTM. The concentrations of vinyl chloride exceeding the groundskeeper RBTL in groundwater during this reporting period were located south and southwest of former Building 335.

During the tenth year of LTM, the vinyl chloride plume for both the residuum and transition groundwater zones remained in the vicinity of the estimated source area. The lateral extent of vinyl chloride exceeding groundskeeper RBTLs is limited to only one residuum well and one transition well located to the south and southwest of former Building 335. Although vinyl chloride concentrations were above groundskeeper RBTLs for both events in monitoring wells PPMP-66-MW02RR and PPMP-66-MW23R the concentrations have decreased over time.

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This section summarizes the activities performed and the results from groundwater monitoring during the tenth year of LTM at the Site and presents conclusions and recommendations.

5.1 Summary of Activities

Activities conducted at the Site included:

- Collected semi-annual groundwater samples and groundwater level measurements from four residuum wells, three transition wells, and one bedrock well in 2020 semi-annual sampling events in May and October. Analyzed the groundwater samples for the COCs and their degradation products.
- Collected groundwater samples from select wells during the post-injection sampling semi-annual events in May and October. Analyzed the groundwater samples for one or more of the following: COCs, degradation products, sulfate, dissolved gases and iron.

5.2 Summary of Results

Results from the tenth year of LTM at the Site indicate the following:

- Groundwater was encountered at the Site at shallow depths and the direction of flow was radially from the site.
- Groundwater occurrence and flow direction are consistent with historical patterns.
- One of the three COCs (vinyl chloride) exceeded the groundskeeper RBTL in groundwater collected during the tenth year of LTM from May to October 2020 at only one location (two adjacent wells).
- Vinyl chloride concentrations exceeding the groundskeeper RBTL during the tenth year of LTM were found in groundwater from residuum well PPMP-66-MW02RR and the adjacent transition well PPMP-66-MW23R located in the vicinity of the estimated source area.
- The overall trend in Site groundwater COCs showed small decreasing fluctuations during the tenth year of LTM compared to the prior year.

5.3 Conclusions and Recommendations

MDA has implemented two rounds of groundwater remediation (2010/2011 and 2018) at the site with some improvement observed after each round. Analytical results indicate the ISCO injection had some impact on reducing the COC concentrations. During the tenth year of LTM, COC concentrations in residuum well PMP-66-MW06R did not exhibit any rebound and concentrations continued to stay below RBTLs. Although vinyl chloride exceeded RBTLs for both the residuum and transition groundwater zones (PMP-66-MW02RR and PMP-66-MW23R), it is a decomposition product of the initial chlorinated compound contaminants, and concentrations of vinyl chloride have slightly decreased indicating the remediation process is working. MDA recommends allowing monitored natural attenuation to continue with routine groundwater monitoring unless there should be an observed significant spike in contaminant concentrations or MDA desires to attempt additional treatment. This proposed course of action is supported by the facts that the site is located in an identified industrial park, potable water is

provided, there is no use of the groundwater for any reason other than groundwater monitoring, and any construction on the site would have to address impacts to construction workers and vapor intrusion in any buildings erected. Therefore, it is recommended sampling and analysis continue on a semi-annual basis in accordance with the *Cleanup Agreement* and *Second Addendum to CMIP*.

6.0 REFERENCES

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Tables

Table 4-1: Groundwater Elevations,
Tenth Year LTM
Small Weapons Repair Shop, Parcel 66(7), McClellan, Anniston, Alabama

Well Location	Well Type	Ground Elevation (feet msl)	TOC Elevation (feet msl)	Date Measured	Well Depth (feet BTOC)	Depth to Water (feet BTOC)	Groundwater Elevation (feet msl)
May 2020 Sampling Event							
PPMP-66-MW01	residuum	780.10	782.12	5/5/2020	26.03	4.80	777.32
PPMP-66-MW02RR	residuum	780.59	780.37	5/5/2020	23.50	4.78	775.59
PPMP-66-MW03	residuum	781.11	780.74	5/5/2020	28.27	4.31	776.43
PPMP-66-MW04	residuum	779.99	781.90	5/5/2020	26.40	4.92	776.98
PPMP-66-MW06R	residuum	781.45	781.41	5/5/2020	27.80	2.88	778.53
PPMP-66-MW07	residuum	782.41	782.17	5/5/2020	28.65	4.90	777.27
PPMP-66-MW08	bedrock	780.89	780.66	5/5/2020	73.90	3.74	776.92
PPMP-66-MW09	bedrock	781.14	780.88	5/5/2020	74.80	3.91	776.97
PPMP-66-MW10	bedrock	779.79	782.01	5/5/2020	77.40	6.31	775.70
PPMP-66-MW11	bedrock	781.10	780.89	5/5/2020	84.35	2.21	778.68
PPMP-66-MW13	bedrock	781.93	781.65	5/5/2020	74.30	4.13	777.52
PPMP-66-MW14	residuum	781.92	781.70	5/5/2020	20.71	4.59	777.11
PPMP-66-MW16	residuum	780.86	780.47	5/5/2020	12.75	3.25	777.22
PPMP-66-MW17	transition	781.63	781.29	5/5/2020	17.71	3.91	777.38
PPMP-66-MW18R	residuum	781.68	781.25	5/5/2020	15.00	2.72	778.53
PPMP-66-MW21	residuum	780.78	780.44	5/5/2020	14.40	2.17	778.27
PPMP-66-MW22	transition	780.79	780.44	5/5/2020	24.71	3.47	776.97
PPMP-66-MW23R	transition	781.12	780.87	5/5/2020	29.25	3.75	777.12
PPMP-66-MW24R	transition	781.57	781.20	43956.00	34.15	3.96	777.24
October 2020 Sampling Event							
PPMP-66-MW01	residuum	780.10	782.12	10/22/2020	26.03	3.93	778.19
PPMP-66-MW02RR	residuum	780.59	780.37	10/22/2020	23.50	4.32	776.05
PPMP-66-MW03	residuum	781.11	780.74	10/22/2020	28.00	5.22	775.52
PPMP-66-MW04	residuum	779.99	781.90	10/22/2020	26.50	5.76	776.14
PPMP-66-MW06R	residuum	781.45	781.41	10/22/2020	27.80	4.13	777.28
PPMP-66-MW07	residuum	782.41	782.17	10/22/2020	28.65	5.94	776.23
PPMP-66-MW08	bedrock	780.89	780.66	10/22/2020	73.90	4.60	776.06
PPMP-66-MW09	bedrock	781.14	780.88	10/22/2020	74.75	4.87	776.01
PPMP-66-MW10	bedrock	779.79	782.01	10/22/2020	77.41	7.03	774.98
PPMP-66-MW11	bedrock	781.10	780.89	10/22/2020	84.35	3.70	777.19
PPMP-66-MW13	bedrock	781.93	781.65	10/22/2020	74.03	5.35	776.30
PPMP-66-MW14	residuum	781.92	781.70	10/22/2020	20.71	5.74	775.96
PPMP-66-MW16	residuum	780.86	780.47	10/22/2020	12.75	4.81	775.66
PPMP-66-MW17	transition	781.63	781.29	10/22/2020	17.71	4.96	776.33
PPMP-66-MW18R	residuum	781.68	781.25	10/22/2020	15.00	4.00	777.25
PPMP-66-MW21	residuum	780.78	780.44	10/22/2020	14.40	3.34	777.10
PPMP-66-MW22	transition	780.79	780.44	10/22/2020	24.65	4.43	776.01
PPMP-66-MW23R	transition	781.12	780.87	10/22/2020	29.25	4.76	776.11
PPMP-66-MW24R	transition	781.57	781.20	10/22/2020	34.15	5.01	776.19

Notes:
BTOC = Below top of casing
LTM = Long-term monitoring
msl = Mean sea level
TOC = Top of casing
* Water at top of casing

Table 4-2: Horizontal Hydraulic Gradients,
Tenth Year LTM
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Upgradient Monitoring Well	Well Type	Groundwater Elevation	Downgradient Monitoring Well	Well Type	Groundwater Elevation	Estimated Groundwater Flow Direction	Horizontal Distance	Groundwater Elevation Difference (feet)	Horizontal Gradient (feet per foot)
May 2020									
PPMP-66-MW02RR	residuum	775.59	PPMP-66-MW01	residuum	777.32	west	96	-1.73	-0.018
PPMP-66-MW02RR	residuum	775.59	PPMP-66-MW07	residuum	777.27	east	150	-1.68	-0.011
PPMP-66-MW02RR	residuum	775.59	PPMP-66-MW06R	residuum	778.53	southeast	82	-2.94	-0.036
PPMP-66-MW18R	residuum	778.53	PPMP-66-MW07	residuum	777.27	northeast	75	1.26	0.017
PPMP-66-MW14	residuum	777.11	PPMP-66-MW03	residuum	776.43	southwest	79	0.68	0.009
PPMP-66-MW13	bedrock	777.52	PPMP-66-MW11	bedrock	778.68	northwest	71	-1.16	-0.016
PPMP-66-MW13	bedrock	777.52	PPMP-66-MW08	bedrock	776.92	west	134	0.60	0.004
PPMP-66-MW17	transition	777.38	PPMP-66-MW24R	transition	777.24	west	47	0.14	0.003
PPMP-66-MW24R	transition	777.24	PPMP-66-MW23R	transition	777.12	northwest	68	0.12	0.002
							Average May 2020 Horizontal Gradient:		**-0.005**
October 2020									
PPMP-66-MW02RR	residuum	776.05	PPMP-66-MW01	residuum	778.19	southwest	88	-2.14	-0.024
PPMP-66-MW02RR	residuum	776.05	PPMP-66-MW07	residuum	776.23	east	150	-0.18	-0.001
PPMP-66-MW02RR	residuum	776.05	PPMP-66-MW06R	residuum	777.28	southeast	82	-1.23	-0.015
PPMP-66-MW18R	residuum	777.25	PPMP-66-MW06R	residuum	777.28	southwest	26	-0.03	-0.001
PPMP-66-MW18R	residuum	777.25	PPMP-66-MW14	residuum	775.96	southeast	55	1.29	0.023
PPMP-66-MW18R	residuum	777.25	PPMP-66-MW07	residuum	776.23	northeast	75	1.02	0.014
PPMP-66-MW18R	residuum	777.25	PPMP-66-MW02RR	residuum	776.05	west	104	1.20	0.011
PPMP-66-MW14	residuum	775.96	PPMP-66-MW03	residuum	775.52	southwest	79	0.44	0.006
PPMP-66-MW13	bedrock	776.30	PPMP-66-MW11	bedrock	777.19	northwest	71	-0.89	-0.013
PPMP-66-MW08	bedrock	776.06	PPMP-66-MW11	bedrock	777.19	northeast	124	-1.13	-0.009
PPMP-66-MW08	bedrock	776.06	PPMP-66-MW13	bedrock	776.30	east	134	-0.24	-0.002
PPMP-66-MW17	transition	776.33	PPMP-66-MW24R	transition	776.19	west	47	0.14	0.003
PPMP-66-MW23R	transition	776.11	PPMP-66-MW24R	transition	776.19	southeast	68	-0.08	-0.001
							Average October 2020 Horizontal Gradient:		**-0.001**

Notes:
Elevations in feet above mean sea level.
LTM = Long-term monitoring

Table 4-3: Vertical Hydraulic Gradients, Tenth Year LTM
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Well Cluster IDs	Well Zone	Midpoint of Screen (Elevation)	GWE		dL	dH		VHG (ft/ft)	
			May20	Nov20		May20	Nov20	May20	Nov20
PPMP-66-MW06R	residuum	763.49	778.53	777.28	10.27	1.29	1.09	0.1256	0.1061
PPMP-66-MW24R	transition	753.22	777.24	776.19					
PPMP-66-MW02RR	residuum	764.49	775.59	776.05	6.51	-1.53	-0.06	-0.235	-0.0092
PPMP-66-MW23R	transition	757.98	777.12	776.11					
PPMP-66-MW02RR	residuum	764.49	775.59	776.05	48.97	-1.33	-0.01	-0.0272	-0.0002
PPMP-66-MW08	bedrock	715.52	776.92	776.06					
PPMP-66-MW23R	transition	757.98	777.12	776.11	42.46	0.2	0.05	0.0047	0.0012
PPMP-66-MW08	bedrock	715.52	776.92	776.06					
PPMP-66-MW18R	residuum	772.68	778.53	777.25	5.3	1.15	0.92	0.2170	0.1736
PPMP-66-MW17	transition	767.38	777.38	776.33					
PPMP-66-MW21	residuum	771.83	778.27	777.10	9.86	1.3	1.09	0.1318	0.1105
PPMP-66-MW22	transition	761.97	776.97	776.01					
PPMP-66-MW16	residuum	773.79	777.22	775.66	1.96	-1.05	-1.44	-0.5357	-0.7347
PPMP-66-MW21	residuum	771.83	778.27	777.10					

Notes:
ft/ft = feet per foot (a negative value indicates an upward vertical gradient)
ID = identification
LTM = Long-term monitoring
dH = difference in groundwater elevation (feet)
dL = distance between screened intervals (feet)
GWE = Groundwater Elevation
VHG = Vertical Hydraulic Gradient

Elevations in feet above mean sea level.

Table 4-4: Field Parameters, Tenth Year LTM
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Well ID	Well Type	Sample Date	Temperature (^{o}C)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH
May 2020									
PPMP-66-MW01	residuum	5/6/2020	19.2	3105	5.06	31.7	2.009	9.95	7.03
PPMP-66-MW02RR	residuum	5/6/2020	22.6	4876	1.42	15.2	3.166	102.6	6.29
PPMP-66-MW03	residuum	5/5/2020	21.6	2306	2.49	-118.6	1.495	2.67	6.95
PPMP-66-MW04	residuum	5/5/2020	20.1	2199	0.73	-150.4	1.430	4.90	6.91
PPMP-66-MW06R	residuum	5/7/2020	18.0	1288	0.46	-104.2	0.839	6.87	12.37
PPMP-66-MW07	residuum	5/5/2020	21.9	1574	0.18	-42.4	1.021	6.02	7.08
PPMP-66-MW08	bedrock	5/6/2020	21.4	2220	0.95	-66.7	1.443	3.95	7.03
PPMP-66-MW11	bedrock	5/5/2020	22.9	330.6	0.42	-36.5	0.215	3.55	7.74
PPMP-66-MW13	bedrock	5/5/2020	22.9	1375.0	0.33	-122.9	0.891	5.55	7.42
PPMP-66-MW14	residuum	5/5/2020	21.0	1734	4.19	-86.9	1.131	14.93	6.96
PPMP-66-MW16	residuum	5/6/2020	21.0	569	0.56	19.7	0.371	5.47	6.50
PPMP-66-MW17	transition	5/5/2020	22.5	757	4.49	-90.7	0.494	25.93	7.27
PPMP-66-MW18R	residuum	5/6/2020	18.2	568	5.25	25.1	0.368	4.25	7.30
PPMP-66-MW21	residuum	5/6/2020	20.3	397	1.28	-0.5	0.259	8.42	6.55
PPMP-66-MW22	transition	5/6/2020	19.4	1168	1.58	-79.6	0.761	15.87	7.12
PPMP-66-MW23R	transition	5/6/2020	19.6	2481	0.11	-283.7	1.612	26.97	12.60
PPMP-66-MW24R	transition	5/7/2020	20.3	2730	0.61	-96.1	1.760	9.84	7.42
November 2020									
PPMP-66-MW01	residuum	10/26/2020	21.3	3041	0.80	-208	1.98	4.0	6.9
PPMP-66-MW02RR	residuum	10/27/2020	23.6	3066	1.7	52	2.02	30	6.1
PPMP-66-MW03	residuum	10/26/2020	22.9	2468	0.2	-69	1.61	7.00	6.8
PPMP-66-MW04	residuum	10/26/2020	21.5	456	0.6	-106	0.30	12	6.6
PPMP-66-MW06R	residuum	10/27/2020	23.9	1095	1.1	-191	0.72	65	11.6
PPMP-66-MW07	residuum	10/26/2020	23.6	2583	0.3	-38	1.68	30	6.8
PPMP-66-MW08	bedrock	10/27/2020	21.5	2280	0.9	-32	1.48	5	6.8
PPMP-66-MW11	bedrock	10/26/2020	22.2	307	2.0	45	0.20	4	7.4
PPMP-66-MW13	bedrock	10/26/2020	24.3	1126	1.7	-61	0.73	4	7.3
PPMP-66-MW14	residuum	10/26/2020	23.5	1709	0.5	-51	1.12	11	6.9
PPMP-66-MW16	residuum	10/26/2020	23.1	560	0.5	55	0.36	12	6.9

Table 4-4: Field Parameters, Tenth Year LTM
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Well ID	Well Type	Sample Date	Temperature (^{o}C)	Conductivity (µs/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH
PPMP-66-MW17	transition	10/27/2020	21.1	710	0.3	-66	0.46	5	7.1
PPMP-66-MW18R	residuum	10/27/2020	21.7	729.0	2.40	75.3	0.475	8.71	6.97
PPMP-66-MW21	residuum	10/26/2020	24.7	424	1.2	72	0.28	17	6.3
PPMP-66-MW22	transition	10/26/2020	21.7	1232	0.4	-81	0.80	14	7.0
PPMP-66-MW23R	transition	10/27/2020	23.8	2145	0.3	-181	1.40	3	12.0
PPMP-66-MW24R	transition	10/27/2020	24.4	2618	0.1	-173	1.70	14	7.2

Notes:

^{o}C = Degrees Celsius
mg/L = Milligrams per liter
µs/cm = Microsiemens per centimeter
mV = Millivolts
NM = Not measured
NS = Not sampled
NTU = Nephelometric turbidity units
ORP = Oxidation-reduction potential
TDS = Total Dissolved Solids

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Residuum PPMP-66-MW01							
		10/30/18	1/15/19	02/26/19	5/21/19	8/6/19	11/04/19	5/6/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.39 J (UB)	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW02/PPMP-66-MW02R/PPMP-66-MW02RR *																							
		3/6/01	4/24/02	5/13/04	11/7/07	5/21/08	10/1/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	1/2/14	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical					Baseline & First Year LTM					2nd Year LTM					3rd Year LTM			4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	7.5	9.5 (nv)	36	210	130	200	41	29	28	220	300	320	310	530	520		7.9	4.2	2.7	2.9	23	25	34	19	40	31
Trichloroethene	205	40	29 (nv)	74	480	27	170	34	52	45	87	130	160	140	530	450	well	3.1	1.0	0.49 J	0.31 J	12	19	35	10	29	27
Vinyl Chloride	3.86	60	67 (nv)	110	100	71	41	10	8.7	17	85	72	65	59	72	73	damaged,	10	9.3	6.3	5.1	12	11	11	9.1	12	9.1
Degradation Products																	could not										
1,1-Dichloroethene	4800	9.2	11 (nv)	28	97	30	37	5	1.8	1.6	8	9.7	10	10	15	15	be sampled	0.3 J	< 1.0	< 1.0	< 1.0	0.45 J	0.58 J	0.72 J	0.39 J	0.78 J	0.58 J
Trans-1,2-Dichloroethene	1950	6.4	6.7 nv)	10	13	7.2	7.6	12	8.7	15	72	97	110	100	280	220		2.1	1.0	0.57 J	0.71 J	7.1	9.7	15	6.9	18	15

VOCs (µg/L)	GS RBTL	Residuum PPMP-66-MW02RR																	
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/31/18	1/28/19	2/26/19	5/21/19	8/7/19	11/4/19	5/6/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	28	23	18	31	25	39	32	57	45	41	42 (JM)	18	19	20	12 (J)	14	14	9.5 B
Trichloroethene	205	28	11	6.9	24	21	23	19	31	32	27	27 (JM)	6.5	8.1	5.1	3.4 (J)	3.2	2.8	2.8
Vinyl Chloride	3.86	6.4	9.6	8.0	7.2	5.4	13	7.6	15	22	17	20	10	8.1	11	5.5 (J)	7.5	5.2	3.9
Degradation Products																			
1,1-Dichloroethene	4800	0.49 J	0.43 J	0.29 J	0.57 J	0.34 J	0.68 J	0.55 J	0.77 J	0.90 J	0.69 J	0.67 J	0.38 J	0.39 J	0.39 J	< 1 (J)	< 1	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	13	8.5	5.1	16	11	19	15	27	26	26	26	7.1	10 B	6.9	3.7 (J)	4.7	3.8	3.3

VOCs (µg/L)	GS RBTL	Residuum PPMP-66-MW04							
		10/29/18	1/14/19	2/25/19	5/20/19	8/5/19	11/1/19	5/5/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.49 J (UB)	< 1	< 1	< 1	< 1	< 1

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW06/PPMP-66-MW06R *																									
		3/14/01	4/25/02	5/17/04	11/5/07	5/19/08	9/28/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical					Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	500	720 (nv)	1600	810	700	580	47	71	46	34	38	56	48	30	25	31	41	29	21	32	33	15	14	17	14	12
Trichloroethene	205	9200	14000 (nv)	13000	2900	3900	2100	180	260	380	240	230	310	270	180	150	190	200	150	120	140	180	88	82	69	75	56
Vinyl Chloride	3.86	< 5	3.5 (nv)	10	26	26	27	2.2	4.8	8.5	5.8	6.1	10	9.9	5.4	4.0	7.9	14	6.9	4.6	7.0	10	3.4	3.1	3.6	1.8	2.0
Degradation Products																											
1,1-Dichloroethene	4800	310	360 (nv)	300	46	52	44	4.5	7.6	2.8	1.6	1.6	2	1.8	1	0.91 J	1.1	1.3	0.65 J	0.49 J	0.86 J	0.76 J	0.39 J	0.33 J	0.47 J	0.34 J	0.32 J
Trans-1,2-Dichloroethene	1950	17	31 (nv)	130	34	33	30	2.1	4.9	12	7.6	7.9	13	13	8	6.3	8.8	12	7.2	5.9	7.9	9.8	4.9	4.3	4.5	3.8	3.2

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW06R															
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/31/18	1/16/19	02/26/19	05/22/19	08/07/19	11/05/19	5/7/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	11	24	25	11	13	19	14	16	8.1	8.8	33	6	5.9	7.8	8.8	6.5	4.1	4.1
Trichloroethene	205	48	78	79	37 J	55	64	45	49	30	40	71	21	26	30	31	32	28	28
Vinyl Chloride	3.86	2.4	7.1	6.5	3.0	3.8	5.7	3.5	6.1	2.4	< 1	1.8	1.4	1.2	1.4	1.2 (J)	0.93 J	0.53 J	< 1.0
Degradation Products																			
1,1-Dichloroethene	4800	0.29 J	0.64 J	0.59 J	0.34 J	0.29 J	0.66 J	0.45 J	0.49 J	0.44 J	< 1	1.5	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	2.8	6.0	5.9	2.9	3.3	5.2	3.3	3.8	2.1	2.2	2.4	2.3	2.8	3.2	2.7	3.4	2.3	2.3

VOCs (µg/L)	GS RBTL	Residuum PPMP-66-MW07							
		10/29/18	01/14/19	2/25/19	5/20/19	8/6/19	11/4/19	5/5/20	10/26/20
COCs								10th Year LTM	
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.45 J (UB)	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Bedrock Well PPMP-66-MW08																									
		3/6/01	5/12/04	5/20/08	10/1/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical			Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	< 5	< 1.0	< 1.0	0.29 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	205	< 5	< 1.0	0.28 J	0.98 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	3.86	< 5	< 1.0	< 1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Degradation Products																											
1,1-Dichloroethene	4800	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Bedrock Well PPMP-66-MW08																	
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/30/18	1/15/19	2/26/19	5/21/19	8/7/19	11/4/19	5/6/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1 F2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products																			
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Bedrock PPMP-66-MW11							
		10/29/18	01/14/19	02/25/19	05/20/19	08/05/19	11/01/19	5/5/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.4 J (UB)	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Bedrock PPMP-66-MW13							
		10/29/18	1/15/19	02/25/19	05/20/19	08/05/19	11/04/19	5/5/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.42 J (UB)	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Residuum PPMP-66-MW14							
		10/29/18	01/14/19	02/25/19	05/20/19	08/05/19	11/04/19	5/5/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	0.44 J (UB)	< 1	< 1	< 1	< 1	< 1

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW16																							
		10/17/01	5/13/04	11/7/07	5/20/08	10/1/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical				Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	0.5 J	< 1.0	0.28 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	205	< 1.0	< 1.0	0.77 J	0.6 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	3.86	< 1.0	0.26 J	0.57 J	< 1.0	0.21 J	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Degradation Products																										
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW16																
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/30/18	1/15/19	2/26/19	5/21/19	8/7/19	11/4/19	5/6/20	10/26/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	0.30 J	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products																			
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW17																							
		5/20/04	5/20/08	9/29/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical		Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	205	< 1.0	0.84 J	0.88 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	3.86	< 1.0	< 1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Degradation Products																									
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW17																	
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/30/18	1/15/19	2/25/19	5/21/19	8/5/19	11/1/19	5/5/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.55 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	0.98 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products																			
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW18/PPMP-66-MW18R *																					
		5/12/04	5/20/08	9/28/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical		Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM		
Cis-1,2-Dichloroethene	991	< 1.0	< 1.0	< 1.0	7.5	14	3.6	1.3	3	7.6	5.2	2.2	2.2	5.2	4.9	1.5	2.1	1.0	2.3	0.26 J	0.67 J	2.3	< 1.0	< 1.0
Trichloroethene	205	< 1.0	4.6	< 1.0	21	42	10	3.4	4.5	2.2	0.58 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1 J	1.2	0.68 J	0.6 J	0.31 J
Vinyl Chloride	3.86	< 1.0	< 1.0	< 0.8	0.66 J	6.2	2.4	1	0.96	1.5	1.3	0.64 J	0.76 J	1.8	1.4	0.45 J	0.47 J	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Degradation Products																								
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	0.25 J	0.32 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	0.47 J	2.5	0.36 J	< 1.0	< 1.0	0.38 J	0.29 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

VOCs (µg/L)	GS RBTL	Residuum Well PPMP-66-MW18R																
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/30/18	1/15/19	2/25/19	5/21/19	8/6/19	11/4/19	5/5/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	0.72 J	2.8	1.7	< 1.0	0.28 J	1.1	0.73 J	0.37 J	< 1	< 1	1.1	< 1	< 1	1.0	0.79 J (B)	< 1	< 1	< 1
Trichloroethene	205	0.48 J	0.44 J	0.57 J	0.76 J	0.74 J	0.76 J	0.34 J	0.28 J	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	<0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products																			
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.39 J (UB)	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Transition PPMP-66-MW22							
		10/30/18	1/15/19	2/26/19	5/21/19	8/6/19	11/04/19	5/6/20	10/26/20
COCs									
Cis-1,2-Dichloroethene	991	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	205	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	3.86	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products									
1,1-Dichloroethene	4800	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW23/PPMP-66-MW23R *																						
		5/13/04	11/7/07	5/21/08	10/1/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical			Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM		
Cis-1,2-Dichloroethene	991	1.6	110	75	58	92	550	180	130	93	180	170	150	130	210	270	170	170	210	220	180	140	91	160	160
Trichloroethene	205	1.4	89	290	39	77	940	550	370	200	210	180	130	75	120	170	120	110	140	210	120	100	62	110	120
Vinyl Chloride	3.86	9.2	16	20	6.6	4.5	15	14	20	19	39	33	31	32	48	59	31	41	39	54	33	26	20	28	23
Degradation Products																									
1,1-Dichloroethene	4800	2.2	34	57	18	31	96	45	29	16	19	16	11	8.2	11	14	10	5.4	7.1	6.2	10	7.5	4.1	9.6	9.2
Trans-1,2-Dichloroethene	1950	< 1.0	0.77 J	2.7	0.47 J	1.2	7.9	5.9	7.2	6.2	22	27	23	24	43	68	22	52	67	84	39	33	27	35	37

Table 4-5a: Groundwater Analytical Results for COCs and Degradation Products
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW23R																	
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/30/18	1/15/19	2/26/19	5/21/19	8/6/19	11/5/19	5/6/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	80	110	110	170	110	90	130	140	71	43	86	91	88	90	92	76	62	50 B
Trichloroethene	205	66	76	67	120	89	78	120	130	69	47	80	200	150	120	130	140	180	140
Vinyl Chloride	3.86	12	19	16	30	16	24	21	24	22	9.8	29	15	14	13	13	13	6.1	5.7
Degradation Products																			
1,1-Dichloroethene	4800	4.0	6.0	5.1	11	4.9	5.6	7.5	11	4.3	2.7	5.1	4.3	3	3.4	3.4	2.7	2	1.4
Trans-1,2-Dichloroethene	1950	23	31	23	45	29	37	41	57	31	17	40	73	71 B	63	62	73	62	46

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW24/PPMP-66-MW24R *																							
		5/17/04	11/5/07	5/20/08	9/29/10	5/11/11	8/11/11	11/2/11	2/6/12	5/7/12	8/6/12	11/12/12	2/4/13	5/8/13	8/26/13	11/19/13	2/5/14	5/7/14	8/11/14	11/3/14	2/3/15	5/18/15	8/3/15	11/12/15	2/9/16
COCs		Historical			Baseline & First Year LTM					2nd Year LTM				3rd Year LTM				4th Year LTM				5th Year LTM			
Cis-1,2-Dichloroethene	991	130	290	260	80	0.47 J	0.47 J	0.39 J	0.46 J	0.39 J	0.64 J	0.55 J	0.32 J	0.4 J	0.55 J	0.54 J	0.36 J	0.46 J	0.57 J	0.55 J	0.42 J	0.64 J	0.84 J	0.51 J	0.46 J
Trichloroethene	205	5000	2500	4000	5.5	2.4	1.1	0.78 J	0.66 J	0.54 J	0.48 J	0.58 J	0.53 J	0.44 J	0.38 J	0.4 J	0.45 J	0.46 J	0.37 J	0.4 J	0.44 J	0.45 J	0.25 J	0.37 J	0.39 J
Vinyl Chloride	3.86	1.2	16	11	20	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Degradation Products																									
1,1-Dichloroethene	4800	180	100	98	4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-Dichloroethene	1950	8.2	7.6	8.5	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

VOCs (µg/L)	GS RBTL	Transition Well PPMP-66-MW24R																	
		5/3/16	8/4/16	11/1/16	2/14/17	5/18/17	8/7/17	11/20/17	2/8/18	5/3/18	8/8/18	10/31/18	1/16/19	2/26/19	5/22/19	8/7/19	11/4/19	5/7/20	10/27/20
COCs		6th Year LTM				7th Year LTM				8th Year LTM				9th Year LTM				10th Year LTM	
Cis-1,2-Dichloroethene	991	0.80 J	1.1	0.95 J	0.74 J	0.59 J	0.93 J	0.65 J	0.73 J	< 1	0.5 J	0.47 J	0.77 J	0.69 J	0.68 J	0.76 J (B)	0.63 J	0.72 J	0.60 J
Trichloroethene	205	0.24 J	0.29 J	0.30 J	0.48 J	0.32 J	0.38 J	0.46 J	0.49 J	< 1	< 1	< 1	1.2	0.91 J	< 1	0.5 J (B)	0.53 J	0.60 J	0.55 J
Vinyl Chloride	3.86	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Degradation Products																			
1,1-Dichloroethene	4800	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trans-1,2-Dichloroethene	1950	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes:
< = Indicates the analyte was not detected at the reported quantitation limit shown.
µg/L = micrograms per liter
COCs = Constituents of concern
GS = Groundskeeper
(nv) = Not validated
LTM = Long-term monitoring
RBTL = Risk-Based Target Level (10^{-5} Risk)
VOCs = Volatile Organic Compounds

* Groundwater samples were collected from the original wells during the historical and baseline rounds (i.e., from March 2001 through October 2010).
Groundwater samples were collected from the replacement wells (noted with a "R" suffix) during the LTM rounds from May 2011 to the present, with the exception of well PPMP-66-MW02R.
Groundwater samples were collected from replacement well PPMP-66-MW02R from May 2011 through May 2013 and from the second replacement well PPMP-66-MW02RR from January 2014 to the present.

Lab Flag:
J = Estimated detection. The analyte is positively identified and the concentration is less than the reporting limit but greater than the method detection limit.
F2 = MS/MSD RPD exceeds control limits.

Result exceeds GS RBTL

Table 4-5b: Groundwater Analytical Results for Iron and Sulfate
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

	PPMP-66-MW01						PPMP-66-MW02RR					
	10/30/18	**01/15/19**	**02/26/19**	**05/21/19**	**08/06/19**	**11/04/19**	**10/31/18**	**01/28/19**	**2/26/19**	**5/21/19**	**8/7/19**	**11/4/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	2100	770	690	700	1900	1500	44 J	27000	24000	25000	10000 (J)	11000 (J))
Iron, dissolved	27 J	< 100	< 100	30 J (UB)	28 J	85 J	< 100	470	21000	15000	7900 (J)	210
Sulfate (mg/L)												
Sulfate	1800 F2 F1	1900	1900	1900	1900	2000	29	3200	3900	3900	3000	2900

	PPMP-66-MW03							
	10/29/18	**01/15/19**	**2/25/19**	**5/21/19**	**8/5/19**	**11/1/19**	**5/5/20**	**10/26/20**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	2400	2200	1600	2200	2300	2300	2000	1900
Iron, dissolved	27 J	78 J	220	190 (UB)	130	230	180	200
Sulfate (mg/L)								
Sulfate	1100	830	1000	1100	1200	1300	1100	1200

	PPMP-66-MW04								
	10/29/18	**11/28/18**	**01/14/19**	**2/25/19**	**5/20/19**	**8/5/19**	**11/1/19**	**5/5/20**	**10/26/20**
Iron SW6020A (µg/L)	Pre-ISO	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	--	1600	3100	3600	1200	1100	420	2000	900
Iron, dissolved	--	73 J	210	620	43 J (UB)	52 J	410	500	510
Sulfate (mg/L)									
Sulfate	980	--	39	1000	1000	1100	41	830	68

	PPMP-66-MW06R					
	10/31/18	**01/16/19**	**2/26/19**	**5/22/19**	**8/7/19**	**11/5/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	< 100	420	280	140	100	290
Iron, dissolved	< 100	72 J	69 J	92 J (UB)	31 J	46 J
Sulfate (mg/L)						
Sulfate	11	350	550	280	210	150

	PPMP-66-MW07							
	10/29/18	**01/14/19**	**2/25/19**	**5/20/19**	**8/6/19**	**11/4/19**	**5/5/20**	**10/26/20**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	2200	760	700	900	1200	2200	1200	2600
Iron, dissolved	< 100	< 100	70 J	150 (UB)	75 J	97 J	290	360
Sulfate (mg/L)								
Sulfate	1400	1100	1100	1200	1400	1400	610	1300

Table 4-5b: Groundwater Analytical Results for Iron and Sulfate
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

	PPMP-66-MW08						PPMP-66-MW11					
	10/30/18	**01/15/19**	**2/26/19**	**5/21/19**	**8/7/19**	**11/4/19**	**10/29/18**	**01/14/19**	**2/25/19**	**5/20/19**	**8/5/19**	**11/1/19**
Sulfate (mg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Sulfate	610	730	1200	1100	1100	960	49	42.3	47	47	61	65

	PPMP-66-MW13					
	10/29/18	**01/15/19**	**2/25/19**	**5/20/19**	**8/5/19**	**11/4/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	--	--	--	--	--	--
Iron, dissolved	--	--	--	--	--	--
Sulfate (mg/L)						
Sulfate	960	440	220	390	440	250

	PPMP-66-MW14							
	10/29/18	**01/14/19**	**2/25/19**	**5/20/19**	**8/5/19**	**11/4/19**	**5/5/20**	**10/26/20**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	4900	1700	1900	3300	3100	2900	2900	3100
Iron, dissolved	60 J	< 100	160	140 (UB)	130	140	300	130
Sulfate (mg/L)								
Sulfate	710	530	580	700	930	530	630	620

	PPMP-66-MW16						PPMP-66-MW17					
	10/30/18	**01/15/19**	**2/26/19**	**5/21/19**	**8/7/19**	**11/4/19**	**10/30/18**	**01/15/19**	**2/25/19**	**5/21/19**	**8/5/19**	**11/1/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	340	2900	2800	410	3000	97 J (UB)	380	390	720	530	600	640
Iron, dissolved	230	1800	1500	270	1800	60 J	< 100	< 100	78 J	88 J (UB)	120	45 J
Sulfate (mg/L)												
Sulfate	140	200	99	150	130	67	130	180	150	150	170	140

	PPMP-66-MW18R					
	10/30/18	**01/15/19**	**2/25/19**	**5/21/19**	**8/3/19**	**11/4/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	360	190	200	160	130	320
Iron, dissolved	29 J	< 100	< 100	65 J (UB)	510	52 J
Sulfate (mg/L)						
Sulfate	31	41	18	24	29	52

	PPMP-66-MW21							
	10/31/18	**01/16/19**	**2/26/19**	**5/21/19**	**8/6/19**	**11/4/19**	**5/6/20**	**10/26/20**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	130	7900	6400	6900	5000	750	2700	1300
Iron, dissolved	< 100	5300	4600	3500	3700	590	1600	510
Sulfate (mg/L)								
Sulfate	94	340	120	110	78	78	55	47

Table 4-5b: Groundwater Analytical Results for Iron and Sulfate
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

	PPMP-66-MW22						PPMP-66-MW23R					
	10/30/18	**01/15/19**	**2/26/19**	**5/21/19**	**8/6/19**	**11/4/19**	**10/30/18**	**01/16/19**	**2/26/19**	**5/21/19**	**8/6/19**	**11/5/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	--	--	--	--	--	--	160	210	290	35 J	51 J (UB)	31 J (UB)
Iron, dissolved	--	--	--	--	--	--	< 100	< 100	< 100	43 J	27 J	< 100
Sulfate (mg/L)												
Sulfate	120	510	200	390	440	260	24	500	200	150	120	77

	PPMP-66-MW24R					
	10/31/18	**01/16/19**	**2/26/19**	**5/22/19**	**8/7/19**	**11/4/19**
Iron SW6020A (µg/L)	Pre-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO	Post-ISO
Iron	1700	6300	1500	6600	6500	7100
Iron, dissolved	33 J	59 J	540	170 (UB)	170	90 J
Sulfate (mg/L)						
Sulfate	81	140	2000	1700	1600	1900

Notes:

GS = Groundskeeper
ISO - In-Situ Chemical Oxidation
µg/L = micrograms per liter
mg/L = milligrams per iter

Validation Qualifiers (in parentheses):

B - Analyte detected in a blank.
J - Results estimated based on QC outliers.
UB - Analyte considered not detected based on concentarion in associated blank.

Lab Qualifier:

F1 = MS and/or MSD recovery is outside acceptance limits.
F2 = MS/MSD RPD exceeds control limits.
J = Estimated detection. The analyte is positively identified and the concentration is less than the reporting limit but > MDL

Table 4-5c: Groundwater Analytical Results for Dissolved Gases
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

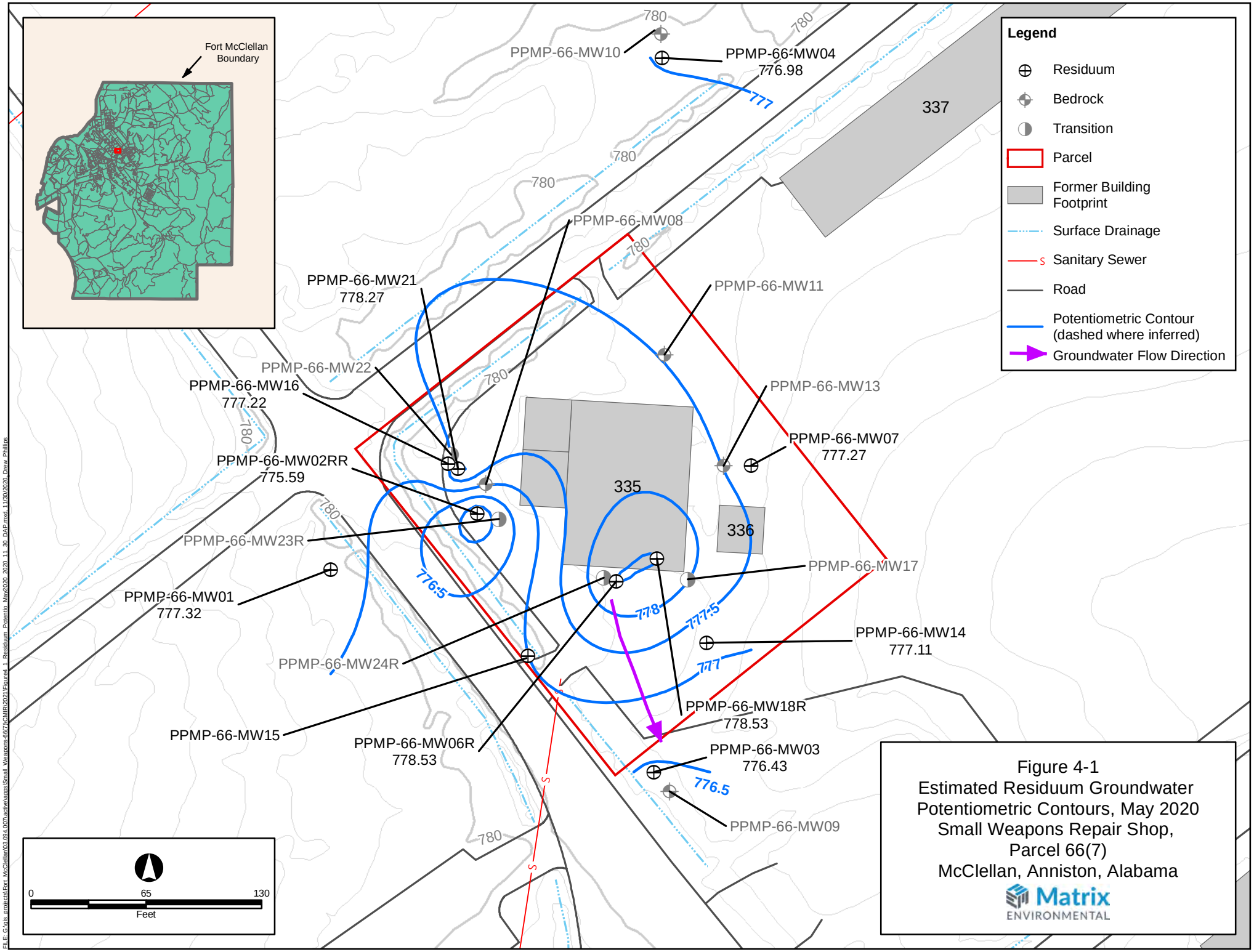
	PPMP-66-MW02RR
	10/27/20
Gases RSK-175 (µg/L)	Post-ISO
Ethane	< 1.1
Ethene	0.55 J
Methane	18

	PPMP-66-MW06R
	10/27/20
Gases RSK-175 (µg/L)	Post-ISO
Ethane	< 1.1
Ethene	< 1
Methane	77

Notes:
ISO - In-Situ Chemical Oxidation

Lab Qualifier:
J = Estimated detection. The analyte is positively identified and the concentration is less than the reporting limit but > MDL

Figures


Fort McClellan Boundary
Legend
Residuum
Bedrock
Transition
Parcel
Former Building Footprint
Surface Drainage
Sanitary Sewer
Road
Potentiometric Contour (dashed where inferred)
Groundwater Flow Direction
PPMP-66-MW10
PPMP-66-MW04
776.98
PPMP-66-MW08
PPMP-66-MW21
778.27
PPMP-66-MW11
PPMP-66-MW22
PPMP-66-MW16
777.22
PPMP-66-MW13
PPMP-66-MW07
777.27
PPMP-66-MW02RR
775.59
PPMP-66-MW23R
PPMP-66-MW01
777.32
PPMP-66-MW17
PPMP-66-MW14
777.11
PPMP-66-MW24R
PPMP-66-MW18R
778.53
PPMP-66-MW15
PPMP-66-MW06R
778.53
PPMP-66-MW03
776.43
PPMP-66-MW09
337
335
336
780
777
776.5
778
777.5
0
65
130
Feet
Figure 4-1
Estimated Residuum Groundwater Potentiometric Contours, May 2020
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama
Matrix ENVIRONMENTAL

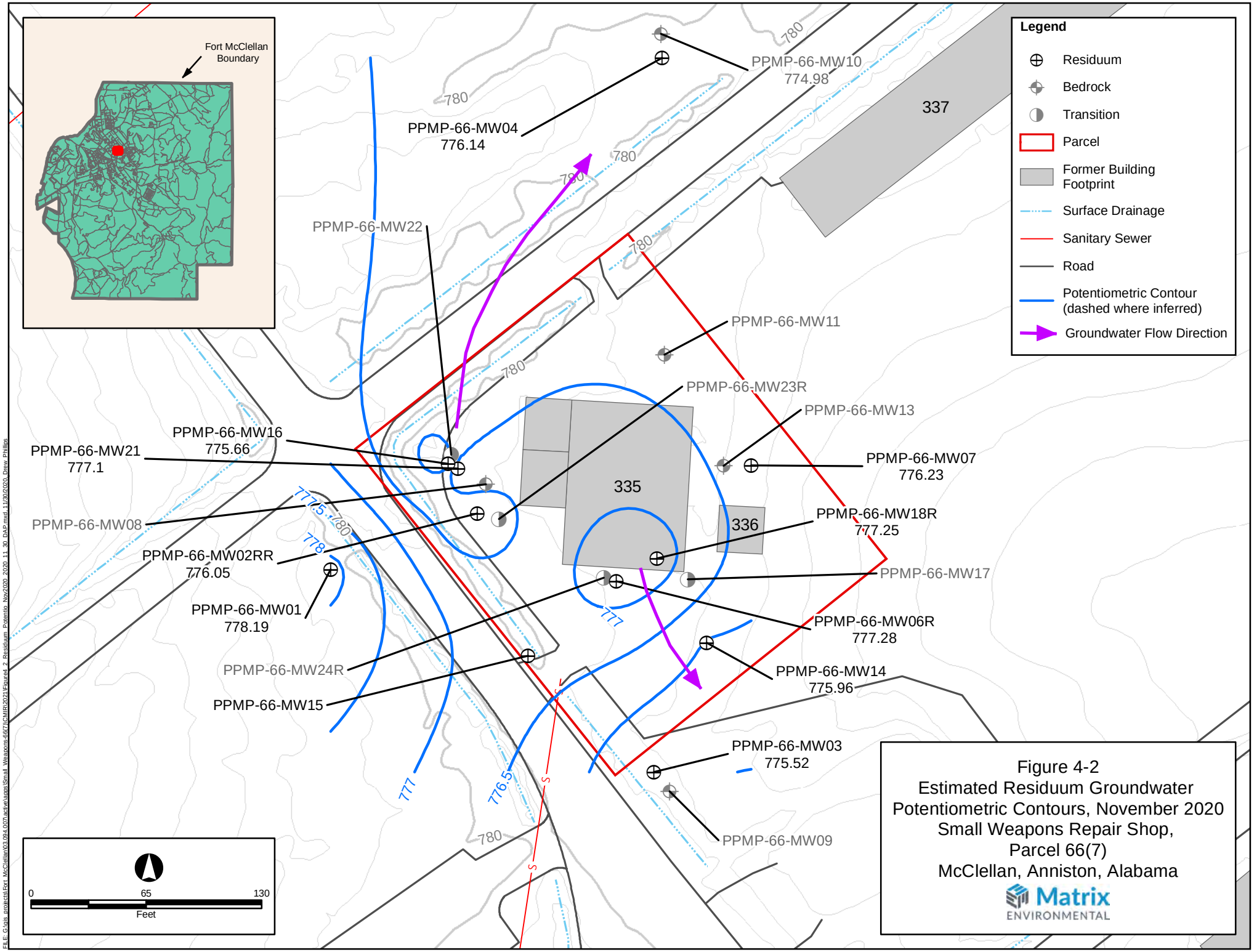
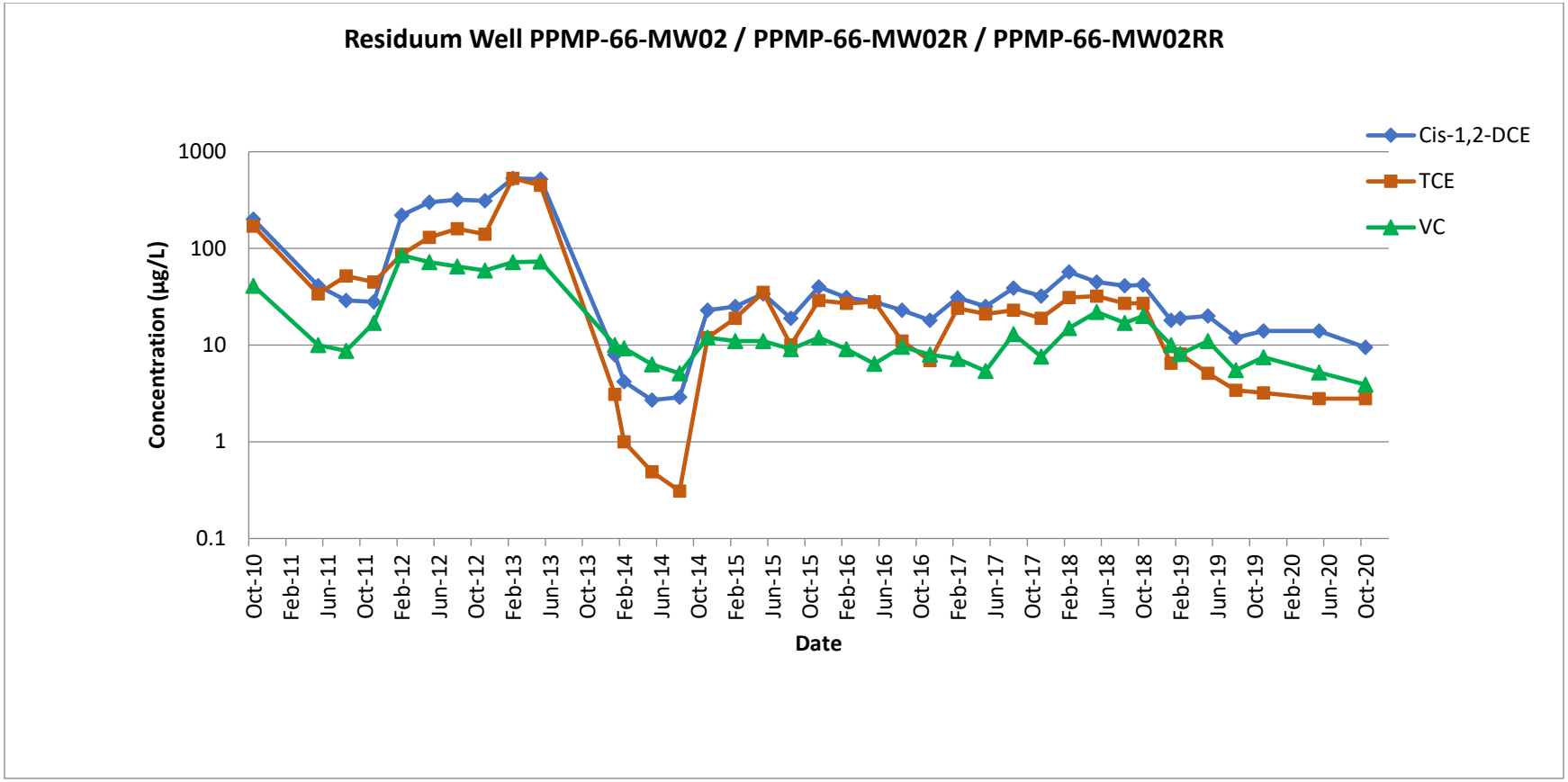


Figure 4-2
Estimated Residuum Groundwater Potentiometric Contours, November 2020
Small Weapons Repair Shop,
Parcel 66(7)
McClellan, Anniston, Alabama

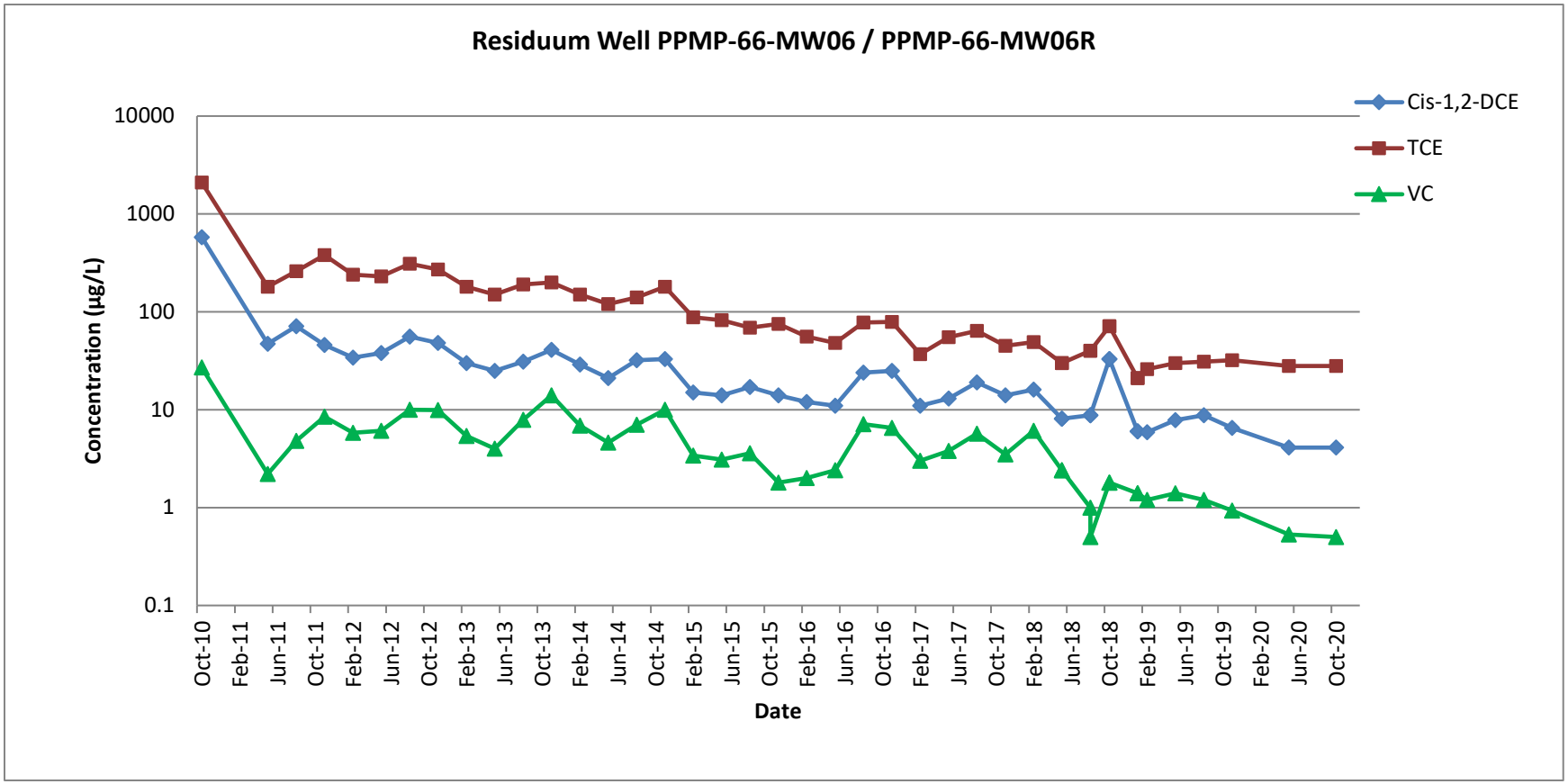
Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort McClellan\03.004.007\active\apps\Small Weapons-66(7)\CMR\2021\Figure4_2_Residuum_Potentio_Nov2020_2020_11_30_DAP.mxd, 11/30/2020, Drew Phillips



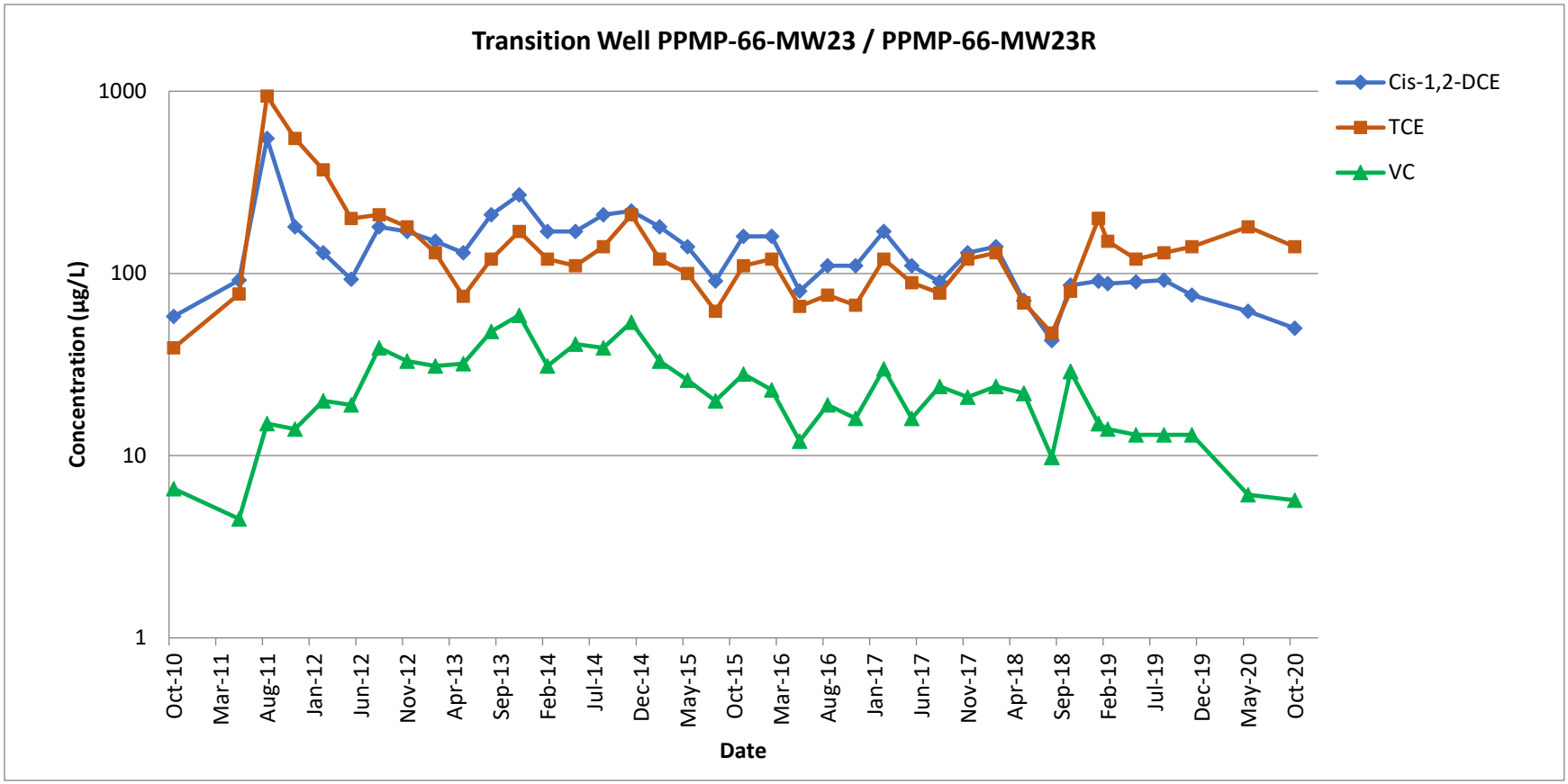
Matrix ENVIRONMENTAL

Figure 4-3: Volatile Concentrations in Residuum Well PPMP-66-MW02 / PPMP-66-MW02R/ PPMP-66-MW02RR
Small Weapons, Parcel 66(7)
McClellan, Anniston, Alabama



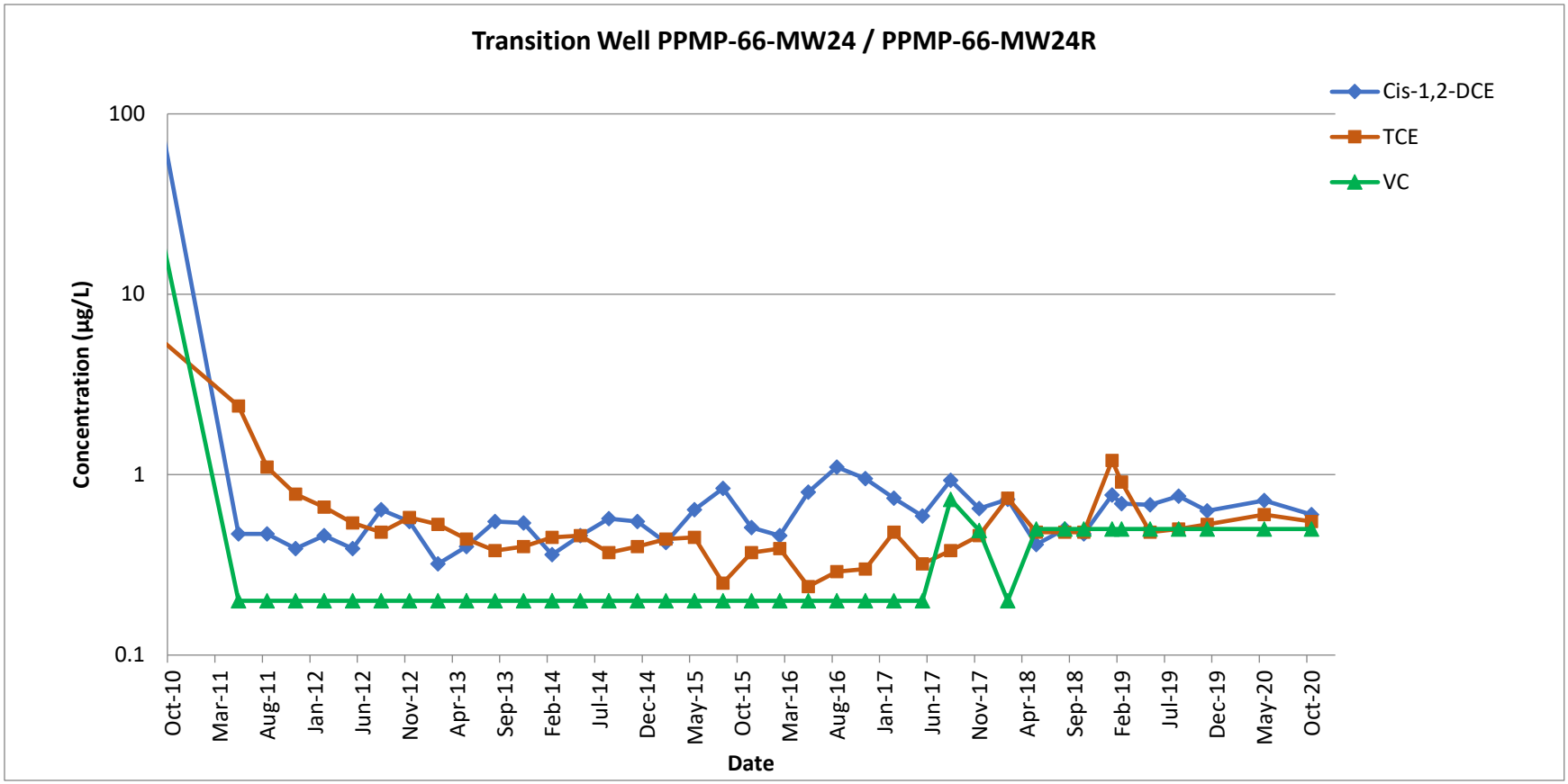
Matrix ENVIRONMENTAL

Figure 4-4: Volatile Concentrations in Residuum Well
PPMP-66-MW06 / PPMP-66-MW06R
Small Weapons, Parcel 66(7)
McClellan, Anniston, Alabama



Matrix ENVIRONMENTAL

Figure 4-5: Volatile Concentrations in Residuum Well
PPMP-66-MW23 / PPMP-66-MW23R
Small Weapons, Parcel 66(7)
McClellan, Anniston, Alabama



Matrix ENVIRONMENTAL

Figure 4-6: Volatile Concentrations in Residuum Well
PPMP-66-MW24 / PPMP-66-MW24R
Small Weapons, Parcel 66(7)
McClellan, Anniston, Alabama

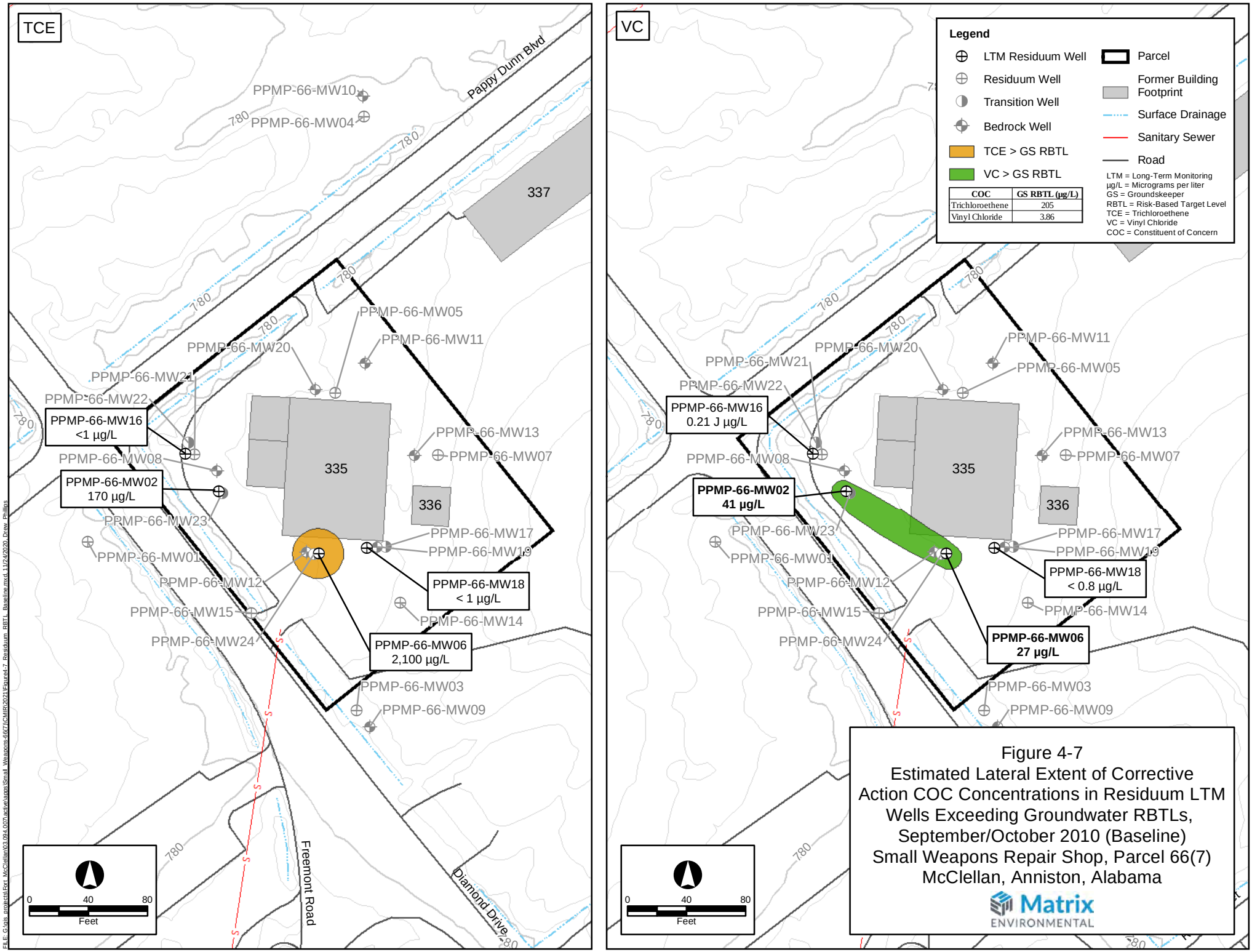
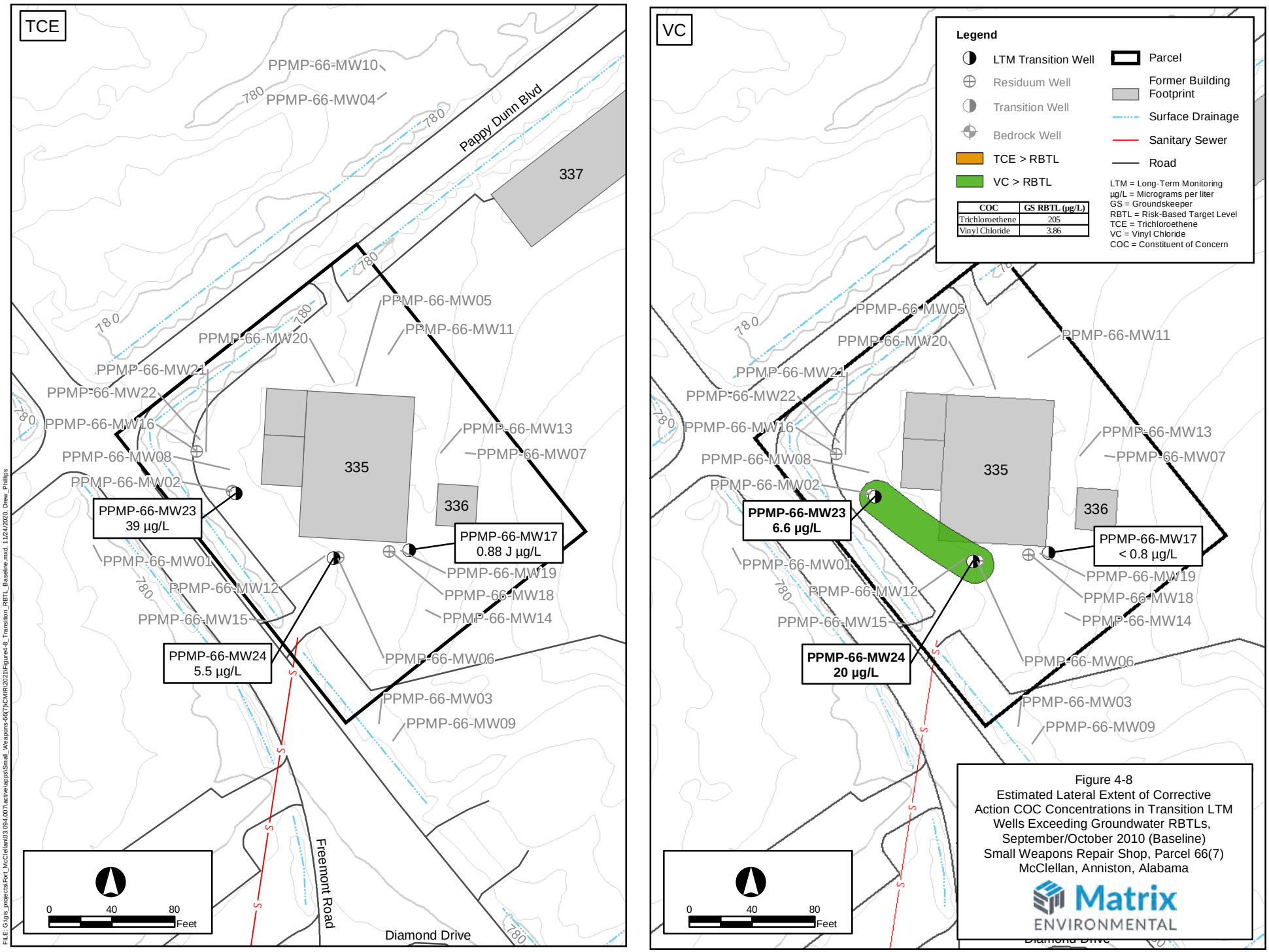
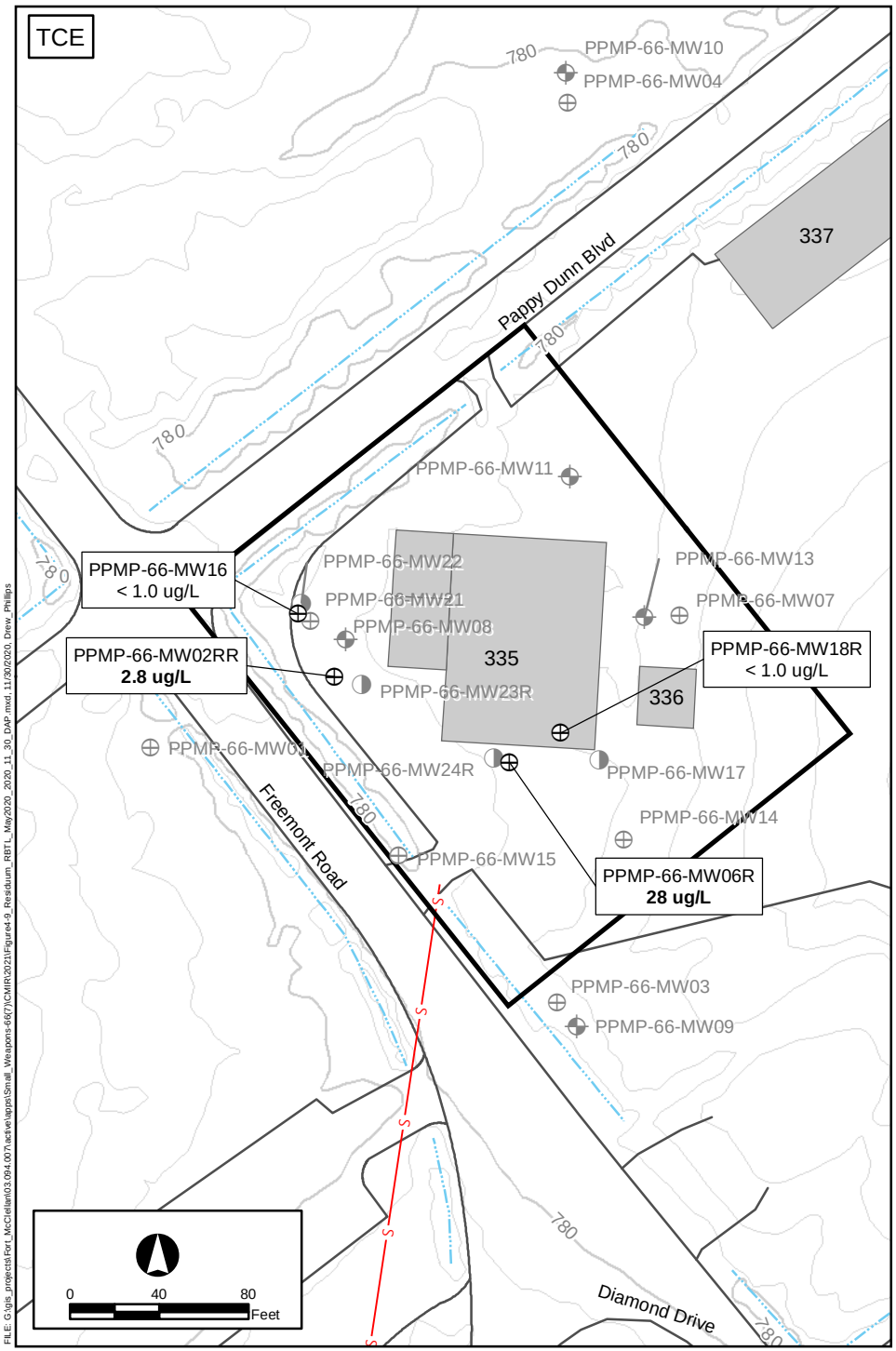


Figure 4-7
Estimated Lateral Extent of Corrective Action COC Concentrations in Residuum LTM Wells Exceeding Groundwater RBTLs, September/October 2010 (Baseline)
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL


TCE
VC
Legend
LTM Transition Well
Residuum Well
Transition Well
Bedrock Well
TCE > RBTL
VC > RBTL
Parcel
Former Building Footprint
Surface Drainage
Sanitary Sewer
Road
LTM = Long-Term Monitoring
µg/L = Micrograms per liter
GS = Groundskeeper
RBTL = Risk-Based Target Level
TCE = Trichloroethene
VC = Vinyl Chloride
COC = Constituent of Concern
COC | GS RBTL (µg/L)
Trichloroethene | 205
Vinyl Chloride | 3.86
PPMP-66-MW10
PPMP-66-MW04
PPMP-66-MW05
PPMP-66-MW11
PPMP-66-MW20
PPMP-66-MW21
PPMP-66-MW22
PPMP-66-MW16
PPMP-66-MW08
PPMP-66-MW02
PPMP-66-MW23
39 µg/L
PPMP-66-MW23
6.6 µg/L
PPMP-66-MW01
PPMP-66-MW12
PPMP-66-MW15
PPMP-66-MW24
5.5 µg/L
PPMP-66-MW24
20 µg/L
PPMP-66-MW13
PPMP-66-MW07
PPMP-66-MW17
0.88 J µg/L
PPMP-66-MW17
< 0.8 µg/L
PPMP-66-MW19
PPMP-66-MW18
PPMP-66-MW14
PPMP-66-MW06
PPMP-66-MW03
PPMP-66-MW09
335
336
337
Pappy Dunn Blvd
Freemont Road
Diamond Drive
780
0
40
80
Feet
Figure 4-8
Estimated Lateral Extent of Corrective Action COC Concentrations in Transition LTM Wells Exceeding Groundwater RBTLs, September/October 2010 (Baseline)
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama
Matrix ENVIRONMENTAL
FILE: G:\gis_projects\Fort_McClellan\03.094.007\active\appx\Small_Weapons-66(7)\CMR\2021\Figure4-8_Transition_RBTL_Baseline.mxd, 11/24/2020, Drew_Phillips



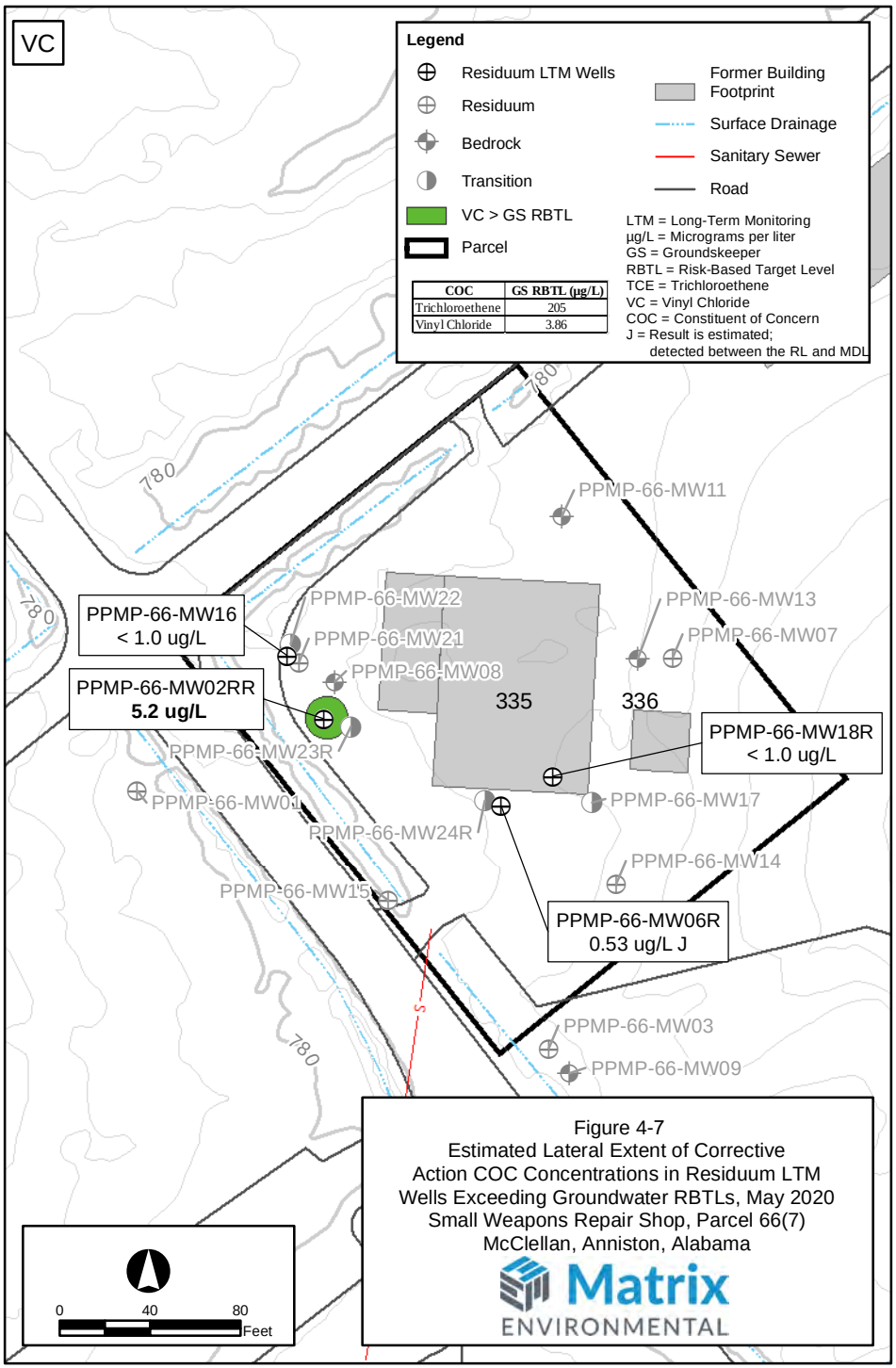


Figure 4-7
Estimated Lateral Extent of Corrective Action COC Concentrations in Residuum LTM Wells Exceeding Groundwater RBTLs, May 2020
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort_McClellan\03.094.007\active\appe\Small_Weapons-66(7)\CMIR\2021\Figure4-9_Residuum_RBTL_May2020_2020_11_30_DAP.mxd 11/30/2020 Drew_Phillips

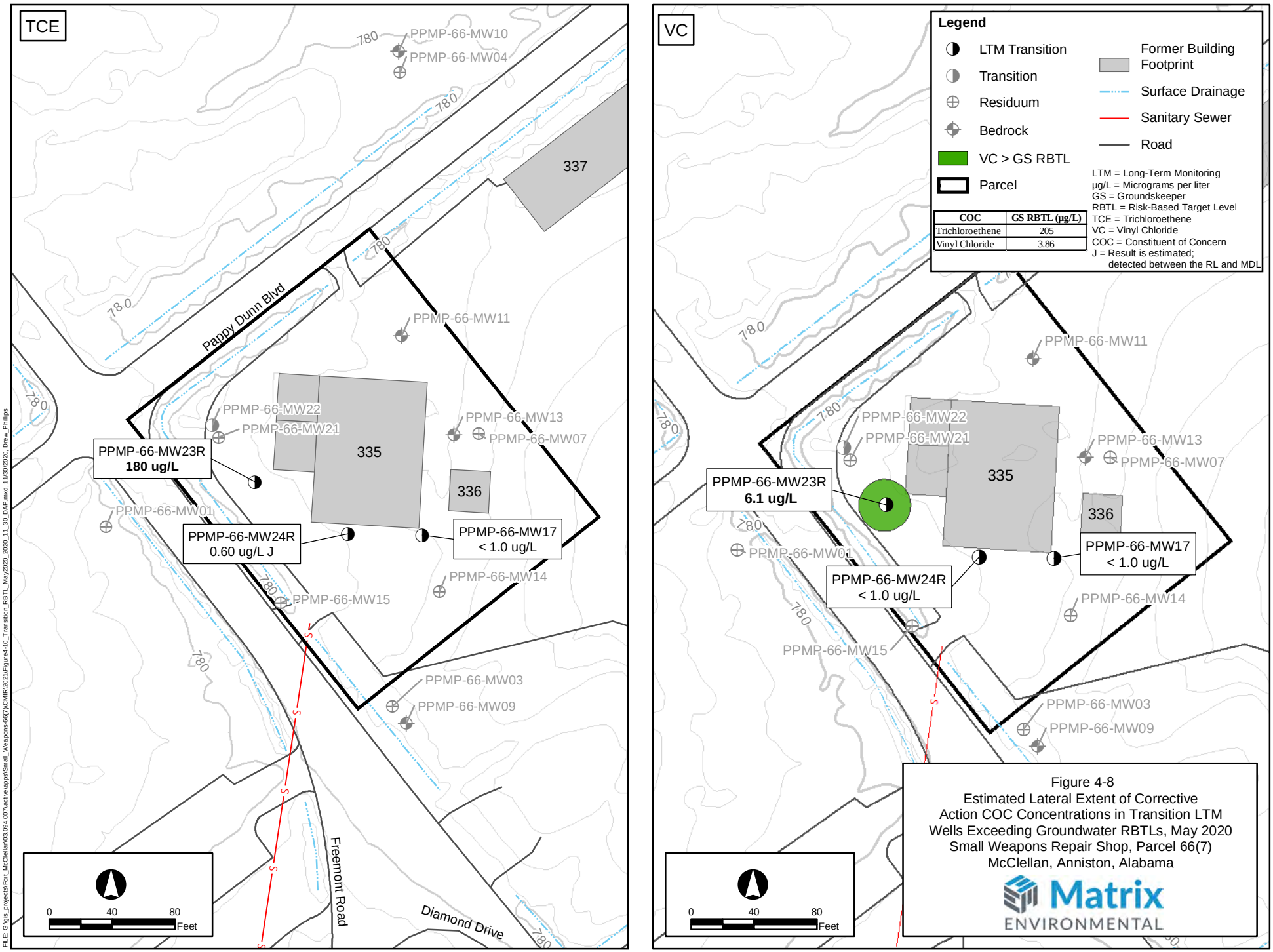
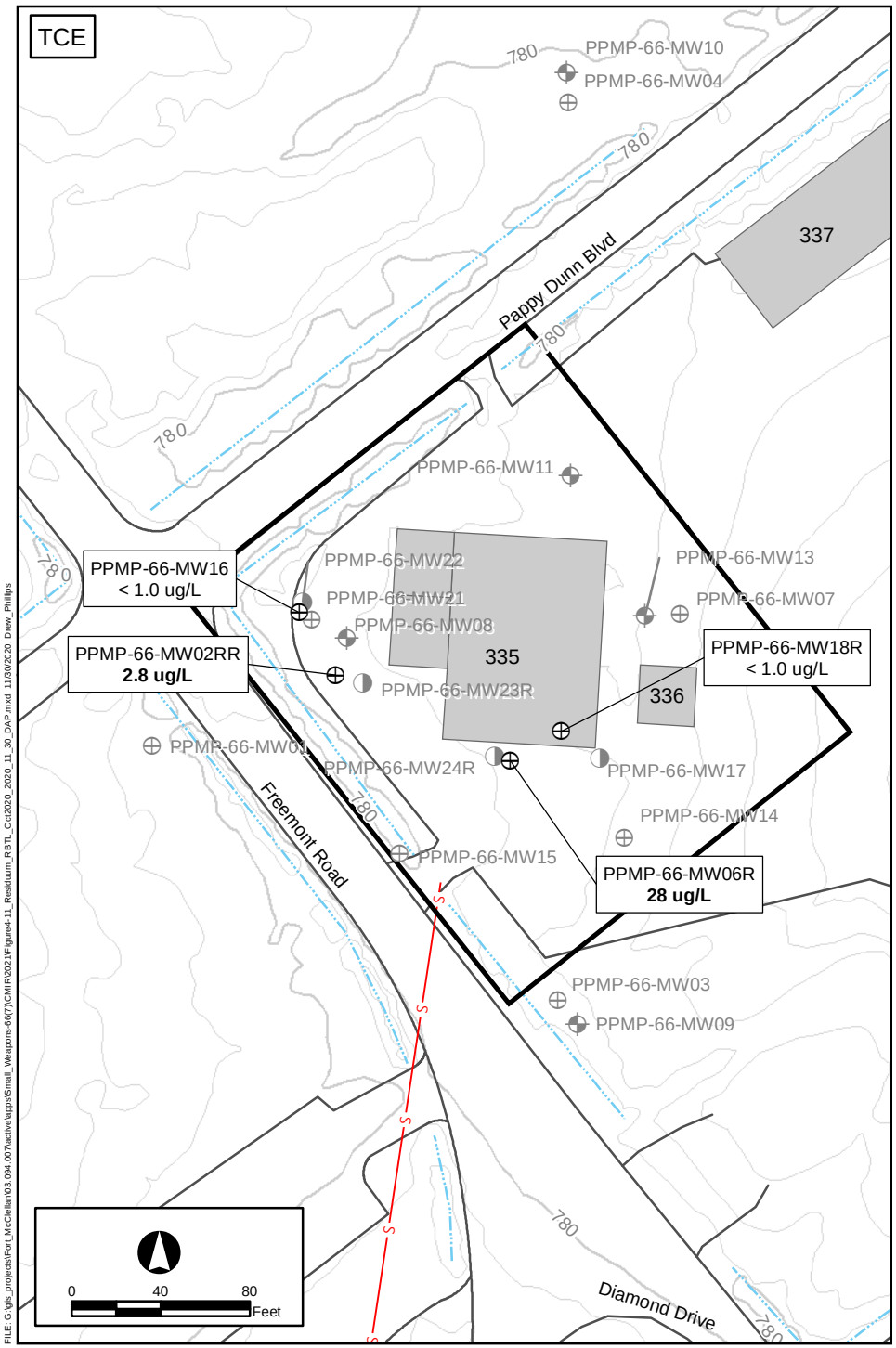


Figure 4-8
Estimated Lateral Extent of Corrective Action COC Concentrations in Transition LTM Wells Exceeding Groundwater RBTLs, May 2020
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort_McClellan\03.094.007\active\appe\Small_Weapons-66(7)\CMIR\2021\Figure4-10_Transition_RBTL_May2020_2020_11_30_DAP.mxd, 11/30/2020, Drew_Phillips



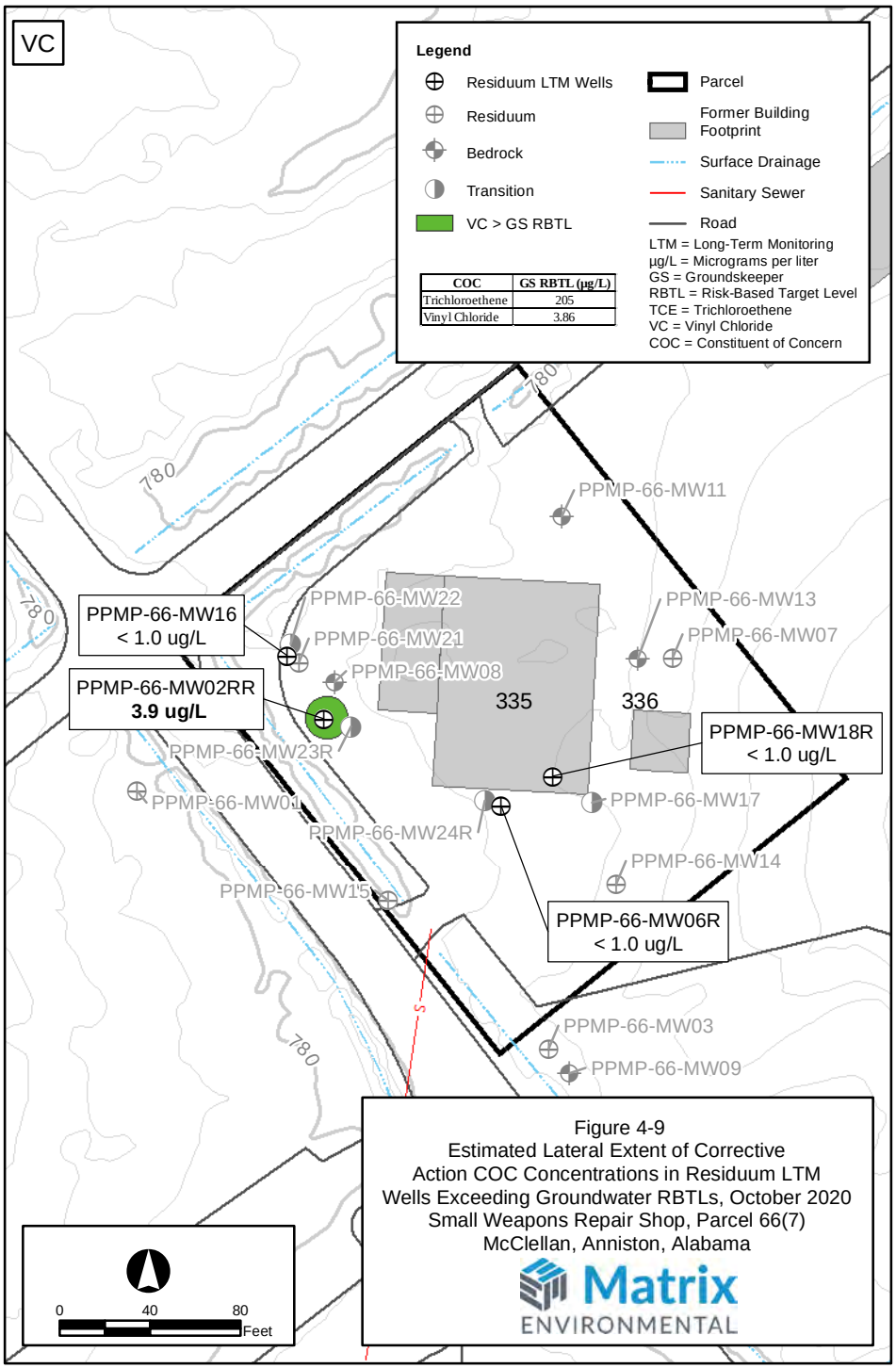


Figure 4-9
Estimated Lateral Extent of Corrective Action COC Concentrations in Residuum LTM Wells Exceeding Groundwater RBTLs, October 2020
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

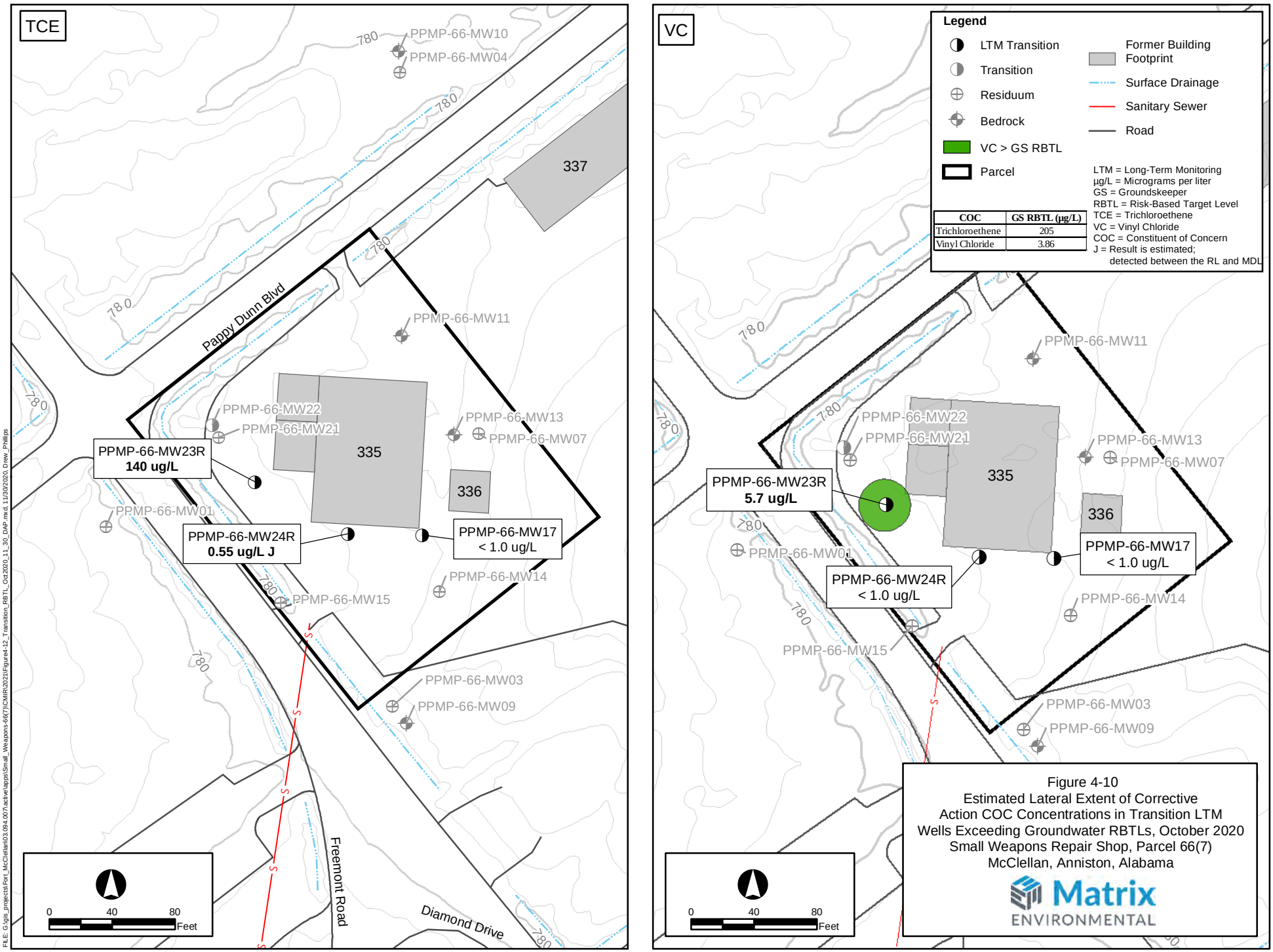


Figure 4-10
Estimated Lateral Extent of Corrective Action COC Concentrations in Transition LTM Wells Exceeding Groundwater RBTLs, October 2020
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Anniston, Alabama

Matrix ENVIRONMENTAL

FILE: G:\gis_projects\Fort_McClellan\03.094.007\active\appe\Small_Weapons-66(7)\CMIR\2021\Figure4-12_Transition_RBTL_Oct2020_11_30_DAP_mxd 11/30/2020 Drew_Phillips

APPENDIX A

Groundwater Sampling Documentation

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780
(256) 847-0905

Project Name
McClellan

Project Number
19.094.20-22.1

GROUNDWATER LEVELS

Field Personnel	Measuring Equipment	Date
Abernathy/Tulley	Solinst Water Level Meter	5/5/2020

Conditions

Well ID	Casing Diameter	Date	Time	Depth to Water (feet)	Well Depth (feet)	Water Column (feet)	Initials
PPMP-66-MW01	2	5/5/2020	9:59	4.80	26.03	21.23	JT/DA
PPMP-66-MW02RR	2	5/5/2020	9:44	4.78	23.50	18.72	JT/DA
PPMP-66-MW03	2	5/5/2020	9:28	4.31	28.00	23.69	JT/DA
PPMP-66-MW04	2	5/5/2020	8:45	4.92	26.50	21.58	JT/DA
PPMP-66-MW06R	2	5/5/2020	9:20	2.88	27.80	24.92	JT/DA
PPMP-66-MW07	2	5/5/2020	9:03	4.90	28.65	23.75	JT/DA
PPMP-66-MW08	4	5/5/2020	9:35	3.74	73.90	70.16	JT/DA
PPMP-66-MW09	4	5/5/2020	9:31	3.91	74.75	70.84	JT/DA
PPMP-66-MW10	4	5/5/2020	8:50	6.31	77.41	71.10	JT/DA
PPMP-66-MW11	4	5/5/2020	8:54	2.21	84.35	82.14	JT/DA
PPMP-66-MW13	4	5/5/2020	8:58	4.13	74.03	69.90	JT/DA
PPMP-66-MW14	2	5/5/2020	9:15	4.59	20.71	16.12	JT/DA
PPMP-66-MW16	2	5/5/2020	9:54	3.25	12.75	9.50	JT/DA
PPMP-66-MW17	2	5/5/2020	9:07	3.91	17.71	13.80	JT/DA
PPMP-66-MW18R	2	5/5/2020	9:11	2.72	15.00	12.28	JT/DA
PPMP-66-MW21	2	5/5/2020	9:48	2.17	14.40	12.23	JT/DA
PPMP-66-MW22	2	5/5/2020	9:52	3.47	24.65	21.18	JT/DA
PPMP-66-MW23R	2	5/5/2020	9:39	3.75	29.25	25.50	JT/DA
PPMP-66-MW24R	2	5/5/2020	9:24	3.96	34.15	30.19	JT/DA

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW01	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.96 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/6/2020
Well Depth (TOC) 24 feet		**Location (Site)** SWR	**Begin Time** 10:10
Water Column Thickness 19.04 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** test america	**Sample Depth** 16.5
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 66°	**Meters** YSI Pro Plus#2 GeoTech Water Level Met.	**Serial numbers**
Casing Volume 3.05 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 782.12 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 777.16 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1010	0	18.90	3145	7.45	11.5	2.041	15.73	7.02	Clear	Clear	None
1015	500	18.90	3142	7.25	10.6	2.041	14.35	7.02	Clear	Clear	None
1020	500	19.00	3138	6.78	9.8	2.041	13.26	7.03	Clear	Clear	None
1025	500	19.10	3133	6.45	9.5	2.0345	12.13	7.03	Clear	Clear	None
1030	500	19.20	3130	6.18	11.9	2.0345	11.64	7.03	Clear	Clear	None
1035	500	19.20	3129	5.85	14.3	2.0345	11.15	7.03	Clear	Clear	None
1040	500	19.20	3126	5.65	17.7	2.0345	10.91	7.03	Clear	Clear	None
1045	500	19.10	3118	5.39	21.2	2.0345	10.57	7.03	Clear	Clear	None
1050	500	19.20	3108	5.20	24.2	2.0215	10.25	7.03	Clear	Clear	None
1055	500	19.10	3107	5.14	29.6	2.015	10.04	7.03	Clear	Clear	None
1100	500	19.20	3105	5.06	31.7	2.0085	9.95	7.03	Clear	Clear	None
1105	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	5000	no	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW02RR	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.72 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/6/2020
Well Depth (TOC) 23.55 feet		**Location (Site)** SWR	**Begin Time** 13:00
Water Column Thickness 19.83 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 20.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 69°	**Meters** YSI Pro Plus #2 Geotech Water Level Met.	**Serial numbers**
Casing Volume 3.17 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Cloudy 60	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.37 feet			
776.65 feet	**temp +/- 1° DO +/- 10% Turbidity +/- 10%** **cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit**	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1310	0	22.40	5031	2.98	-40.3	3.276	97.88	6.46	Cloudy	Brown	None
1315	500	22.30	5033	2.55	-41.6	3.276	116.00	6.45	Cloudy	Brown	None
1320	500	22.30	5036	2.13	-42.7	3.2695	134.20	6.44	Cloudy	Brown	None
1325	500	21.40	5089	1.65	-39.1	3.302	151.00	6.44	Cloudy	Brown	None
1330	500	20.10	5056	1.44	-34.2	3.289	150.70	6.43	Cloudy	Brown	None
1335	500	20.30	5038	1.65	-30.1	3.2695	147.50	6.41	Cloudy	Brown	None
1340	500	20.80	5014	1.53	-23.5	3.2565	145.50	6.40	Cloudy	Brown	None
1345	500	21.10	5018	1.51	-20.4	3.263	146.70	6.39	Cloudy	Brown	None
1350	500	21.50	5009	1.41	-18.1	3.2435	148.40	6.38	Cloudy	Brown	None
1355	500	22.10	4980	1.37	-13.3	3.2305	151.20	6.36	Cloudy	Brown	None
1400	500	23.00	4961	1.32	-11.9	3.224	147.20	6.35	Cloudy	Brown	None
1405	500	22.90	4936	1.31	6.9	3.211	125.60	6.34	Cloudy	Brown	None

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
95	9000	no	Water level meter required cleaning to stop alarming due to water

QA/QC Samples

Signature

Matrix Environmental Services
1601 Blake Street, Suite 200
Denver, Colorado 80202
(303) 572-0200
(303) 572-0202

Station Name/Sample ID: PPMP-66-MW02RR

Project: McClellan

Date: 5/6/2020

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1410	500	23.4	4936	1.33	-3.9	3.211	115.5	6.33	Cloudy	Brown	None
1415	500	22.9	4920	1.3	2.4	3.183	112.6	6.32	Cloudy	Brown	None
1420	500	22.7	4906	1.37	5.6	3.1785	110.5	6.31	Cloudy	Brown	None
1425	500	22.4	4895	1.41	7.5	3.172	108.6	6.3	Cloudy	Brown	None
1430	500	22.6	4870	1.44	9.6	3.1655	106.8	6.29	Cloudy	Brown	None
1435	500	22.5	4865	1.44	14.4	3.1655	104.2	6.29	Cloudy	Brown	None
1440	500	22.6	4876	1.42	15.2	3.1655	102.6	6.29	Cloudy	Brown	None
1445	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
95	9,000	no	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW03	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.31 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/5/2020
Well Depth (TOC) 29 feet		**Location (Site)** SWR	**Begin Time** 10:00:00 AM
Water Column Thickness 24.69 feet	**Equipment** Geotech Bladder Pump Geotech Geo control Pro	**Laboratory** TestAmerica	**Sample Depth** 19.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 71°	**Meters** YSI Pro Plus#2 Geotech water level met.	**Serial numbers**
Casing Volume 3.95 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Cloudy	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.74 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.43 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1015	0	20.20	2320	5.70	-80.8	1.508	17.62	6.94	Clear	Clear	Sulfur-like
1020	500	20.30	2318	5.18	-87.7	1.508	14.06	6.94	Clear	Clear	Sulfur-like
1025	500	20.50	2310	4.82	-92.6	1.508	10.65	6.95	Clear	Clear	None
1030	500	20.50	2301	4.19	-99.5	1.495	8.46	6.94	Clear	Clear	None
1035	500	20.60	2301	3.86	-103.2	1.495	6.80	6.95	Clear	Clear	None
1040	500	20.50	2295	3.34	-108.8	1.4885	6.20	6.95	Clear	Clear	None
1045	500	20.70	2286	3.03	-112.2	1.4885	4.24	6.95	Clear	Clear	None
1050	500	20.90	2301	2.85	-114.6	1.5015	3.67	6.95	Clear	Clear	None
1055	500	21.20	2305	2.67	-117.3	1.495	2.90	6.96	Clear	Clear	None
1100	500	21.40	2304	2.56	-119.7	1.495	2.75	6.96	Clear	Clear	None
1105	500	21.60	2306	2.49	-118.6	1.495	2.67	6.95	Clear	Clear	None
1110	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	5000	no	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW04	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.92 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/5/2020
Well Depth (TOC) 24 feet		**Location (Site)** SWR	**Begin Time** 10:00
Water Column Thickness 19.08 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 15.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 75	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.05 gallons	**Weather Conditions** Overcast	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.9 feet			
Groundwater Elevation 776.98 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
10:15	0	20.10	2185	0.72	-147.5	1.4235	45.96	6.90	Cloudy	Yellow	None
10:20	500	19.60	2184	0.52	-151.8	1.417	44.85	6.90	Cloudy	Yellow	None
10:25	500	20.00	2118	0.95	-148.3	1.378	12.74	6.90	Clear	Clear	None
10:30	500	20.10	2185	0.60	-148.5	1.4235	9.41	6.91	Clear	Clear	None
10:35	500	20.10	2196	0.51	-149.2	1.4235	4.21	6.91	Clear	Clear	None
10:40	500	20.10	2198	0.95	-150.1	1.43	5.15	6.91	Clear	Clear	None
10:45	500	20.10	2199	0.73	-150.4	1.43	4.90	6.91	Clear	Clear	None
10:46	Collecting Sample Suite										

5-5-20

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
30	3000	No	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW06R	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.88 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/7/2020
Well Depth (TOC) 29 feet		**Location (Site)** SWR	**Begin Time** 7:45
Water Column Thickness 26.12 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 19.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 48	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 4.18 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/7/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.41 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 778.53 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
8:15	0	15.10	1227	0.49	2.9	0.7995	301.70	11.98	Cloudy	Brown	None
8:20	500	15.30	1232	0.50	-18.0	0.806	221.80	12.11	Cloudy	Brown	None
8:25	500	15.20	1238	0.45	-45.7	0.806	176.40	12.21	Cloudy	Brown	None
8:30	500	16.00	1231	0.36	-54.7	0.7995	71.08	12.27	Cloudy	Brown	None
8:35	500	16.70	1237	0.34	-75.0	0.806	24.12	12.36	Clear	Clear	None
8:40	500	16.80	1239	0.34	-77.9	0.806	13.45	12.36	Clear	Clear	None
8:45	500	16.90	1243	0.35	-83.5	0.806	8.12	12.36	Clear	Clear	None
8:50	500	17.20	1265	0.47	-88.8	0.8255	9.45	12.35	Clear	Clear	None
8:55	500	17.40	1266	0.42	-103.1	0.8325	6.42	12.37	Clear	Clear	None
9:00	500	17.80	1282	0.42	-103.8	0.8385	7.06	12.37	Clear	Clear	None
9:05	500	18.00	1288	0.46	-104.2	0.8385	6.87	12.37	Clear	Clear	None
9:06			Collecting Sample Suite								

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	5000	No	

QA/QC Samples Dup#345

Signature J.T

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW07	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.9 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/5/2020
Well Depth (TOC) 29.5 feet		**Location (Site)** SWR	**Begin Time** 13:30
Water Column Thickness 24.6 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 20.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 80	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.94 gallons	**Weather Conditions** Overcast	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 782.17 feet			
Groundwater Elevation 777.27 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
13:50	0	22.00	1481	0.37	-50.0	0.962	57.45	7.13	Cloudy	Brown	None
13:55	500	22.20	1495	0.35	-51.0	0.9815	38.74	7.11	Cloudy	Brown	None
14:00	500	22.30	1565	0.23	-63.8	1.0205	10.89	7.10	Clear	Clear	None
14:05	500	22.40	1570	0.19	-42.6	1.0205	6.54	7.08	Clear	Clear	None
14:10	500	21.90	1574	0.19	-42.6	1.0205	7.09	7.08	Clear	Clear	None
14:15	500	21.80	1575	0.19	-42.4	1.0205	6.36	7.08	Clear	Clear	None
14:20	500	21.90	1574	0.18	-42.4	1.0205	6.02	7.08	Clear	Clear	None
14:21				Collecting	Sample	Site					

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
30	3000	No	

QA/QC Samples

Signature J. Tulley 5.5.20

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW08	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.91 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/6/2020
Well Depth (TOC) 74.5 feet		**Location (Site)** SWR	**Begin Time** 11:35
Water Column Thickness 70.59 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 66.0
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 69°	**Meters** YSI Pro Plus #2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 45.88 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Cloudy	**Calibration** 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.66 feet			
Groundwater Elevation 776.75 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1145	0	21.10	2280	3.00	-46.8	1.482	6.54	7.04	Clear	Clear	None
1150	500	21.10	2292	2.76	-49.6	1.4885	5.65	7.04	Clear	Clear	None
1155	500	21.00	2310	2.29	-57.2	1.5015	4.07	7.03	Clear	Clear	None
1200	500	20.70	2310	1.89	-61.9	1.5015	5.08	7.03	Clear	Clear	None
1205	500	20.80	2307	1.69	-64.3	1.5015	5.75	7.03	Clear	Clear	None
1210	500	21.10	2275	1.00	-66.3	1.4755	5.93	7.03	Clear	Clear	None
1215	500	21.30	2253	1.16	-66.6	1.4625	4.75	7.03	Clear	Clear	None
1220	500	21.40	2246	1.09	-66.8	1.456	4.24	7.03	Clear	Clear	None
1225	500	21.50	2236	0.99	-66.9	1.4495	4.13	7.03	Clear	Clear	None
1230	500	21.40	2220	0.95	-66.7	1.443	3.95	7.03	Clear	Clear	None
1235	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	4500	No	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW11	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.21 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/5/2020
Well Depth (TOC) 85 feet		**Location (Site)** SWR	**Begin Time** 11:00
Water Column Thickness 82.79 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 73.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 75	**Meters** YSI Pro Solinst Water Level Meter Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 13.25 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.89 feet			**Persulfate** N\A; **H_2O_2** N/A
Groundwater Elevation 778.68 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
11:15	0	23.30	331.9	0.94	15.8	0.2157	18.76	7.61	Clear	Clear	None
11:20	450	23.80	337.9	0.70	0.8	0.2197	17.02	7.70	Clear	Clear	None
11:25	450	24.00	340.5	0.58	-18.0	0.221	13.12	7.80	Clear	Clear	None
11:30	450	23.30	335.1	0.52	-36.0	0.2171	6.58	7.77	Clear	Clear	None
11:35	450	23.20	334.7	0.41	-36.6	0.2171	4.09	7.75	Clear	Clear	None
11:40	450	23.50	330.4	0.40	-37.2	0.2152	3.41	7.74	Clear	Clear	None
11:45	450	23.30	330.1	0.40	-36.9	0.2149	2.99	7.74	Clear	Clear	None
11:50	450	22.90	330.6	0.42	-36.5	0.2148	3.55	7.74	Clear	Clear	None
11:51	Collecting Sample Suite										

5.5.20

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
35	3150	No	

QA/QC Samples

Signature J. Tulley

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW13	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.13 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/5/2020
Well Depth (TOC) 75 feet		**Location (Site)** SWR	**Begin Time** 12:15
Water Column Thickness 70.87 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 67.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 80	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 11.34 gallons	**Weather Conditions** Overcast	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.65 feet			
Groundwater Elevation 777.52 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
12:30	0	21.70	1626	0.80	-92.6	1.0595	11.95	7.32	Clear	Clear	None
12:35	500	24.10	1633	0.64	-110.8	1.0595	8.88	7.40	Clear	Clear	None
12:40	500	23.70	1557	0.51	-120.0	1.014	7.49	7.43	Clear	Clear	None
12:45	500	23.80	1502	0.41	-122.4	0.975	5.88	7.43	Clear	Clear	None
12:50	500	23.60	1409	0.38	-124.5	0.9165	6.02	7.43	Clear	Clear	None
12:55	500	23.20	1383	0.34	-123.0	0.897	5.79	7.43	Clear	Clear	None
13:00	500	22.70	1377	0.36	-123.1	0.8905	5.01	7.42	Clear	Clear	None
13:05	500	22.90	1375	0.33	-122.9	0.8905	5.55	7.42	Clear	Clear	None
13:06			Collecting Sample Suite								
							5.5.20				

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
35	3500	No	

QA/QC Samples

Signature J. Tulley

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW14	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.59 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/5/2020
Well Depth (TOC) 22.5 feet		**Location (Site)** SWR	**Begin Time** 11:30
Water Column Thickness 17.91 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 15.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 79°	**Meters** YSI Pro Plus#2 Geotech Water Level Met.	**Serial numbers**
Casing Volume 2.87 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** cloudy	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.7 feet			
Groundwater Elevation 777.11 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1140	0	21.00	1748	5.93	-80.5	1.131	148.00	6.96	Cloudy	Brown	None
1145	500	21.10	1740	5.81	-83.0	1.131	76.87	6.96	Cloudy	Brown	None
1150	500	21.50	1743	5.48	-84.2	1.1375	59.62	6.96	Cloudy	Brown	None
1155	500	21.50	1753	5.27	-86.8	1.1375	33.26	6.96	Clear	Clear	None
1200	500	21.40	1749	5.09	-87.4	1.1375	28.20	6.96	Clear	Clear	None
1205	500	21.20	1747	4.73	-87.9	1.131	20.34	6.96	Clear	Clear	None
1210	500	21.30	1740	4.45	-88.5	1.131	18.87	6.96	Clear	Clear	None
1215	500	21.20	1738	4.32	-88.3	1.131	17.32	6.96	Clear	Clear	None
1220	500	20.90	1736	4.25	-87.8	1.131	15.36	6.96	Clear	Clear	None
1225	500	21.00	1734	4.19	-86.9	1.131	14.93	6.96	Clear	Clear	None
1230	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	4,500	no	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW16	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.25 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/6/2020
Well Depth (TOC) 13 feet		**Location (Site)** SWR	**Begin Time** 13:00
Water Column Thickness 9.75 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 8.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 1.56 gallons	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.47 feet			
Groundwater Elevation 777.22 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
13:20	0	20.20	729	0.76	-20.8	0.4745	24.56	6.69	Clear	Clear	None
13:25	550	20.80	718	0.82	-13.7	0.468	19.86	6.71	Clear	Clear	None
13:30	550	19.30	658	0.78	1.8	0.429	14.14	6.58	Clear	Clear	None
13:35	550	19.40	616	0.70	10.7	0.3965	11.86	6.56	Clear	Clear	None
13:40	550	19.20	608	0.77	13.8	0.3965	7.48	6.52	Clear	Clear	None
13:45	550	20.10	579	0.70	25.1	0.377	6.01	6.49	Clear	Clear	None
13:50	550	20.70	568	0.60	23.1	0.3705	5.98	6.49	Clear	Clear	None
13:55	550	21.00	568	0.60	20.8	0.3705	6.65	6.49	Clear	Clear	None
14:00	550	21.00	569	0.56	19.7	0.3705	5.47	6.50	Clear	Clear	None
14:01	Collecting Sample Suite										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	4400	No	

QA/QC Samples MS/MSD

Signature J. Tulley 5.6.20

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW17	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.91 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/5/2020
Well Depth (TOC) 20 feet		**Location (Site)** SWR	**Begin Time** 12:50
Water Column Thickness 16.09 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 14.75
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 81°	**Meters** YSI Pro Plus#2 Geotech Water level met.	**Serial numbers**
Casing Volume 2.57 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 5/5/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.29 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 777.38 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1255	0	21.30	853	7.97	31.5	0.559	19.56	7.24	Clear	Clear	None
1300	500	22.70	864	6.96	-1.8	0.559	25.77	7.26	Clear	Clear	None
1305	500	22.60	846	6.57	-29.8	0.533	29.86	7.26	Clear	Clear	None
1310	500	22.60	824	6.28	-56.6	0.533	28.12	7.27	Clear	Clear	None
1315	500	23.70	811	5.75	-71.2	0.5265	29.86	7.28	Clear	Clear	None
1320	500	23.60	801	5.45	-79.2	0.52	28.54	7.28	Clear	Clear	None
1325	500	23.60	795	5.21	-81.9	0.5135	27.28	7.28	Clear	Clear	None
1330	500	23.50	787	4.99	-85.3	0.5135	25.24	7.27	Clear	Clear	None
1335	500	22.90	772	4.65	-87.2	0.5135	25.34	7.27	Clear	Clear	None
1340	500	22.50	763	4.59	-89.0	0.494	24.26	7.27	Clear	Clear	None
1345	500	22.50	757	4.49	-90.7	0.494	25.93	7.27	Clear	Clear	None
1350	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	5,000	no	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW18R	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.85 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/6/2020
Well Depth (TOC) 15 feet		**Location (Site)** SWR	**Begin Time** 8:30
Water Column Thickness 12.15 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 9.5
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 64°	**Meters** YSI Pro Plus #2 Geotech Water level met.	**Serial numbers**
Casing Volume 1.94 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.25 feet			
Groundwater Elevation 778.4 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0840	0	18.00	580.3	7.36	69.6	0.3698	27.18	7.21	Clear	Clear	None
0845	500	18.00	573.2	6.83	63.2	0.3698	19.21	7.23	Clear	Clear	None
0850	500	18.00	568.4	6.77	55.3	0.3685	7.53	7.25	Clear	Clear	None
0855	500	18.00	553	6.51	45.7	0.3594	5.70	7.26	Clear	Clear	None
0900	500	18.10	554.2	6.28	42.1	0.3601	5.47	7.28	Clear	Clear	None
0905	500	18.10	557.1	6.01	37.5	0.362	4.93	7.29	Clear	Clear	None
0910	500	18.10	561	5.79	34.1	0.3653	4.55	7.29	Clear	Clear	None
0915	500	18.10	563.7	5.57	31.1	0.3666	4.47	7.30	Clear	Clear	None
0920	500	18.20	565.8	5.39	27.7	0.3679	4.39	7.30	Clear	Clear	None
0925	500	18.20	568	5.25	25.1	0.3679	4.25	7.30	Clear	Clear	None
0930	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	4,500	no	

QA/QC Samples DUP 344

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW21	
Project	**Project Number**
McClellan	19.094.20-22.2

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.17 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/6/2020
Well Depth (TOC) 15 feet		**Location (Site)** SWR	**Begin Time** 11:25
Water Column Thickness 12.83 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 10.00
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 2.05 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.44 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 778.27 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
11:40	0	19.80	431.2	1.90	-42.5	0.2775	15.45	6.78	Clear	Clear	None
11:45	500	20.10	416.6	1.58	-37.2	0.271	20.22	6.72	Clear	Clear	None
11:50	500	20.20	402.5	1.50	-26.2	0.2606	47.56	6.64	Clear	Brown	None
11:55	500	20.20	388.5	1.43	-3.1	0.2529	18.76	6.60	Clear	Clear	None
12:00	500	20.20	388.2	1.41	-2.3	0.2529	19.01	6.59	Clear	Clear	None
12:05	500	20.30	389.8	1.46	-4.7	0.2535	17.73	6.64	Clear	Clear	None
12:10	500	20.20	391.5	1.40	-5.9	0.2542	9.96	6.62	Clear	Clear	None
12:15	500	20.40	395	1.32	-1.5	0.2581	8.85	6.57	Clear	Clear	None
12:20	500	20.30	396.5	1.30	-0.8	0.2587	9.09	6.56	Clear	Clear	None
12:25	500	20.30	397	1.28	-0.5	0.2589	8.42	6.55	Clear	Clear	None
12:26				Collecting Sample Suite QT 5.6.20							

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	4500	No	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW22	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.47 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/6/2020
Well Depth (TOC) 25 feet		**Location (Site)** SWR	**Begin Time** 9:30
Water Column Thickness 21.53 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 20.00
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 68	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.44 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.44 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.97 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
10:30	0	19.30	1595	6.62	-78.2	1.0335	88.65	6.81	Cloudy	Brown	None
10:35	500	19.30	1457	6.87	-81.6	0.949	51.11	6.87	Cloudy	Brown	None
10:40	500	19.20	1189	1.46	-89.9	0.7735	33.01	7.03	Cloudy	Clear	None
10:45	500	19.30	1185	1.36	-88.3	0.767	34.12	7.04	Cloudy	Clear	None
10:50	500	19.40	1178	1.86	-86.1	0.767	16.46	7.08	Clear	Clear	None
10:55	500	19.30	1169	1.94	-81.1	0.7605	15.03	7.11	Clear	Clear	None
11:00	500	19.30	1169	1.64	-79.9	0.7605	14.98	7.12	Clear	Clear	None
11:05	500	19.40	1168	1.58	-79.6	0.7605	15.87	7.12	Clear	Clear	None
11:06				Collecting Sample Suite							

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
35	3500	No	

QA/QC Samples

Signature 5.6.19

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW23R	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.91 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 5/6/2020
Well Depth (TOC) 30 feet		**Location (Site)** SWR	**Begin Time** 15:00
Water Column Thickness 26.09 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol Pro	**Laboratory** TestAmerica	**Sample Depth** 25.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 68°	**Meters** YSI Pro Solinst Water Level Meter	**Serial numbers**
Casing Volume 4.17 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/6/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.87 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.96 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1510	0	20.70	2479	0.26	-255.6	1.612	16.59	12.56	Clear	Clear	None
1515	500	21.40	2491	0.20	-271.6	1.6315	16.43	12.55	Clear	Clear	None
1520	500	20.30	2485	0.15	-262.1	1.612	16.12	12.47	Clear	Clear	None
1525	500	20.50	2481	0.14	-281.3	1.612	18.34	12.54	Clear	Clear	None
1530	500	20.50	2492	0.08	-271.3	1.6185	20.27	12.44	Clear	Clear	None
1535	500	20.40	2491	0.12	-271.7	1.6185	24.27	12.39	Clear	Clear	None
1540	500	19.80	2483	0.10	-283.2	1.612	27.39	12.54	Clear	Clear	None
1545	500	19.50	2477	0.11	-283.6	1.612	27.37	12.55	Clear	Clear	None
1550	500	19.40	2485	0.10	-285.8	1.612	27.45	12.59	Clear	Clear	None
1555	500	19.60	2475	0.11	-285.9	1.599	27.38	12.55	Clear	Clear	None
1600	500	19.80	2469	0.10	-284.2	1.6055	27.22	12.57	Clear	Clear	None
1605	500	19.60	2475	0.10	-283.5	1.612	27.15	12.58	Clear	Clear	None

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
65	6000	No	continued on page 2

QA/QC Samples

Signature

Matrix Environmental Services
1601 Blake Street, Suite 200
Denver, Colorado 80202
(303) 572-0200
(303) 572-0202

Station Name/Sample ID: PPMP-66-MW23R

Project: McClellan

Date: 5/6/2020

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1610	500	19.6	2481	0.11	-283.7	1.612	26.97	12.6	Clear	Clear	none
1615	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
65	6000	No	

QA/QC Samples

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW24R	
Project	**Project Number**
McClellan	19.094.20-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.96 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 5/7/2020
Well Depth (TOC) 35 feet		**Location (Site)** SWR	**Begin Time** 9:45
Water Column Thickness 31.04 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 30.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 57	**Meters** YSI pro plus#2 Solinst Water Level Meter Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 4.97 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 5/7/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.2 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 777.24 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
10:15	0	19.70	2858	0.34	-124.0	1.859	127.40	8.46	Cloudy	Brown	None
10:20	500	19.70	2884	0.40	-112.0	1.872	98.50	8.05	Cloudy	Brown	None
10:25	500	20.00	2883	0.39	-108.6	1.872	85.20	7.91	Cloudy	Clear	None
10:30	500	19.90	2880	0.42	-104.9	1.872	59.84	7.77	Cloudy	Clear	None
10:35	500	20.50	2847	0.52	-103.0	1.8525	24.72	7.63	Clear	Clear	None
10:40	500	20.00	2770	0.56	-98.5	1.7875	17.96	7.51	Clear	Clear	None
10:45	500	20.00	2740	0.60	-97.3	1.768	11.87	7.44	Clear	Clear	None
10:50	500	20.10	2734	0.57	-96.5	1.762	9.52	7.43	Clear	Clear	None
10:55	500	20.00	2732	0.59	-96.3	1.761	10.54	7.42	Clear	Clear	None
11:00	500	20.30	2730	0.61	-96.1	1.76	9.84	7.42	Clear	Clear	None
11:01			Collecting Sample Suite								

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	4500	No	

QA/QC Samples

Signature 5-7-20

Matrix Environmental Services
283 Rucker Street
Anniston, Alabama 36205
(256) 847-0780
(256) 847-0905

Project Name
McClellan

Project Number
20.094.21-22.1

GROUNDWATER LEVELS

Field Personnel	Measuring Equipment	Date
Abernathy/Tulley	Solinst Water Level Meter	10/22/2020

Conditions
Sunny, 73°

Well ID	Casing Diameter	Date	Time	Depth to Water (feet)	Well Depth (feet)	Water Column (feet)	Initials
PPMP-66-MW01	2	10/22/2020	10:53	3.93	26.03	22.10	JT
PPMP-66-MW02RR	2	10/22/2020	10:33	4.32	23.50	19.18	JT
PPMP-66-MW03	2	10/22/2020	11:00	5.22	28.00	22.78	JT
PPMP-66-MW04	2	10/22/2020	9:50	5.76	26.50	20.74	JT
PPMP-66-MW06R	2	10/22/2020	10:21	4.13	27.80	23.67	JT
PPMP-66-MW07	2	10/22/2020	10:07	5.94	28.65	22.71	JT
PPMP-66-MW08	4	10/22/2020	10:37	4.60	73.90	69.30	JT
PPMP-66-MW09	4	10/22/2020	11:04	4.87	74.75	69.88	JT
PPMP-66-MW10	4	10/22/2020	9:54	7.03	77.41	70.38	JT
PPMP-66-MW11	4	10/22/2020	10:00	3.70	84.35	80.65	JT
PPMP-66-MW13	4	10/22/2020	10:03	5.35	74.03	68.68	JT
PPMP-66-MW14	2	10/22/2020	11:07	5.74	20.71	14.97	JT
PPMP-66-MW16	2	10/22/2020	10:45	4.81	12.75	7.94	JT
PPMP-66-MW17	2	10/22/2020	10:13	4.96	17.71	12.75	JT
PPMP-66-MW18R	2	10/22/2020	10:17	4.00	15.00	11.00	JT
PPMP-66-MW21	2	10/22/2020	10:41	3.34	14.40	11.06	JT
PPMP-66-MW22	2	10/22/2020	10:49	4.43	24.65	20.22	JT
PPMP-66-MW23R	2	10/22/2020	10:29	4.76	29.25	24.49	JT
PPMP-66-MW24R	2	10/22/2020	10:25	5.01	34.15	29.14	JT

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW01	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 5.28 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/26/2020
Well Depth (TOC) 24 feet		**Location (Site)** SWR	**Begin Time** 8:10
Water Column Thickness 18.72 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** Test America	**Sample Depth** 16.5
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 68°	**Meters** YSI pro plus#2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 3.00 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 782.12 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.84 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0810	0	21.2	3255	7.7	-44	2.12	6	6.9	Clear	Clear	None
0815	500	21.3	3245	7.3	-45	2.11	6	6.9	Clear	Clear	None
0820	500	21.3	3182	6.9	-37	2.06	4	6.9	Clear	Clear	None
0825	500	21.2	3127	1.4	-28	2.03	4	6.9	Clear	Clear	None
0830	500	21.1	3092	0.9	-24	2.01	4	6.9	Clear	Clear	None
0835	500	21.2	3078	0.9	-22	2.00	4	6.9	Clear	Clear	None
0840	500	21.3	3061	0.9	-22	2.00	4	6.9	Clear	Clear	None
0845	500	21.3	3047	0.9	-21	1.98	4	6.9	Clear	Clear	None
0850	500	21.3	3041	0.8	-208	1.98	4	6.9	Clear	Clear	None
0855	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	4000	No	

QA/QC Samples DUP-360

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW02RR	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.13 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/27/2020
Well Depth (TOC) 23.55 feet		**Location (Site)** SWR	**Begin Time** 9:30
Water Column Thickness 19.42 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 20.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70	**Meters** YSI 556 MPS Solinst Water Level Meter Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.11 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.37 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.24 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
9:50	0	22.7	4801	0.9	-52	3.12	79	6.5	Cloudy	Brown	None
9:55	250	22.7	4803	0.9	-52	3.12	99	6.5	Cloudy	Brown	None
10:00	250	22.5	4801	0.9	-52	3.12	116	6.5	Cloudy	Brown	None
10:05	250	22.3	4806	0.6	-49	3.13	80	6.5	Cloudy	Brown	None
10:10	250	22.3	4718	0.5	-23	3.06	51	6.3	Cloudy	Clear	None
10:15	250	22.4	4708	0.5	-21	3.05	73	6.3	Cloudy	Clear	None
10:20	250	22.3	4651	0.6	-7	3.02	80	6.3	Cloudy	Clear	None
10:25	250	22.5	4577	0.6	9	2.97	121	6.2	Cloudy	Clear	None
10:30	250	23.5	4435	0.6	31	2.89	113	6.1	Cloudy	Clear	None
10:35	250	23.6	3883	0.8	46	2.51	91	6.0	Cloudy	Clear	None
10:40	250	24.0	3774	0.8	48	2.43	101	6.0	Cloudy	Clear	None
10:45	250	24.1	3682	1.2	49	2.39	77	6.0	Cloudy	Clear	None

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
85	4250	No	continued on page 2

QA/QC Samples N/A

Signature

Matrix Environmental Services
1601 Blake Street, Suite 200
Denver, Colorado 80202
(303) 572-0200
(303) 572-0202

Station Name/Sample ID: PPMP-66-MW02RR

Project: McClellan

Date: 10/27/2020

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
10:50	250	24.8	3562	1.2	47	2.31	55	6.0	Cloudy	Clear	None
10:55	250	25.1	3336	1.2	37	2.17	61	6.0	Cloudy	Clear	None
11:00	250	24.3	3234	1.2	53	2.06	57	6.1	Cloudy	Clear	None
11:05	250	23.8	2996	1.6	47	1.95	33	6.1	Clear	Clear	None
11:10	250	23.7	3021	1.7	50	1.98	31	6.1	Clear	Clear	None
11:15	250	23.6	3066	1.7	52	2.02	30	6.1	Clear	Clear	None
11:16	~~~~~	~~~~~	~~~~~	Collecting Sample Suite							

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
85	4250	No	

QA/QC Samples
N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID: PPMP-66-MW03

Project: McClellan

Project Number: 20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.59 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/26/2020
Well Depth (TOC) 29 feet		**Location (Site)** SWR	**Begin Time** 13:45
Water Column Thickness 24.41 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 19.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 77°	**Meters** YSI Pro plus#2 Geotech Water Level Mete	**Serial numbers**
Casing Volume 3.91 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Cloudy	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.74 feet			
Groundwater Elevation 776.15 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1345	0	22.6	2473	1.7	-48	1.61	36	6.8	Cloudy	White	None
1350	500	23.1	2474	1.0	-57	1.61	25	6.9	Cloudy	White	None
1355	500	23.8	2474	0.7	-62	1.61	15	6.9	Clear	Clear	None
1400	500	23.9	2471	0.6	-62	1.61	10	6.9	Clear	Clear	None
1405	500	23.2	2469	0.4	-66	1.61	8	6.8	Clear	Clear	None
1410	500	23.1	2469	0.3	-67	1.61	7	6.8	Clear	Clear	None
1415	500	22.9	2469	0.3	-68	1.61	7	6.8	Clear	Clear	None
1420	500	22.9	2469	0.2	-69	1.61	7	6.8	Clear	Clear	None
1425	500	22.9	2468	0.2	-69	1.61	7	6.8	Clear	Clear	None
1430	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	4000	No	

QA/QC Samples: N/A

Signature:

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW04	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 5.1 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/26/2020
Well Depth (TOC) 24 feet		**Location (Site)** SWR	**Begin Time** 8:00
Water Column Thickness 18.9 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 15.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 66	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.02 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.9 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.8 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
8:15	0	20.7	425	0.8	-88	0.28	21	6.5	Clear	Clear	None
8:20	500	20.7	425	1.2	-90	0.28	20	6.5	Clear	Clear	None
8:25	500	20.8	436	0.9	-95	0.28	20	6.5	Clear	Clear	None
8:30	500	20.9	446	0.8	-98	0.29	17	6.5	Clear	Clear	None
8:35	500	21.1	450	0.7	-99	0.29	18	6.5	Clear	Clear	None
8:40	500	21.1	453	0.7	-97	0.29	16	6.5	Clear	Clear	None
8:45	500	21.2	454	0.7	-104	0.30	14	6.5	Clear	Clear	None
8:50	500	21.5	456	0.7	-105	0.30	13	6.6	Clear	Clear	None
8:55	500	21.5	456	0.6	-106	0.30	12	6.5	Clear	Clear	None
9:00	500	21.5	456	0.6	-106	0.30	12	6.6	Clear	Clear	None
9:01			Collecting Sample Suite								
									J. T 10-26-20		

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	4500	No	

QA/QC Samples	Signature
N/A	J. T

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID: PPMP-66-MW06R

Project: McClellan | **Project Number:** 20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.95 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/27/2020
Well Depth (TOC) 29 feet		**Location (Site)** SWR	**Begin Time** 10:15
	Equipment Geotech Bladder Pump, Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 19.0
Water Column Thickness 26.05 feet		**Sample Suite** See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70°	**Meters** YSI Pro Plus #2, Geotech Water Level Meter	**Serial numbers**
Casing Volume 4.17 gallons (1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4)	**Weather Conditions** Sunny	**Calibration** Field, 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.41 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 778.46 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description: clarity	color	odor
1015	0	22.0	1113	2.5	-184	0.73	75	11.6	Cloudy	Brown	None
1020	350	22.1	1119	2.5	-186	0.73	79	11.7	Cloudy	Brown	None
1025	350	22.0	1121	2.1	-195	0.73	76	11.7	Cloudy	Brown	None
1030	350	22.7	1120	1.7	-197	0.73	69	11.7	Cloudy	Brown	None
1035	350	23.4	1118	1.6	-202	0.73	62	11.7	Cloudy	Brown	None
1040	350	23.5	1117	1.4	-209	0.73	64	11.7	Cloudy	Brown	None
1045	350	23.9	1112	1.3	-199	0.72	65	11.7	Cloudy	Brown	None
1050	350	24.1	1112	1.2	-202	0.72	66	11.7	Cloudy	Brown	None
1055	350	23.9	1104	1.1	-196	0.72	66	11.7	Cloudy	Brown	None
1100	350	23.8	1099	1.1	-194	0.72	66	11.7	Cloudy	Brown	None
1105	350	23.9	1095	1.1	-191	0.72	65	11.6	Cloudy	Brown	None
1110	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	3500	No	

QA/QC Samples: N/A

Signature:

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW07	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 5.78 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/26/2020
Well Depth (TOC) 29.5 feet		**Location (Site)** SWR	**Begin Time** 12:30
Water Column Thickness 23.72 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 20.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 77	**Meters** YSI Pro Solinst Water Level Meter Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 3.80 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 782.17 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.39 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
12:45	0	23.7	2579	0.3	-34	1.68	94	6.8	Cloudy	Brown	None
12:50	500	23.7	2574	0.3	-36	1.67	76	6.8	Cloudy	Brown	None
12:55	500	23.6	2581	0.3	-38	1.68	55	6.8	Cloudy	Brown	None
13:00	500	23.7	2575	0.3	-38	1.67	31	6.8	Cloudy	Clear	None
13:05	500	23.7	2582	0.3	-38	1.68	28	6.8	Clear	Clear	None
13:10	500	23.7	2582	0.3	-38	1.68	31	6.8	Clear	Clear	None
13:15	500	23.6	2583	0.3	-38	1.68	30	6.8	Clear	Clear	None
13:16	Collecting Sample Suite										

10-26-20

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
30	3000	No	

QA/QC Samples Ms/Msd

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW08	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.03 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/27/2020
Well Depth (TOC) 74.5 feet		**Location (Site)** SWR	**Begin Time** 8:00
Water Column Thickness 70.47 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 66.0
		Sample Suite See COCs	
Casing Diameter 4 inches	**Temperature (°F)** 68	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 45.81 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.66 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.63 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
8:25	0	20.1	1953	1.5	-12	1.27	12	7.0	Clear	Clear	None
8:30	500	20.7	2272	1.6	-30	1.48	10	6.9	Clear	Clear	None
8:35	500	20.9	2286	2.6	-28	1.48	8	6.8	Clear	Clear	None
8:40	500	21.0	2284	1.3	-30	1.48	4	6.8	Clear	Clear	None
8:45	500	21.0	2284	1.1	-31	1.48	4	6.8	Clear	Clear	None
8:50	500	21.1	2277	0.9	-33	1.48	4	6.8	Clear	Clear	None
8:55	500	21.4	2279	0.8	-32	1.48	4	6.8	Clear	Clear	None
9:00	500	21.5	2280	0.9	-32	1.48	5	6.8	Clear	Clear	None
9:01			Collecting Sample Suite								

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
35	3500	No	

QA/QC Samples N/A

Signature J. Tulley 10-27-20

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW11	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 1.15 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/26/2020
Well Depth (TOC) 85 feet		**Location (Site)** SWR	**Begin Time** 9:30
Water Column Thickness 83.85 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 73.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 13.42 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.89 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 779.74 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description: clarity	color	odor
9:45	0	21.7	296	1.4	37	0.19	7	7.1	Clear	Clear	None
9:50	500	21.7	313	0.7	11	0.20	6	7.3	Clear	Clear	None
9:55	500	21.8	313	0.7	10	0.20	5	7.4	Clear	Clear	None
10:00	500	22.1	312	1.6	26	0.20	4	7.4	Clear	Clear	None
10:05	500	22.2	310	1.1	24	0.20	5	7.4	Clear	Clear	None
10:10	500	22.1	309	1.0	26	0.20	4	7.4	Clear	Clear	None
10:15	500	22.3	307	1.5	44	0.20	4	7.4	Clear	Clear	None
10:20	500	22.2	307	1.6	44	0.20	5	7.4	Clear	Clear	None
10:25	500	22.2	307	2.0	45	0.20	4	7.4	Clear	Clear	None
10:26	Collecting Sample Suite										
	J. T. 10.26.20										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
40	4000	No	

QA/QC Samples N/A

Signature J. T.

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW13	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.41 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/26/2020
Well Depth (TOC) 75 feet		**Location (Site)** SWR	**Begin Time** 11:00
Water Column Thickness 70.59 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 67.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 74	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 11.29 gallons	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.65 feet			
Groundwater Elevation 777.24 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
11:20	0	24.2	1262	0.6	-74	0.82	4	7.3	Clear	Clear	None
11:25	500	24.5	1242	0.7	-61	0.81	4	7.3	Clear	Clear	None
11:30	500	24.3	1191	0.5	-77	0.77	3	7.3	Clear	Clear	None
11:35	500	24.3	1186	0.5	-77	0.77	4	7.4	Clear	Clear	None
11:40	500	24.5	1174	0.6	-76	0.76	3	7.3	Clear	Clear	None
11:45	500	24.5	1133	1.7	-60	0.73	4	7.3	Clear	Clear	None
11:50	500	24.4	1127	1.4	-61	0.73	4	7.3	Clear	Clear	None
11:55	500	24.3	1126	1.7	-61	0.73	4	7.3	Clear	Clear	None
11:56				Collecting Sample Suite							

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
35	3500	No	

QA/QC Samples N/A

Signature J. Tulley 10.26.20

Matrix ENVIRONMENTAL

Matrix Environmental Services
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(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW14	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 5.29 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/26/2020
Well Depth (TOC) 22.5 feet		**Location (Site)** SWR	**Begin Time** 14:00
Water Column Thickness 17.21 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 15.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 77	**Meters** YSI pro plus#2 Solinst Water Level Meter Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 2.75 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.7 feet			
Groundwater Elevation 776.41 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
14:20	0	24.9	1765	0.7	-45	1.14	54	6.9	Cloudy	Clear	None
14:25	500	24.8	1771	1.2	-49	1.15	51	6.9	Cloudy	Clear	None
14:30	500	24.4	1763	0.8	-51	1.14	47	6.9	Cloudy	Clear	None
14:35	500	24.4	1759	1.0	-50	1.14	43	6.9	Cloudy	Clear	None
14:40	500	24.1	1746	0.3	-52	1.14	42	6.9	Cloudy	Clear	None
14:45	500	24.1	1743	0.5	-53	1.13	40	6.9	Cloudy	Clear	None
14:50	500	24.4	1732	0.5	-54	1.12	29	6.9	Clear	Clear	None
14:55	500	24.5	1718	0.4	-55	1.12	23	6.9	Clear	Yellow	None
15:00	500	24.1	1708	0.6	-55	1.11	12	6.9	Clear	Clear	None
15:05	500	23.4	1708	0.5	-51	1.11	12	6.9	Clear	Clear	None
15:10	500	23.5	1709	0.5	-51	1.12	11	6.9	Clear	Clear	None
15:11	Collecting Sample Suite										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	5,000	No	

QA/QC Samples DUP359

Signature J. Tulley

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW16	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.12 feet	**Sample Method** Low Flow	**Sampler** D.Abernathy	**Date** 10/26/2020
Well Depth (TOC) 13 feet		**Location (Site)** SWR	**Begin Time** 10:45
Water Column Thickness 10.88 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 8.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 70°	**Meters** YSI Pro Plus #2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 1.74 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.47 feet			
Groundwater Elevation 778.35 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1045	0	22.4	524	3.5	62	0.35	13	6.8	Clear	Clear	None
1050	400	22.5	528	0.6	60	0.34	14	6.8	Clear	Clear	None
1055	400	22.8	538	0.6	59	0.35	14	6.9	Clear	Clear	None
1100	400	22.8	539	0.4	59	0.35	13	6.9	Clear	Clear	None
1105	400	22.8	544	0.4	59	0.35	13	6.9	Clear	Clear	None
1110	400	22.9	551	0.4	58	0.36	12	6.9	Clear	Clear	None
1115	400	22.9	557	0.4	58	0.36	13	6.9	Clear	Clear	None
1120	400	23.0	559	0.5	56	0.36	12	6.9	Clear	Clear	None
1125	400	23.1	560	0.5	55	0.36	12	6.9	Clear	Clear	None
1130	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	3200	No	Slow Recharge

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW17	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.3 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/27/2020
Well Depth (TOC) 20 feet		**Location (Site)** SWR	**Begin Time** 7:35
Water Column Thickness 15.7 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 14.75
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 63°	**Meters** YSI Pro Plus #2 Geotech Water Level Mete	**Serial numbers**
Casing Volume 2.51 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Sunny	**Calibration** Field 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A **Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 781.29 feet			
Groundwater Elevation 776.99 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0735	0	20.8	749	0.8	17	0.49	27	6.9	Cloudy	Brown	None
0740	500	21.0	752	0.5	-10	0.49	13	7.0	Clear	Clear	None
0745	500	21.0	749	0.3	-25	0.49	6	7.1	Clear	Clear	None
0750	500	20.9	736	0.4	-39	0.48	5	7.1	Clear	Clear	None
0755	500	21.0	730	0.3	-48	0.47	6	7.1	Clear	Clear	None
0800	500	21.0	724	0.3	-54	0.47	6	7.1	Clear	Clear	None
0805	500	21.0	720	0.3	-58	0.47	5	7.1	Clear	Clear	None
0810	500	21.0	716	0.3	-61	0.47	5	7.1	Clear	Clear	None
0815	500	21.1	713	0.3	-64	0.46	5	7.1	Clear	Clear	None
0820	500	21.1	710	0.3	-66	0.46	5	7.1	Clear	Clear	None
0825	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	4,500	No	

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID		
PPMP-66-MW18R		
Project	**Project Number**	
McClellan	20.094.21-22.1	

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 2.8 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/27/2020
Well Depth (TOC) 15 feet		**Location (Site)** SWR	**Begin Time** 9:00
Water Column Thickness 12.2 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 9.5
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 68°	**Meters** YSI Pro Plus#2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 1.95 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.25 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 778.45 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0900	0	20.80	776	2.64	103.8	0.5005	25.42	6.95	Cloudy	White	None
0905	375	21.10	762	2.53	90.8	0.494	23.45	6.97	Cloudy	White	None
0910	375	21.30	748	2.33	79.9	0.4875	19.40	6.97	Clear	Clear	None
0915	375	21.70	739	2.38	72.0	0.4745	16.50	6.98	Clear	Clear	None
0920	375	21.80	733	2.33	71.4	0.4745	12.18	6.99	Clear	Clear	None
0925	375	21.80	732	2.36	72.0	0.4745	10.15	6.98	Clear	Clear	None
0930	375	21.70	730	2.38	73.5	0.4745	8.99	6.98	Clear	Clear	None
0935	375	21.60	729	2.39	74.5	0.4745	8.65	6.97	Clear	Clear	None
0940	375	21.70	729	2.40	75.3	0.4745	8.71	6.97	Clear	Clear	None
0945	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
45	3,000	No	

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW21	
Project	**Project Number**
McClellan	20.094.21-22.2

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 0.6 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/26/2020
Well Depth (TOC) 15 feet		**Location (Site)** SWR	**Begin Time** 11:50
Water Column Thickness 14.4 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 10.00
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 72°	**Meters** YSI Pro Plus #2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 2.30 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.44 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 779.84 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1150	0	23.6	466	5.5	19	0.30	8	6.3	Clear	Clear	None
1155	300	23.8	453	3.5	36	0.29	17	6.3	Cloudy	Brown	None
1200	300	23.9	449	0.5	46	0.29	24	6.3	Cloudy	Brown	None
1205	300	24.3	444	0.8	61	0.29	28	6.3	Cloudy	Brown	None
1210	300	24.5	438	1.0	72	0.29	24	6.3	Cloudy	Brown	None
1215	300	24.3	436	1.1	74	0.28	20	6.3	Clear	Brown	None
1220	300	24.2	433	1.2	76	0.28	18	6.3	Clear	Clear	None
1225	300	24.4	431	1.2	76	0.28	18	6.3	Clear	Clear	None
1230	300	24.7	429	1.2	74	0.28	18	6.3	Clear	Clear	None
1235	300	24.7	426	1.2	69	0.28	18	6.4	Clear	Clear	None
1240	300	24.7	424	1.2	72	0.28	17	6.3	Clear	Clear	None
1245	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	3000	No	slow recharge

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID		
PPMP-66-MW22		
Project	**Project Number**	
McClellan	20.094.21-22.1	

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 3.7 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/26/2020
Well Depth (TOC) 25 feet		**Location (Site)** SWR	**Begin Time** 9:30
Water Column Thickness 21.3 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 20.00
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 69°	**Meters** YSI Pro Plus#2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 3.41 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/26/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 780.44 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.74 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
0930	0	21.7	1615	6.8	-73	1.03	21	6.9	Cloudy	White	None
0935	450	21.8	1486	4.4	-81	0.95	24	7.0	Cloudy	White	None
0940	450	22.0	1349	0.4	-91	0.87	26	7.0	Cloudy	White	None
0945	450	21.9	1318	0.3	-92	0.86	24	7.0	Cloudy	White	None
0950	450	22.0	1291	0.3	-92	0.84	20	7.0	Cloudy	White	None
0955	450	21.9	1269	0.3	-91	0.83	18	7.0	Cloudy	White	None
1000	450	21.9	1256	0.3	-88	0.82	15	7.0	Clear	Clear	None
1005	450	21.9	1249	0.3	-86	0.81	14	7.0	Clear	Clear	None
1010	450	21.8	1243	0.4	-84	0.81	14	7.0	Clear	Clear	None
1015	450	21.7	1232	0.4	-81	0.80	14	7.0	Clear	Clear	None
1020	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
50	4050	No	

QA/QC Samples N/A

Signature

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW23R	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.52 feet	**Sample Method** Low Flow	**Sampler** J. Tulley	**Date** 10/27/2020
Well Depth (TOC) 30 feet		**Location (Site)** SWR	**Begin Time** 11:40
Water Column Thickness 25.48 feet	**Equipment** Geotech Bladder Pump	**Laboratory** TestAmerica	**Sample Depth** 25.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 75	**Meters** YSI Pro; Solinst Water Level Meter; Geotech Geocontrol PRO	**Serial numbers**
Casing Volume 4.08 gallons	**Weather Conditions** Overcast	**Calibration** Field 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4			**Persulfate** N/A; **H_2O_2** N/A
Well Elevation (TOC) 780.87 feet			
Groundwater Elevation 776.35 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
12:00	0	21.3	2159	1.4	-163	1.40	31	11.8	Clear	Clear	None
12:05	500	22.9	2156	0.5	-183	1.40	14	12.0	Clear	Clear	None
12:10	500	22.8	2146	0.5	-181	1.39	8	12.0	Clear	Clear	None
12:15	500	22.8	2145	0.5	-182	1.39	4	12.0	Clear	Clear	None
12:20	500	22.9	2144	0.3	-181	1.40	4	12.0	Clear	Clear	None
12:25	500	23.8	2148	0.3	-181	1.40	3	12.0	Clear	Clear	None
12:30	500	23.8	2145	0.3	-181	1.40	3	12.0	Clear	Clear	None
12:31	Collecting Sample Suite										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
30	3000	No	

QA/QC Samples N/A

Signature J. Tulley 10.27.20

Matrix ENVIRONMENTAL

Matrix Environmental Services
283 Rucker Street
Anniston, AL 36205
(256) 847-0780

Station Name/Sample ID	
PPMP-66-MW24R	
Project	**Project Number**
McClellan	20.094.21-22.1

GROUNDWATER SAMPLING LOG

Groundwater Depth (TOC) 4.25 feet	**Sample Method** Low Flow	**Sampler** D. Abernathy	**Date** 10/27/2020
Well Depth (TOC) 35 feet		**Location (Site)** SWR	**Begin Time** 11:50
Water Column Thickness 30.75 feet	**Equipment** Geotech Bladder Pump Geotech Geocontrol PRO	**Laboratory** TestAmerica	**Sample Depth** 30.0
		Sample Suite See COCs	
Casing Diameter 2 inches	**Temperature (°F)** 74°	**Meters** YSI pro plus#2 Geotech Water Level Meter	**Serial numbers**
Casing Volume 4.92 gallons 1"=x0.04 2"=x0.16 4"=x0.65 6"=x1.47 8"=x10.4	**Weather Conditions** Overcast	**Calibration** Field 10/27/2020	**Ferrous Iron (Fe II) (mg/L)** N/A
Well Elevation (TOC) 781.2 feet			**Persulfate** N/A; **H_2O_2** N/A
Groundwater Elevation 776.95 feet	**Parameter Stabilization** temp +/- 1° DO +/- 10% Turbidity +/- 10% cond +/- 3% ORP +/- 10mV pH +/- 0.1 unit	**Product Observed (yes/no)** N/A	**Depth to product** N/A

Time	Volume removed (mL)	Temp (°C)	Cond (µS/cm)	DO (mg/L)	ORP (mV)	TDS (g/L)	Turbidity (NTU)	pH	Description		
									clarity	color	odor
1150	0	22.5	2531	0.8	-169	1.65	18	7.4	Clear	Clear	None
1155	200	23.1	2554	0.4	-172	1.66	17	7.3	Clear	Clear	None
1200	200	23.4	2569	0.2	-173	1.67	16	7.3	Clear	Clear	None
1205	200	23.7	2579	0.1	-176	1.68	15	7.3	Clear	Clear	None
1210	200	23.6	2593	0.2	-178	1.68	15	7.2	Clear	Clear	None
1215	200	23.5	2607	0.2	-177	1.70	14	7.2	Clear	Clear	None
1220	200	23.9	2610	0.2	-177	1.70	14	7.2	Clear	Clear	None
1225	200	23.9	2613	0.2	-176	1.70	14	7.2	Clear	Clear	None
1230	200	24.1	2616	0.2	-175	1.70	14	7.2	Clear	Clear	None
1235	200	24.3	2620	0.2	-174	1.70	14	7.2	Clear	Clear	None
1240	200	24.4	2618	0.1	-173	1.70	14	7.2	Clear	Clear	None
1245	Collect Sample										

Total Time (min.)	Total Volume Removed	Well pumped dry (yes/no)	Notes
55	2000	No	Black flecks in the water, Drawdown occurred at 200ml every 5 minutes

QA/QC Samples N/A

Signature

APPENDIX B

Chain-of-Custody Forms

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6017
Cooler ID 1 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 19.094.20-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3- 40 mL vials, HCl	SW6020A Iron (total) 1-250 mL poly, HNO3	SW6020A Iron (dissolved) 1-250 mL poly, none	SW9056A Sulfate 1 - 125mL poly, none	SW8260B - VOC* TB 2- 40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW04	NS	MW	WQ	G	5/5/2020	10:46	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW11	NS	MW	WQ	G	5/5/2020	11:51	1			1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07	NS	MW	WQ	G	5/5/2020	14:21	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW13	NS	MW	WQ	G	5/5/2020	13:06	1			1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW03	NS	MW	WQ	G	5/5/2020	11:10		1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW14	NS	MW	WQ	G	5/5/2020	12:30	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW17	NS	MW	WQ	G	5/5/2020	13:50	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW18R	NS	MW	WQ	G	5/6/2020	09:30	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW01	NS	MW	WQ	G	5/6/2020	11:05	1	1	1	1	
McClellan Field QC	DUP344	FD	WQ	W	G	5/6/2020	N/A	1	1	1	1	
McClellan Field QC	TB552	TB	WQ	W	G	5/7/2020	12:07					1

Double the number of bottles for MS/MSD

NOTES:

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature):

Date/Time: 5/7/2020 16:00

Received by (Signature): FedEX

Relinquished by (Signature):

Date/Time:

Received by (Signature):

DUP 344 - PPMP-66-MW18

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6021
Cooler ID 2 of 2
Page 1 of 2

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 19.094.20-22.1
Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3-40 mL vials, HCl	SW6020A Iron (total) 1-250 mL poly, HNO3	SW6020A Iron (dissolved) 1-250 mL poly, none	SW9056A Sulfate 1-125mL poly, none	SW8260B - VOC* TB 2-40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW22	NS	MW	WQ	G	5/6/2020	11:06	1			1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	NS	MW	WQ	G	5/6/2020	14:01	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	MS/MSD	MW	WQ	G	5/6/2020	14:01	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW21	NS	MW	WQ	G	5/6/2020	12:26		1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW08	NS	MW	WQ	G	5/6	12:35	1			1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW23R	NS	MW	WQ	G	5/6/2020	16:15	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW02RR	NS	MW	WQ	G	5/6/2020	14:45	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW24R	NS	MW	WQ	G	5/7/2020	11:01	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW06R	NS	MW	WQ	G	5/7/2020	9:06	1	1	1	1	
McClellan Field QC	DUP345	FD	WQ	W	G	5/7/2020	N/A	1	1	1	1	
McClellan Field QC	EB133	EB	WQ	W	G	5/7/2020	12:25	1	1	1	1	
McClellan Field QC	MATERIAL103	Material Blank	WQ	W	G	5/7/2020	12:40	1	1	1	1	
McClellan Field QC	TB553	TB	WQ	W	G	5/7/2020	12:15					1

NOTES:

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

Double the number of bottles for MS/MSD

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature):

Date/Time: 5/7/2020 16:00

Received by (Signature): Fed EX

Relinquished by (Signature):

Date/Time:

Received by (Signature):

DUP 345 - PPMP-66-MW06R

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6191
Cooler ID 2 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 20.094.21-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3- 40 mL vials, HCl	Analysis: SW6020A Iron (total) 1-250 mL poly, HNO3	Analysis: SW6020A Iron (dissolved) 1-250 mL poly, none	Analysis: SW9056A Sulfate 1 - 125mL poly, none	Analysis: RSK 175 Methane, Ethane, Ethene 3- 40 mL vials, HCL	Analysis: SW8260B - VOC* TB 2- 40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW22	NS	MW	WQ	G	10-26-20	1020	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	NS	MW	WQ	G	10-26-20	1130	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW21	NS	MW	WQ	G	10-26-20	1245		X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW08	NS	MW	WQ	G	10-27-20	901	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW23R	NS	MW	WQ	G	10-27-20	1231	X				X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW02RR	NS	MW	WQ	G	10-27-20	1116	X				X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW24R	NS	MW	WQ	G	10-27-20	1245	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW06R	NS	MW	WQ	G	10-27-20	1110	X				X	
McClellan Field QC	DUP360	FD	WQ	W	G	10-26-20	N/A	X					
McClellan Field QC	EB135	EB	WQ	W	G	10-27-20	1500	X	X	X	X		
McClellan Field QC	MATERIAL105	Material Blank	WQ	W	G	10-27-20	1445	X	X	X	X		
McClellan Field QC	TB568	TB	WQ	W	G	10-27-20	1510						X

NOTES:

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

Double the number of bottles for MS/MSD

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature): Date/Time: 10-27-20 1600 Received by (Signature): Fedex

Relinquished by (Signature): Date/Time: Received by (Signature):

DUP360 on PPMP-66-MW01

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6188
Cooler ID 1 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 20.094.21-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3- 40 mL vials, HCl	Analysis: SW6020A Iron (total) 1-250 mL poly, HNO3	Analysis: SW6020A Iron (dissolved) 1-250 mL poly, none	Analysis: SW9056A Sulfate 1 - 125mL poly, none	Analysis: RSK 175 Methane, Ethane, Ethene 3-40 mL vials, HCL	Analysis: SW8260B - VOC* TB 2- 40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW04	NS	MW	WQ	G	10-26-20	901	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW11	NS	MW	WQ	G	10-26-20	1026	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07	NS	MW	WQ	G	10-26-20	1316	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07	MS/MSD	MW	WQ	G	10-26-20	1316	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW13	NS	MW	WQ	G	10-26-20	1156	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW03	NS	MW	WQ	G	10-26-20	1430		X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW14	NS	MW	WQ	G	10-26-20	1516	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW17	NS	MW	WQ	G	10-27-20	0825	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW18R	NS	MW	WQ	G	10-27-20	0945	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW01	NS	MW	WQ	G	10-26-20	0855	X					
McClellan Field QC	DUP359	FD	WQ	W	G	10-26-20	N/A	X	X	X	X		
McClellan Field QC	TB567	TB	WQ	W	G	10-27-20	1430						X

NOTES:

Double the number of bottles for MS/MSD

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature): Date/Time: 10-27-20 1600 Received by (Signature): Fedex

Relinquished by (Signature): Date/Time: Received by (Signature):

DUP359 on PPMP-66-MW14

APPENDIX C

Data Quality Summary

Appendix C

Data Quality Summary:

Former Small Weapons Repair Shop, Parcel 66(7)

McClellan, Anniston, Alabama

Tenth Year Long-Term Monitoring

(May 2020 to October 2020)

Prepared for:

MCCLELLAN
DEVELOPMENT AUTHORITY

Prepared by:

Matrix ENVIRONMENTAL
283 Rucker Street, Bldg. 3165
Anniston, Alabama 36205
(256) 847-0780
Fax (256) 847-0905

January 2021

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ATTACHMENTS

C1 Laboratory Reports

LIST OF ABBREVIATIONS AND ACRONYMS

ADEM	Alabama Department of Environmental Management
ARBCA	*Alabama Risk-Based Corrective Action Guidance Manual*
CCAL	Continuing calibration
COC	Chain-of-custody
DQO	Data Quality Objective
DQS	Data Quality Summary
EB	Equipment blank
EPA	United States Environmental Protection Agency
ESV	Ecological Screening Value
FD	Field duplicate
GC/MS	Gas chromatography/mass spectrometry
ICAL	Initial calibration
IDL	Instrument detection limit
IS	Internal standard
ISCO	In_situ chemical oxidation
IT	IT Corporation
LCS	Laboratory control sample
LCSD	Laboratory control sample duplicate
LTM	Long-term monitoring
MDA	McClellan Development Authority
MDL	Method detection limit
MES	Matrix Environmental Services, LLC
MS	Matrix spike
MSD	Matrix spike duplicate
PARCCS	Precision, accuracy, representativeness, completeness, comparability, and sensitivity
QA	Quality assurance
QAP	*Quality Assurance Plan*
QC	Quality control
%R	Percent recovery
RBTL	Risk-Based Target Level
RL	Reporting limit
RPD	Relative percent difference
RSD	Relative standard deviation
Site	Former Small Weapons Repair Shop, Parcel 66(7)
TAL	TestAmerica Laboratories, Inc.
TB	Trip blank
VOC	Volatile Organic Compound

1.0 INTRODUCTION

Matrix Environmental Services, LLC (MES) has prepared this Data Quality Summary (DQS) on behalf of the McClellan Development Authority (MDA) in support of sampling events conducted during the tenth year of long-term monitoring (LTM) from May 2020 to October 2020 at the Former Small Weapons Repair Shop, Parcel 66(7) (the Site) within McClellan, Anniston, Alabama, formerly known as Fort McClellan. The purpose of these sampling events was to collect data to support the evaluation of the effectiveness of the remedial action for contaminated groundwater at the Site.

This DQS addresses the data quality review for groundwater samples collected during the May 2020 to October 2020 sampling events. The approved methods used to conduct the investigations are discussed in the *Quality Assurance Plan* (*QAP*) in *Appendix A* of the *Final Installation-Wide Sampling and Analysis Plan* (MES, 2013) which details the specifics of quality assurance (QA) and quality control (QC) with respect to sampling and data evaluation.

2.0 PROJECT DESCRIPTION

Project objectives and QA objectives in terms of precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) are described in this section.

2.1 PROJECT OBJECTIVES

The objective of the environmental sampling at the Site was to evaluate the effectiveness of the selected remedy for groundwater at the Site. To support this objective groundwater samples were collected from four residuum wells, three transition wells, and one bedrock well during four rounds of sampling conducted from May 2020 to October 2020. The groundwater samples were analyzed for one of more of the following; VOCs, metals, and sulfate. Field sampling parameters were collected prior to sample collection in all four quarter sampling events.

2.2 DATA QUALITY LEVELS

During the field program, groundwater samples were collected and analyzed with screening level methods for field parameters and definitive level methods for specific chemical analytes. Screening and definitive level data are defined as follows (United States Environmental Protection Agency [EPA], 1994):

- Screening Level Data – Screening level data are subject to minimal QC requirements. Results are often not compound-specific and not quantitative, but results are available in real time. Obtaining screening level data is less costly than obtaining definitive level data, but the results are less defensible because of the greater potential for error and the inherent precision and accuracy limitations. This level is normally used for field investigation health and safety screening, but can also be used to identify media or samples for consideration for further analyses. Field pH, conductivity, temperature, turbidity, total dissolved solids, dissolved oxygen, and oxidation/reduction potential measurements collected during this investigation are considered screening level data.

- Definitive Level Data - Analyses performed using established analytical procedures and strict QC procedures produce definitive level data. Applicable EPA test methods (EPA, 1986) were used to collect definitive level data for the Site. Analytical results produced were analyte-specific with confirmation of analyte identity and concentration. Definitive level data meeting quality criteria are suitable for site assessments, risk assessments, remedial design, and remediation efforts.

2.3 DATA QUALITY OBJECTIVES

QA objectives in terms of PARCCS are outlined below.

Precision is a measure of the reproducibility of a set of duplicate analytical results, usually under prescribed similar conditions. Precision, as discussed in Section A3.3.1 in the *QAP*, is expressed in terms of the relative percent difference (RPD) between duplicate determinations, or

in terms of the relative standard deviation (RSD) when three or more determinations are made. Various measures of precision exist depending on the prescribed similar conditions.

Overall sampling and analysis precision was assessed using RPDs for duplicate environmental samples and matrix spike/matrix spike duplicates (MS/MSDs). The RPDs for laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results were used to assess laboratory precision. RPD is defined as the difference between two measurements divided by their mean and expressed as a percent as shown in the following equation:

$$RPD = \frac{|X - Y|}{(X + Y) / 2} \times 100\%$$

where:

X = Primary sample concentration (primary field investigative sample, MS, or LCS)

Y = Duplicate sample concentration (laboratory duplicate, field duplicate [FD], MSD, or LCSD)

To evaluate precision, the RPDs for MS/MSDs, laboratory duplicates, and LCS/LCSDs were compared to laboratory historical limits. The RPDs for FDs were compared to the project precision goal of 50 percent for aqueous samples.

The RSD is the standard deviation of a set of values divided by the average value expressed as a percent as shown in the following equation:

$$RSD = S/\overline{X} \times 100$$

where:

S = The standard deviation of the sample data

$\overline{X}$ = The arithmetic mean of the sample data

RSDs can be used to evaluate the linearity of the initial calibration (EPA, 1986).

Accuracy is a measure of the agreement of an analytical result with the true value. Accuracy, as discussed in Section A3.3.2 in the *QAP*, is typically expressed as a percent recovery (%R) calculated by the ratio of the measurement and accepted true value as shown in the following equation:

$$\%R = ((Xs - Xu) / K) \times 100\%$$

where:

Xs = Measured value of the spiked sample

Xu = Measured value of the unspiked sample

K = Known amount of the spike in the sample

Analytical accuracy is assessed through the analysis of spikes such as surrogates, MS/MSDs and LCS/LCSDs, performance evaluation samples, standard reference materials and calibration check samples. Surrogates and MS/MSDs are spiked into the actual sample matrix

and are accuracy indicators that take into account the nature of the matrix in question and the native concentration of the analyte spiked. Matrix variability or interferences from high concentrations of native compounds may adversely affect spike recovery and yield less than conclusive data. Accuracy checks that focus on analytical method and consist of compounds spiked in a blank or non-interfering matrix (e.g., LCSs or calibration check samples) address the accuracy of the method or instrumentation at detecting the target analyte(s) at a certain quantification level and are not considered to be subject to matrix effects. The accuracy of sample results can also be affected by holding time violations.

Representativeness, as described in Section A3.3.3 in the *QAP*, is a qualitative parameter that expresses the degree to which sample data actually represent the matrix conditions. For example, in conducting groundwater monitoring, representativeness requires proper location of wells and the collection of samples under consistent, documented procedures. Wells are located based upon the results of the hydrogeologic study in progress and are designed to provide maximum coverage of the flow conditions. Requirements and procedures for sample collection and handling are designed to maximize sample representativeness. Representativeness can also be monitored by reviewing field documentation and by performing field QA audits.

Completeness, as discussed in Section A3.3.4 in the *QAP*, represents the percentage of valid data collected from a sampling/analytical program or measurement system compared to the amount achieved under optimal conditions. The completeness goal for investigative samples is 95 percent. Completeness is calculated using the following formula:

$$\text{Percent Complete} = \frac{\text{Valid Data}}{\text{Total Data}} \times 100\%$$

Valid data are identified during the data review process as being acceptable for use or usable as qualified. Invalid data are identified as rejected.

Comparability, as discussed in Section A3.3.5 of the *QAP*, is a qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability for sampling and analysis tasks is achieved by:

- Specifying well-recognized techniques and accepted standard methods for sampling and analysis, and using well-trained sampling and analysis technicians to execute the prescribed methods consistently.
- Requiring that sampling and analysis personnel produce adequate documentation to record how the prescribed methods were actually executed.
- Noting non-conformances and corrective measures taken.

Specifying standardized laboratory methods helps to ensure that the data generated for a sampling event are comparable to past and future sampling events.

Sensitivity is used broadly here to describe the method detection limits (MDLs) or reporting limits (RLs) established to meet project-specific data quality objectives (DQOs). In addition,

sensitivity can be used to describe the capability of a method or instrument to discriminate between measurement responses. Several limits have been established to describe sensitivity requirements as specified in Section A3.3.6 of the *QAP*. Reported instrument detection limits (IDLs) and MDLs are typically based upon a reagent water matrix or purified solid, and ignore sample matrix interferences and the resulting effects on the limits. For this reason, published MDLs or IDLs may not be achievable for environmental samples. The *QAP* RLs were generated by the laboratory and may exceed Risk-Based Target Levels (RBTLs) due to instrument limitations. Section 6.2 discusses the comparisons between the RBTLs and the laboratory RLs and MDLs for the sampling events.

2.4 ANALYTICAL SERVICES

TestAmerica Laboratories, Inc (TAL), Savannah, Georgia, provided analytical services for the sampling conducted by MES.

2.4.1 Analytical Program

The *QAP* lists the EPA analytical methods used to meet definitive data requirements. Methods SW8260B volatile organic compounds (VOCs) by Gas Chromatography/Mass Spectrometry (GC/MS), SW6020A metals by Inductively Couple Plasma/Mass Spectrometry, and SW9056A anions by Ion Chromatography were used for anions during the May through October 2020 sampling events.

2.4.2 Quality Control

The *QAP* describes the analytical QC requirements. The results of the analytical QC data review for this sampling event are presented in Section 5.0.

3.0 DEVIATIONS FROM PLANNED FIELD ACTIVITIES

No deviations from the planned field activities were noted during the preparation of this DQS with the following exceptions. Three samples were analyzed for dissolved gases in the October sampling event.

4.0 ASSESSMENT OF DATA QUALITY

Data quality is assessed through two review processes. The contracted analytical laboratory performs the first data review to assess compliance with *QAP*-approved analytical methods (MES, 2004) and with laboratory standard operating procedures. MES performs the second data review to assess compliance with the QA objectives, and to assess hard copy and electronic deliverable consistency and integrity.

4.1 LABORATORY DATA QUALITY ASSESSMENT

The laboratory data quality assessment includes an analytical data review to ensure accurate and complete data reporting and compliance with the analytical method specifications.

4.1.1 Laboratory Qualification of Data

The laboratory will flag analytical results, when necessary, to indicate potential impacts to data usability and to alert the user to special analytical conditions. More than one qualifier may be used to indicate multiple conditions or situations that apply to an individual result. The following laboratory qualifiers were used during this investigation:

FLAG	DESCRIPTION
E	Result exceeds the calibration range of the instrument.
J	Estimated value. The analyte is positively identified and the concentration is less than the RL but greater than the MDL.
U	Analyte is not detected above the RL.
V	Detected value.

4.2 MES DATA QUALITY AND USABILITY ASSESSMENT

The following sections describe the procedures that MES followed to assess the quality and usability of both field measurement and definitive data. Data assessment is complete when 100 percent of the information have been collected and reviewed. Based on the results of the review process, data are categorized as fully usable, usable as qualified, or rejected.

4.2.1 Data Review and Validation

MES reviewed the analytical data in accordance with the *QAP* (MES, 2013), analytical methods (EPA, 1986), and *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (EPA, 2017). The data review process included reviewing and evaluating 100 percent of the hard copy data for (1) extraction and analysis holding times, (2) surrogate recoveries, (3) blank detections, (4) LCS/LCSD recoveries and RPDs, (5) MS/MSD recoveries and RPDs, (6) FD RPDs, (7) laboratory duplicate RPDs, if applicable, (8) initial calibrations (ICALs) and continuing calibrations (CCALs), (9) instrument tuning and performance, (10) reporting limits, and (11) completeness of the chain-of-custody (COC) forms.

Hard copy data packages were checked to verify that the following items were included:

- Case narrative
- Data summary sheets
- ICALs and CCALs
- Method or preparation blanks (at least one per QC batch)
- MS/MSD (5 percent of client samples)
- LCS/LCSD (one per QC batch)
- Duplicate analyses (laboratory duplicate sample, LCS/LCSD, MS/MSD, as applicable)
- Holding times
- Retention time window calculation (if applicable)
- Standard preparation sheets
- Linear range calculations (correlation coefficients)

The results of the review of the chemical data obtained during this investigation are included in Section 5.0. The laboratory data forms showing the validated results are included in Attachment D1.

4.2.2 MES Qualification of Data

Based on the data review, MES may assign final qualifiers to analytical results on both the hard copy results and in the database. The following final qualifiers may be assigned to the results to describe data quality and usability:

FLAG	DESCRIPTION
J	Estimated detection. The associated numerical value is the approximate concentration of the analyte in the sample.
UJ	Analyte was analyzed for, but was not detected. The reported quantitation limit is estimated.
U	Result was qualified as not detected above the RL or reported sample quantitation limit.

Whenever duplicate sets of results were reported by the laboratory due to dilutions, re-analyses, re-extractions, or dual column analytical methods, the MES reviewer chose the "most-preferred" results based on the data review. In Section 5.0, only the reportable data (flagged "Y") are shown in Tables C5-2 to C5-6.

5.0 RESULTS OF QUALITY CONTROL ANALYSES

Table C5-1 lists samples and analytical methods included in the May 2020 to October 2020 sampling events for the Site. To evaluate the data quality, the results were compared to method requirements and laboratory historical control limits. Based on the data review performed on the samples collected from May 2020 to October 2020, some of the five analytes were qualified and discussed below and none of the analytical data were rejected. The results of the data review process are discussed further in the following sections.

5.1 QUALITY CONTROL PROCEDURES AND RESULTS OF QUALITY CONTROL ANALYSES

Two types of QC results were used to evaluate data quality: field QC samples were collected and analyzed to evaluate field sampling activities, and laboratory QC samples were analyzed to evaluate laboratory analytical procedures and maintain control of the analytical methods.

5.1.1 Field Quality Control Procedures and Analyses

Field QC samples included MS/MSD samples, FDs, material blanks, equipment blank (EBs) and trip blanks (TBs). The *QAP* was used as the guidance document to identify the appropriate number of field QC samples, procedures for their collection and analysis, and evaluation of results required for this sampling event. The evaluation procedures for the field QC sample analyses are summarized below.

5.1.1.1 Matrix Spike/Matrix Spike Duplicate Samples

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. The formulas used to calculate the %Rs and RPDs are presented in Section 2.3.

Accuracy was assessed by calculating the MS and MSD %Rs of the concentrations of the target analytes added to the investigative sample. The %Rs were then compared to laboratory historical control limits. When both the MS and MSD %Rs were outside laboratory historical control limits, MS/MSD qualifiers were applied only to the results for the investigative sample used for the MS/MSD. When only an MS was analyzed, qualifiers were applied when the MS %R was outside laboratory historical control limits. Low recoveries in an MS/MSD may indicate the matrix has negatively influenced the results. Constituent concentrations could be potentially higher in samples with low MS/MSD recoveries. High MS/MSD recoveries may indicate the matrix has positively influenced the results. Constituent concentrations may be potentially lower in samples with high MS/MSD recoveries.

Precision was assessed by calculating the RPDs for the MS/MSD sample pairs. The MS/MSD RPD values were reviewed to assess the precision of the analytical results based on the magnitude of the RPD values. In cases where a target analyte was not detected in at least one of the MS/MSD sample pair, an RPD would not be valid, and therefore, was not calculated. Qualifiers were not applied based on the MS/MSD RPD values, however, the MS/MSD RPD

values were compared to laboratory historical control limits to assess if further evaluation of the data was warranted.

Groundwater samples from well PPMP-66-MW16 was collected and analyzed for the MS and MSD for the May 2020, PPMP-66-MW07 for October 2020 sampling events. A summary of the MS/MSD %R data is shown in Table C5-2. The MS/MSD %Rs met criteria with the exceptions noted below.

Data is not qualified if only the MS or MSD or RPD is outside acceptance criteria. MS/MSD outliers and qualification if any:

- 1,1-Dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, trichloroethene, and vinyl chloride were below criteria in the MS PPMP-66-MW16 sampled May 2020 (57%, 55%, 58%, 56%, 54% , respectively), data were not qualified because the MSD met criteria.
- Sulfate was below criteria in the MS and MSD for PPMP-66-MW07 sample October 2020 (75%/83%), data were not qualified because the concentration in the parent sample was greater than four times the spike concentration.

The overall accuracy of the analytical results is considered to be acceptable.

5.1.1.2 Field Duplicate Samples

FD samples were collected and analyzed as specified in the *QAP* (Section A6.3.5). 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 precision of FD pairs was assessed by calculating the RPDs using the equation in Section 2.3. In cases where a target analyte was not detected in either sample or was detected in only one of the samples, an RPD would not be valid, and therefore, was not calculated.

Two groundwater FD samples were collected for the sampling events included in this DQS. Table C5-3 lists the original station name from the COC forms (i.e. COC IDs used to disguise the sample's identity when the sample was sent to the laboratory), the parent station name, and the methods analyzed. The results for the FD and associated investigative sample analyses were reviewed to assess the precision of the analytical results based on the magnitude of the RPD values.

Table C5-4 shows the RPDs calculated for the investigative and FD sample pair. The criterion of 50 percent for aqueous samples was used to assess if further evaluation of the data was warranted. All RPDs met criteria. Therefore, the overall variability of the precision measurements is considered acceptable.

5.1.1.3 Material Blank, Equipment Blank, and Trip Blank Analyses

A material blank sample is defined as a sample of a "clean" reagent source such as deionized water, a chemical reagent source, or a sampling medium such as air filter or sorbent cartridge considered "analyte-free" or "background-free" of contamination. If these blanks show elevated concentrations of target analytes, the corresponding data set may be considered biased (MES, 2013). Material blanks were collected on a weekly basis to monitor the final rinse water used by the sampler for potential contaminants. One material blank was collected for each of May and October 2020 sampling events. No target analytes were detected in the material blanks.

An EB consist of a sample of distilled water poured into, over, or pumped through a sampling device. EBs are collected in the same type of sample container as the investigative samples and transported to the laboratory for analysis. EBs are collected on a weekly basis to assess the effectiveness of equipment decontamination procedures. Four EBs were collected, one for each sampling events and analyzed for VOCs, metals, and sulfate. No analytes were detected during May and October 2020. No data were qualified for EBs.

TBs are used to assess the potential introduction of contaminants from sample containers or during the sampling, transportation, and storage procedures (MES, 2013). A TB sample consists of VOC sample vials filled in the laboratory with American Society of Testing and Materials Type II reagent grade water, transported to the sampling site, handled like an environmental sample and returned to the laboratory for analysis. TBs are not opened in the field and are only prepared when aqueous VOC samples are scheduled to be collected and analyzed by the laboratory. Sample results are considered affected by TB contamination when the sample concentration is less than five times the blank concentration (ten times for common laboratory contaminants acetone, methylene chloride, and 2-butanone). Affected sample results less than the reporting limit and less than five times the associated blank concentration are considered non-detects at the reporting limit. Affected sample results greater than the reporting limit and less than five times the blank concentration are considered non-detects at the concentration observed in the sample. Four TBs were collected during the May and October 2020 sampling events. No target analytes were detected in the TBs, therefore, no qualifiers were required based on TB results.

5.1.2 Laboratory Quality Control Procedures and Analyses

Laboratory QC checks include internal system checks and QC samples used to monitor the possible effect of laboratory activities on sample results. The analytical method and method-specific SOPs developed by the laboratory define the types of laboratory QC checks required. QC procedures followed by the laboratory include sample container inspection, COC documentation review, sample holding time review, LCS/LCSD analyses, method blank analyses, and surrogate spike percent recovery evaluation. The laboratories are also responsible for analytical instrument calibration, which includes method-specific criteria for initial and continuing calibrations for external and internal standard calibration procedures.

5.1.2.1 Initial Sample Inspection and Chain-of-Custody Documentation

The laboratory inspected the shipping containers upon receipt and compared the contents with the COC form associated with each cooler. Information from the sample check-in procedure was recorded on the Sample Receipt Form, including sample receipt anomalies. These forms were used by the laboratory to document that sample identifications listed on the COC forms agreed with the samples contained in the coolers. The laboratory verified that COC forms were filled out properly, sample containers were not broken, custody seals were intact, the pH met method-specific criteria for water samples (if applicable), and cooler temperatures were maintained at ≤6 degrees Celsius. The completed forms are included in the laboratory analytical packages and were reviewed during the data review process. The samples arrived at the laboratory at the proper temperature, and no sample containers were damaged during transit.

MES compared the data on the COC forms with the laboratory reports and documented any differences. If minor discrepancies were found and verified by the laboratory, the laboratory reports and MES electronic databases were corrected. In addition to the COC checks, MES reviewers verified approximately 10 percent of the laboratory hard copy reports against the laboratory electronic data deliverables.

5.1.2.2 Holding Times

Samples were shipped regularly in coordination with the analytical laboratory to ensure analyses were conducted within the required holding times. The time elapsed between sample collection and sample extraction/analysis was calculated as part of the review process to evaluate if holding times were met. Holding time criteria were met for the sampling events included in this DQS for reported data, therefore, accuracy of the analytical results is acceptable with regards to holding time.

5.1.2.3 Laboratory Control Sample/Laboratory Control Sample Duplicate

The laboratory analyzed LCS/LCSD pairs with each analytical batch of field samples to assess internal precision and accuracy. LCS/LCSD pairs consisted of analyte-free water spiked with selected target constituents of known concentration. The LCS/LCSD %Rs and RPDs are used to determine laboratory accuracy and precision, respectively. The formulas used to calculate the %Rs and RPDs are presented in Section 2.3. The %Rs and RPDs were then compared to laboratory historical control limits. When the LCS and LCSD %Rs were outside laboratory historical control limits, the LCS/LCSD qualifications were applied to investigative samples within the same analytical batch. Qualifiers were applied only when both the LCS and LCSD %Rs were outside laboratory historical control limits. In cases where only an LCS was analyzed, qualifiers were applied when the LCS %R was outside laboratory historical control limits. Qualifiers were not applied based on LCS/LCSD RPD values, however, the LCS/LCSD RPD values were compared to laboratory historical control limits to assess if further evaluation of the data was warranted. For the sampling events included in this DQS, MES reviewed the LCS/LCSD %Rs and RPDs for Method SW8260B.

Table C5-5 shows the LCS/LCSD %R and RPD data. The LCS/LCSD %Rs and RPDs met criteria. Because 100% of the LCS/LCSD %Rs, and 100 percent of the RPD results were within the laboratory control limits, the overall accuracy and precision measurements are considered to be acceptable.

5.1.2.4 Method Blank Samples

Method blanks are prepared and analyzed by the laboratory to assess the level of background interferences and possible contamination in the analytical system. The method blank must be carried through the complete procedure and contain analyte-free reagents in the same volumes as used in processing the samples. The goal is to conduct investigative sample analysis in such a manner that sample contamination is not introduced by the analytical methods, equipment, or reagents. If such contamination occurs, it is usually identified by the detection of target analytes at trace or low concentrations in the method blanks. When these detections are found, the laboratory investigates the source, qualifies the affected data as appropriate according to the magnitude of the detections, and implements corrective measures as appropriate. For the sampling events included in this DQS, method blanks were prepared and analyzed with each analytical batch for Method SW8260B.

Cis-1,2-dichloroethene was detected in method blanks analyzed November 9, 2020 (0.57 J µg/L). No data were qualified; analyte not detected or detection greater than 10 times the blank concentration in the associated samples.

5.1.2.5 Surrogate Recovery

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. Surrogate recoveries that are outside the laboratory historical control limits may indicate performance problems with the analytical system and extraction procedures, or significant matrix effects when evaluated in conjunction with the MS/MSD results. MES reviewers used laboratory historical control limits to assess percent recoveries for surrogate spike constituents. For sample results affected by surrogate percent recoveries less than the lower control limit, detects were qualified as estimated (JS) and may be biased low, and non-detects were qualified as estimated (UJS) and may be potential false negatives. For sample results affected by surrogate percent recoveries greater than the upper control limit, detects were qualified as estimated (JS) and may be biased high. No qualifiers are required for non-detect results based on high surrogate recoveries.

A summary of the surrogate percent recovery data is provided in Table C5-6. All surrogates met criteria. No qualifiers were required for sample results based on surrogate recoveries.

5.1.2.6 Internal Standards

Adherence to method-specific internal standards (ISs) criteria ensures that GC/MS sensitivity and response are stable during each analysis. *SW-846* (EPA, 1986) recommended ISs are often brominated, fluorinated, or stable isotopically labeled analogs of specific target compounds, or are closely related compounds whose presence in environmental samples is unlikely. The IS spike

solution is added after the preparation or extraction of a sample. ISs are used in internal calibration methods to correct sample results affected by column injection loss, purging loss, or viscosity effects. ISs are added to environmental samples, control standards, and blanks, in accordance with method requirements and laboratory standard operating procedures (MES, 2004). Internal standards were not added to the MS for PPMP-66-MW02RR, batch reextracted out of hold, sample results consistent. No qualifiers were required for sample results based on the IS data.

5.1.2.7 Initial and Continuing Calibration

The calibration of an analytical instrument involves the delineation of the relationship between the response of the instrument and the concentration of an analyte introduced into the instrument. An ICAL is performed on an analytical instrument prior to the analysis of samples to ensure that the equipment is capable of producing acceptable qualitative and quantitative data. The CCAL is the verification of the ICAL at periodic intervals. The CCAL demonstrates that the instrument is capable of acceptable performance during the course of the analytical analysis. Review of the ICAL data included the evaluation of the correlation coefficients and relative standard deviations. Review of the CCAL data included the evaluation of the percent difference between the concentration of the CCAL standard and the expected concentration. For sample results associated with CCAL data that did not meet method-specific criteria, detects and non-detects were qualified as estimated (JC and UJC, respectively). No qualifiers were required for sample results based on the ICAL or CCAL data.

5.2 SUMMARY OF DATA QUALITY INDICATORS

A summary of the data quality indicators in terms of the PARCCS are described in this section.

5.2.1 Precision

As discussed in Section 2.3, the precision evaluation included field precision (FDs), laboratory precision (LCS/LCSDs), and combined field/laboratory precision (MS/MSDs). The MS/MSD, FD, and LCS/LCSD RPDs are discussed in Sections 5.1.1.1, 5.1.1.2, and 5.1.2.3 of this report, respectively. Based on this evaluation, the precision of the data is acceptable for its intended use.

5.2.2 Accuracy

As discussed in Section 2.3, the accuracy evaluation included a comparison of spike recoveries from field samples (surrogate and MS/MSD spikes) and laboratory QC samples (LCS and LCSD), and assessing holding time. The MS/MSD, LCS/LCSD, and surrogate spike recoveries are discussed in Sections 5.1.1.1, 5.1.2.3, and 5.1.2.5, respectively, and holding time is discussed in Section 5.1.2.2. Recoveries from MS/MSDs, LCS/LCSD and surrogate percent recoveries were compared to laboratory historical control limits to determine a laboratory's ability to accurately determine both qualitative and quantitative results. The investigative sample results were within the required percent recovery limits. The investigative sample results were within the required holding time limits. Based on this evaluation, the accuracy of the data is acceptable for its intended use.

5.2.3 Representativeness

Representativeness is the degree to which the data accurately and precisely portray the environmental conditions being studied. For this investigation, sampling procedures and locations were selected to accurately represent overall Site conditions and were biased toward areas that were likely to exhibit evidence of past releases. Sampling was conducted using known, approved field procedures to minimize variability introduced during field sampling. The investigative and FD analyses indicate that the overall combined variability introduced by the sampling procedures, sample matrix, and laboratory analysis is acceptable, and the FD samples are representative of the data associated with the investigative sample.

5.2.4 Completeness

Completeness refers to the amount of valid data obtainable from a measurement system compared to the expected amount of data. Data that have not been qualified as rejected during the data validation process are considered to be valid. As presented in the *QAP* (MES, 2013), a completeness goal of 95 percent was established for investigations. Of the 1024 investigative and field duplicate sample records from the four sampling events, no records were qualified as rejected based on MES' review of the data. Therefore a completeness of 100 percent was calculated for the sampling event, which exceeds project goals. One hundred percent of the results are usable and are acceptable for their intended use.

5.2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. Comparability objectives were met by minimizing the number of contract laboratories used, using EPA methods for analyses, and reporting results in standardized units. The comparability objective for the project was fulfilled.

6.0 REPORTING LIMITS AND DATA USES

This section discusses the laboratory reporting limits and how they compare to RBTLs. Chemical-specific RBTLs were established for use as goals to achieve the Corrective Action Objectives at the Site using the *Alabama Risk-Based Corrective Action Guidance Manual (ARBCA)* (ADEM, 2008). As per the *ARBCA*, RBTLs were developed based on a 10^{-5} risk.

6.1 LABORATORY REPORTING LIMITS

TAL confirms reporting limits on an annual or quarterly basis by performing MDL studies. The MDL is defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is generated from the analysis of a sample in a given matrix containing the analyte (40 Code of Federal Regulations, Chapter 1, Part 136, Appendix B). The reporting limit is defined as the lowest concentration of the target analyte required to be reported. This value is based on project-specific criteria.

The laboratory reports detections that are below the reporting limit as estimated values by assigning a flag to the analytical result. This flag is assigned because the laboratory cannot accurately quantify analyte concentrations at levels below the reporting limit. For detections in the concentration range between the MDL and the reporting limit, the laboratory is confident of the analyte identification and detection but can only estimate the analyte concentration.

6.2 COMPARISON OF LABORATORY REPORTING LIMITS TO RBTLS

For this assessment, the laboratory RLs and MDLs were compared to the groundskeeper RBTLs, shown in Table C6-1. The laboratory RLs and MDLs for the investigative samples were less than the groundskeeper RBTLs.

7.0 CONCLUSIONS

This DQS presents in specific terms the QA and QC practices used to achieve the project objectives for the Site during the May and October 2020 sampling events. Samples were collected and analyzed in accordance with EPA methods and using laboratory-specific QA/QC procedures. These procedures were followed to generate legally and technically defensible data.

One sulfate result was qualified "J" because of MS/MSD(s) outside acceptance criteria (Section 5.1.1.1). Based on this review, the analytical data generated for this investigation are acceptable and adequate to fulfill program objectives and may be used to evaluate the effectiveness of the selected remedy for the Site.

8.0 REFERENCES

Alabama Department of Environmental Management (ADEM). 2008. *Alabama Risk-Based Corrective Action Guidance Manual (ARBCA), Revision 2*. April.

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EPA. 1994. *Guidance for the Data Quality Objectives Process,* EPA/600/R-96/055. September.

EPA. 2014. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*. August.

TABLES

Table C5-1: Sample Index
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Site Name	Delivery Group	Station Name	QC Code	Matrix	Sample Date	Lab	Laboratory Sample ID	Method
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW01	NS	WG	5/6/2020	TALSAV	680-183592-9	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW02RR	NS	WG	5/6/2020	TALSAV	680-183592-17	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW03	NS	WG	5/5/2020	TALSAV	680-183592-5	SW6020A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW03	NS	WG	5/5/2020	TALSAV	680-183592-5	SW9056A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW04	NS	WG	5/5/2020	TALSAV	680-183592-1	SW6020A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW04	NS	WG	5/5/2020	TALSAV	680-183592-1	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW04	NS	WG	5/5/2020	TALSAV	680-183592-1	SW9056A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW06R	NS	WG	5/7/2020	TALSAV	680-183592-19	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW06R	FD	WG	5/7/2020	TALSAV	680-183592-20	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW07	NS	WG	5/5/2020	TALSAV	680-183592-3	SW6020A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW07	NS	WG	5/5/2020	TALSAV	680-183592-3	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW07	NS	WG	5/5/2020	TALSAV	680-183592-3	SW9056A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW08	NS	WG	5/6/2020	TALSAV	680-183592-15	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW11	NS	WG	5/5/2020	TALSAV	680-183592-2	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW13	NS	WG	5/5/2020	TALSAV	680-183592-4	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW14	NS	WG	5/5/2020	TALSAV	680-183592-6	SW6020A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW14	NS	WG	5/5/2020	TALSAV	680-183592-6	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW14	NS	WG	5/5/2020	TALSAV	680-183592-6	SW9056A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW16	NS	WG	5/6/2020	TALSAV	680-183592-13	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW16	MSD	WG	5/6/2020	TALSAV	680-183592-13 MSD	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW16	MS	WG	5/6/2020	TALSAV	680-183592-13 MS	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW17	NS	WG	5/5/2020	TALSAV	680-183592-7	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW18R	NS	WG	5/6/2020	TALSAV	680-183592-8	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW18R	FD	WG	5/6/2020	TALSAV	680-183592-10	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW21	NS	WG	5/6/2020	TALSAV	680-183592-14	SW6020A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW21	NS	WG	5/6/2020	TALSAV	680-183592-14	SW9056A
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW22	NS	WG	5/6/2020	TALSAV	680-183592-12	SW8260B

Table C5-1: Sample Index
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Site Name	Delivery Group	Station Name	QC Code	Matrix	Sample Date	Lab	Laboratory Sample ID	Method
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW23R	NS	WG	5/6/2020	TALSAV	680-183592-16	SW8260B
PARCEL 66(7), FMR SSWR	680-183592-1	PPMP-66-MW24R	NS	WG	5/7/2020	TALSAV	680-183592-18	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW01	NS	WG	10/26/2020	TALSAV	680-190652-9	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW01	FD	WG	10/26/2020	TALSAV	680-190652-20	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW02RR	NS	WG	10/27/2020	TALSAV	680-190652-17	RSK-175
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW02RR	NS	WG	10/27/2020	TALSAV	680-190652-17	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW03	NS	WG	10/26/2020	TALSAV	680-190652-5	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW03	NS	WG	10/26/2020	TALSAV	680-190652-5	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW04	NS	WG	10/26/2020	TALSAV	680-190652-1	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW04	NS	WG	10/26/2020	TALSAV	680-190652-1	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW04	NS	WG	10/26/2020	TALSAV	680-190652-1	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW06R	NS	WG	10/27/2020	TALSAV	680-190652-19	RSK-175
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW06R	NS	WG	10/27/2020	TALSAV	680-190652-19	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	NS	WG	10/26/2020	TALSAV	680-190652-3	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	NS	WG	10/26/2020	TALSAV	680-190652-3	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	NS	WG	10/26/2020	TALSAV	680-190652-3	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MSD	WG	10/26/2020	TALSAV	680-190652-3 MSD	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MSD	WG	10/26/2020	TALSAV	680-190652-3 MSD	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MSD	WG	10/26/2020	TALSAV	680-190652-3 MSD	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MS	WG	10/26/2020	TALSAV	680-190652-3 MS	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MS	WG	10/26/2020	TALSAV	680-190652-3 MS	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW07	MS	WG	10/26/2020	TALSAV	680-190652-3 MS	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW08	NS	WG	10/27/2020	TALSAV	680-190652-15	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW11	NS	WG	10/26/2020	TALSAV	680-190652-2	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW13	NS	WG	10/26/2020	TALSAV	680-190652-4	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	NS	WG	10/26/2020	TALSAV	680-190652-6	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	NS	WG	10/26/2020	TALSAV	680-190652-6	SW8260B

Table C5-1: Sample Index
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Site Name	Delivery Group	Station Name	QC Code	Matrix	Sample Date	Lab	Laboratory Sample ID	Method
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	NS	WG	10/26/2020	TALSAV	680-190652-6	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	FD	WG	10/26/2020	TALSAV	680-190652-10	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	FD	WG	10/26/2020	TALSAV	680-190652-10	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW14	FD	WG	10/26/2020	TALSAV	680-190652-10	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW16	NS	WG	10/26/2020	TALSAV	680-190652-13	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW17	NS	WG	10/27/2020	TALSAV	680-190652-7	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW18R	NS	WG	10/27/2020	TALSAV	680-190652-8	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW21	NS	WG	10/26/2020	TALSAV	680-190652-14	SW6020A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW21	NS	WG	10/26/2020	TALSAV	680-190652-14	SW9056A
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW22	NS	WG	10/26/2020	TALSAV	680-190652-12	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW23R	NS	WG	10/27/2020	TALSAV	680-190652-16	RSK-175
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW23R	NS	WG	10/27/2020	TALSAV	680-190652-16	SW8260B
PARCEL 66(7), FMR SSWR	680-190652-1	PPMP-66-MW24R	NS	WG	10/27/2020	TALSAV	680-190652-18	SW8260B
MCCLELLAN FIELD QC	680-183592-1	EQUIPMENT BLANK (EB133)	EB	W	5/7/2020	TALSAV	680-183592-21	SW6020A
MCCLELLAN FIELD QC	680-183592-1	EQUIPMENT BLANK (EB133)	EB	W	5/7/2020	TALSAV	680-183592-21	SW8260B
MCCLELLAN FIELD QC	680-183592-1	EQUIPMENT BLANK (EB133)	EB	W	5/7/2020	TALSAV	680-183592-21	SW9056A
MCCLELLAN FIELD QC	680-183592-1	MATERIAL BLANK (Material103)	NS	W	5/7/2020	TALSAV	680-183592-22	SW6020A
MCCLELLAN FIELD QC	680-183592-1	MATERIAL BLANK (Material103)	NS	W	5/7/2020	TALSAV	680-183592-22	SW8260B
MCCLELLAN FIELD QC	680-183592-1	MATERIAL BLANK (Material103)	NS	W	5/7/2020	TALSAV	680-183592-22	SW9056A
MCCLELLAN FIELD QC	680-183592-1	TRIP BLANK (TB552)	TB	W	5/7/2020	TALSAV	680-183592-11	SW8260B
MCCLELLAN FIELD QC	680-183592-1	TRIP BLANK (TB553)	TB	W	5/7/2020	TALSAV	680-183592-23	SW8260B
MCCLELLAN FIELD QC	680-190652-1	EQUIPMENT BLANK (EB135)	EB	W	10/27/2020	TALSAV	680-190652-21	SW6020A
MCCLELLAN FIELD QC	680-190652-1	EQUIPMENT BLANK (EB135)	EB	W	10/27/2020	TALSAV	680-190652-21	SW8260B
MCCLELLAN FIELD QC	680-190652-1	EQUIPMENT BLANK (EB135)	EB	W	10/27/2020	TALSAV	680-190652-21	SW9056A
MCCLELLAN FIELD QC	680-190652-1	MATERIAL BLANK (Material105)	NS	W	10/27/2020	TALSAV	680-190652-22	SW6020A
MCCLELLAN FIELD QC	680-190652-1	MATERIAL BLANK (Material105)	NS	W	10/27/2020	TALSAV	680-190652-22	SW8260B
MCCLELLAN FIELD QC	680-190652-1	MATERIAL BLANK	NS	W	10/27/2020	TALSAV	680-190652-22	SW9056A

Table C5-1: Sample Index
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Site Name	Delivery Group	Station Name	QC Code	Matrix	Sample Date	Lab	Laboratory Sample ID	Method
MCCLELLAN FIELD QC	680-190652-1	TRIP BLANK (TB567)	TB	W	10/27/2020	TALSAV	680-190652-11	SW8260B
MCCLELLAN FIELD QC	680-190652-1	TRIP BLANK (TB568)	TB	W	10/27/2020	TALSAV	680-190652-23	SW8260B

Notes:

EB = Equipment blank
FD = Field duplicate
FMR SWR = Former Small Weapons Repair
ID = Identification
MS = Matrix spike
MSD = Matrix spike duplicate
NS = Normal Sample
QC = Quality Control
TALSAV = TestAmerica Laboratories, Inc., Savannah, Georgia
TB = Trip Blank
W = Water
WG = Groundwater

Table C5-2: Summary of MS/MSD Recoveries and RPDs
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Station Name	Matrix	Sample Date	Delivery Group	Method	Parameter Name	MS %R	MSD %R	%R LCL	%R UCL	RPD	RPD Limit
PPMP-66-MW16	WG	5/6/20	680-183592-1	SW8260B	1,1-Dichloroethene	**57**	83	74	125	**37**	20
PPMP-66-MW16	WG	5/6/20	680-183592-1	SW8260B	Cis-1,2-Dichloroethene	**55**	80	80	122	**37**	20
PPMP-66-MW16	WG	5/6/20	680-183592-1	SW8260B	Trans-1,2-Dichloroethene	**58**	84	78	123	**37**	20
PPMP-66-MW16	WG	5/6/20	680-183592-1	SW8260B	Trichloroethene	**56**	80	80	123	**35**	20
PPMP-66-MW16	WG	5/6/20	680-183592-1	SW8260B	Vinyl Chloride	**54**	78	68	132	**36**	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW6020A	Iron	91	90	75	125	1	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW6020A	Iron, dissolved	96	102	75	125	6	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW8260B	1,1-Dichloroethene	90	88	74	125	2	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW8260B	Cis-1,2-Dichloroethene	85	85	80	122	0	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW8260B	Trans-1,2-Dichloroethene	87	86	78	123	1	30
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW8260B	Trichloroethene	94	95	80	123	1	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW8260B	Vinyl Chloride	91	86	68	132	6	20
PPMP-66-MW07	WG	10/26/20	680-190652-1	SW9056A	Sulfate	**75**	**83**	87	112	10	20

Notes:
LCL = Lower control limit
MS - Matrix spike
MSD - Matrix spike duplicate
% - Percent
%R - Percent recovery
UCL = Upper control limit

Bold and grey highlight - recovery below acceptance criteria.
Bold blue type and full border - Recovery above acceptance criteria.

Table C5-3: Field Duplicate Cross Reference
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Matrix	COC ID	Parent Station Name	Sample Date	Delivery Group	Method
WG	DUP344	PPMP-66-MW18R	5/6/20	680-183592-1	SW8260B
WG	DUP345	PPMP-66-MW06R	5/7/20	680-183592-1	SW8260B
WG	DUP359	PPMP-66-MW14	10/26/20	680-190652-1	SW6020A
WG	DUP359	PPMP-66-MW14	10/26/20	680-190652-1	SW8260B
WG	DUP359	PPMP-66-MW14	10/26/20	680-190652-1	SW9056A
WG	DUP360	PPMP-66-MW01	10/26/20	680-190652-1	SW8260B

Notes:
COC = Chain-of-Custody
ID = Identification
WG = Groundwater

Table C5-4: Comparison of Investigative and Field Duplicate Sample Detections
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Station Name	Matrix	Sample Date	Delivery Group	Method	Parameter Name	FD Value	FD Lab Flag	NS Value	NS Lab Flag	Units	RPD	MDL	RL
PPMP-66-MW06R	WG	5/7/20	680-183592-1	SW8260B	Cis-1,2-Dichloroethene	4.1		4.1		µg/L	0	25	100
PPMP-66-MW06R	WG	5/7/20	680-183592-1	SW8260B	Trans-1,2-Dichloroethene	2.2		2.3		µg/L	4.3	25	100
PPMP-66-MW06R	WG	5/7/20	680-183592-1	SW8260B	Trichloroethene	28		28		µg/L	0	25	100
PPMP-66-MW06R	WG	5/7/20	680-183592-1	SW8260B	Vinyl Chloride	0.52	J	0.53	J	µg/L	1.9	40	100
PPMP-66-MW14	WG	10/26/20	680-190652-1	SW6020A	Iron	2300		3100		µg/L	26	25	100
PPMP-66-MW14	WG	10/26/20	680-190652-1	SW6020A	Iron, dissolved	120		130		µg/L	7.7	25	100
PPMP-66-MW14	WG	10/26/20	680-190652-1	SW9056A	Sulfate	410		620		mg/L	34	10	25

Notes:
FD = Field duplicate
MDL = Method detection limit
µg/L = micrograms per liter
NS = Normal sample
RL = Reporting limit
RPD = Relative percent difference
WG = Groundwater

Lab Flag:
J = Estimated value. The analyte is positively identified and the concentration is less than the reporting limit, but greater than the method detection limit.

Blue text, border, and bold indicate RPD above criteria.

Table C5-5: Summary of LCS/LCSD Recoveries and RPDs
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Method	Delivery Group	Analysis Date	Analytical Batch	Matrix	Parameter Name	LCS %R	LCSD %R	LCL	UCL	RPD	RPD Limit
SW8260B	680-183592-1	5/12/20	680-618363	W	1,1-Dichloroethene	100	97	80	120	3	20
SW8260B	680-183592-1	5/12/20	680-618363	W	Cis-1,2-Dichloroethene	101	100	76	120	1	20
SW8260B	680-183592-1	5/12/20	680-618363	W	Trans-1,2-Dichloroethene	102	101	80	120	1	20
SW8260B	680-183592-1	5/12/20	680-618363	W	Trichloroethene	103	103	80	120	0	20
SW8260B	680-183592-1	5/12/20	680-618363	W	Vinyl Chloride	92	88	71	128	4	20
SW6020A	680-183592-1	5/13/20	680-618669	W	Iron, dissolved	90	91	80	120	1	20
SW8260B	680-183592-1	5/13/20	680-618512	W	1,1-Dichloroethene	98	98	80	120	0	20
SW8260B	680-183592-1	5/13/20	680-618512	W	Cis-1,2-Dichloroethene	103	99	76	120	4	20
SW8260B	680-183592-1	5/13/20	680-618512	W	Trans-1,2-Dichloroethene	102	100	80	120	2	20
SW8260B	680-183592-1	5/13/20	680-618512	W	Trichloroethene	100	100	80	120	0	20
SW8260B	680-183592-1	5/13/20	680-618512	W	Vinyl Chloride	89	89	71	128	0	20
SW9056A	680-183592-1	5/16/20	680-618957	W	Sulfate	102	102	87	112	0	15
SW9056A	680-183592-1	5/19/20	680-619264	W	Sulfate	103	104	87	112	1	15
SW9056A	680-190652-1	11/4/20	680-642353	W	Sulfate	99	99	87	112	0	15
SW9056A	680-190652-1	11/5/20	680-642486	W	Sulfate	101	101	87	112	0	15
RSK-175	680-190652-1	11/6/20	680-642725	W	Ethane	95	88	75	125	8	30
RSK-175	680-190652-1	11/6/20	680-642725	W	Ethene	91	86	75	125	6	30
RSK-175	680-190652-1	11/6/20	680-642725	W	Methane	91	88	75	125	3	30
RSK-175	680-190652-1	11/6/20	680-642725	W	Methane	91	94	75	125	3	30
RSK-175	680-190652-1	11/6/20	680-642725	W	Methane	103	88	75	125	16	30
RSK-175	680-190652-1	11/6/20	680-642725	W	Methane	103	94	75	125	9	30
SW8260B	680-190652-1	11/8/20	680-642949	W	1,1-Dichloroethene	88	86	80	120	2	20
SW8260B	680-190652-1	11/8/20	680-642949	W	Cis-1,2-Dichloroethene	87	87	76	120	0	20
SW8260B	680-190652-1	11/8/20	680-642949	W	Trans-1,2-Dichloroethene	90	86	80	120	5	20
SW8260B	680-190652-1	11/8/20	680-642949	W	Trichloroethene	96	96	80	120	0	20
SW8260B	680-190652-1	11/8/20	680-642949	W	Vinyl Chloride	85	87	71	128	2	20
SW8260B	680-190652-1	11/9/20	680-643059	W	1,1-Dichloroethene	83	90	80	120	8	20
SW8260B	680-190652-1	11/9/20	680-643059	W	Cis-1,2-Dichloroethene	101	100	76	120	1	20
SW8260B	680-190652-1	11/9/20	680-643059	W	Trans-1,2-Dichloroethene	91	93	80	120	2	20
SW8260B	680-190652-1	11/9/20	680-643059	W	Trichloroethene	94	96	80	120	2	20
SW8260B	680-190652-1	11/9/20	680-643059	W	Vinyl Chloride	89	96	71	128	8	20
SW8260B	680-190652-1	11/10/20	680-643200	W	1,1-Dichloroethene	104	101	80	120	3	20

Table C5-5: Summary of LCS/LCSD Recoveries and RPDs
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Method	Delivery Group	Analysis Date	Analytical Batch	Matrix	Parameter Name	LCS %R	LCSD %R	LCL	UCL	RPD	RPD Limit
SW8260B	680-190652-1	11/10/20	680-643200	W	Cis-1,2-Dichloroethene	94	94	76	120	0	20
SW8260B	680-190652-1	11/10/20	680-643200	W	Trans-1,2-Dichloroethene	106	105	80	120	1	20
SW8260B	680-190652-1	11/10/20	680-643200	W	Trichloroethene	111	110	80	120	1	20
SW8260B	680-190652-1	11/10/20	680-643200	W	Vinyl Chloride	99	99	71	128	0	20

Notes:

%R = Percent recovery
LCL = Lower control limit
UCL = Upper control limit
LCS = Laboratory control sample
LCSD = Laboratory control sample duplicate
RPD = Relative percent difference
W = Water

Indicates the %R is less than the LCL.

Indicates the %R is greater than the UCL or the RPD is greater than the RPD Limit.

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-165186-1	PPMP-66-MW01	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	73	131
680-165186-1	PPMP-66-MW01	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-165186-1	PPMP-66-MW01	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	99	80	122
680-165186-1	PPMP-66-MW01	2/26/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-165186-2	PPMP-66-MW01	2/26/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	89	73	131
680-165186-2	PPMP-66-MW01	2/26/19	WG	FD	SW8260B	4-Bromofluorobenzene	105	80	120
680-165186-2	PPMP-66-MW01	2/26/19	WG	FD	SW8260B	Dibromofluoromethane	95	80	122
680-165186-2	PPMP-66-MW01	2/26/19	WG	FD	SW8260B	Toluene-D8	100	80	120
680-169435-1	PPMP-66-MW01	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	101	73	131
680-169435-1	PPMP-66-MW01	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	103	80	120
680-169435-1	PPMP-66-MW01	5/21/19	WG	NS	8260B	Dibromofluoromethane	105	80	122
680-169435-1	PPMP-66-MW01	5/21/19	WG	NS	8260B	Toluene-D8	106	80	120
680-172792-1	PPMP-66-MW01	8/6/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-172792-1	PPMP-66-MW01	8/6/19	WG	NS	SW8260B	4-Bromofluorobenzene	101	80	120
680-172792-1	PPMP-66-MW01	8/6/19	WG	NS	SW8260B	Dibromofluoromethane	103	80	122
680-172792-1	PPMP-66-MW01	8/6/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-176441-1	PPMP-66-MW01	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	73	131
680-176441-1	PPMP-66-MW01	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW01	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	106	80	122
680-176441-1	PPMP-66-MW01	11/4/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-165186-2	PPMP-66-MW02RR	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	97	73	131
680-165186-2	PPMP-66-MW02RR	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	97	80	120
680-165186-2	PPMP-66-MW02RR	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	98	80	122
680-165186-2	PPMP-66-MW02RR	2/26/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-169435-2	PPMP-66-MW02RR	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	116	73	131
680-169435-2	PPMP-66-MW02RR	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	124	80	120
680-169435-2	PPMP-66-MW02RR	5/21/19	WG	NS	8260B	Dibromofluoromethane	118	80	122
680-169435-2	PPMP-66-MW02RR	5/21/19	WG	NS	8260B	Toluene-D8	115	80	120
680-172792-1	PPMP-66-MW02RR	8/7/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	73	131
680-172792-1	PPMP-66-MW02RR	8/7/19	WG	NS	SW8260B	4-Bromofluorobenzene	102	80	120
680-172792-1	PPMP-66-MW02RR	8/7/19	WG	NS	SW8260B	Dibromofluoromethane	101	80	122
680-172792-1	PPMP-66-MW02RR	8/7/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-176441-1	PPMP-66-MW02RR	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-176441-1	PPMP-66-MW02RR	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW02RR	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	105	80	122
680-176441-1	PPMP-66-MW02RR	11/4/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-165186-1	PPMP-66-MW04	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	101	73	131
680-165186-1	PPMP-66-MW04	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-165186-1	PPMP-66-MW04	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	98	80	122
680-165186-1	PPMP-66-MW04	2/25/19	WG	NS	SW8260B	Toluene-D8	99	80	120
680-169435-1	PPMP-66-MW04	5/20/19	WG	NS	8260B	1,2-Dichloroethane-D4	96	73	131
680-169435-1	PPMP-66-MW04	5/20/19	WG	NS	8260B	4-Bromofluorobenzene	93	80	120
680-169435-1	PPMP-66-MW04	5/20/19	WG	NS	8260B	Dibromofluoromethane	99	80	122
680-169435-1	PPMP-66-MW04	5/20/19	WG	NS	8260B	Toluene-D8	100	80	120
680-172792-1	PPMP-66-MW04	8/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	73	131
680-172792-1	PPMP-66-MW04	8/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	105	80	120
680-172792-1	PPMP-66-MW04	8/5/19	WG	NS	SW8260B	Dibromofluoromethane	104	80	122
680-172792-1	PPMP-66-MW04	8/5/19	WG	NS	SW8260B	Toluene-D8	81	80	120
680-176441-1	PPMP-66-MW04	11/1/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-176441-1	PPMP-66-MW04	11/1/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW04	11/1/19	WG	NS	SW8260B	Dibromofluoromethane	105	80	122
680-176441-1	PPMP-66-MW04	11/1/19	WG	NS	SW8260B	Toluene-D8	105	80	120
680-165186-2	PPMP-66-MW06R	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	90	73	131
680-165186-2	PPMP-66-MW06R	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	103	80	120
680-165186-2	PPMP-66-MW06R	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	96	80	122
680-165186-2	PPMP-66-MW06R	2/26/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-169435-2	PPMP-66-MW06R	5/22/19	WG	NS	8260B	1,2-Dichloroethane-D4	102	73	131
680-169435-2	PPMP-66-MW06R	5/22/19	WG	NS	8260B	4-Bromofluorobenzene	111	80	120
680-169435-2	PPMP-66-MW06R	5/22/19	WG	NS	8260B	Dibromofluoromethane	106	80	122
680-169435-2	PPMP-66-MW06R	5/22/19	WG	NS	8260B	Toluene-D8	103	80	120
680-172792-1	PPMP-66-MW06R	8/7/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	73	131
680-172792-1	PPMP-66-MW06R	8/7/19	WG	NS	SW8260B	4-Bromofluorobenzene	102	80	120
680-172792-1	PPMP-66-MW06R	8/7/19	WG	NS	SW8260B	Dibromofluoromethane	102	80	122
680-172792-1	PPMP-66-MW06R	8/7/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-176441-1	PPMP-66-MW06R	11/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	73	131
680-176441-1	PPMP-66-MW06R	11/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-176441-1	PPMP-66-MW06R	11/5/19	WG	NS	SW8260B	Dibromofluoromethane	105	80	122
680-176441-1	PPMP-66-MW06R	11/5/19	WG	NS	SW8260B	Toluene-D8	104	80	120
680-165186-1	PPMP-66-MW07	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	73	131
680-165186-1	PPMP-66-MW07	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	98	80	120
680-165186-1	PPMP-66-MW07	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	97	80	122
680-165186-1	PPMP-66-MW07	2/25/19	WG	NS	SW8260B	Toluene-D8	99	80	120
680-165186-1	PPMP-66-MW07	2/25/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	101	73	131
680-165186-1	PPMP-66-MW07	2/25/19	WG	FD	SW8260B	4-Bromofluorobenzene	95	80	120
680-165186-1	PPMP-66-MW07	2/25/19	WG	FD	SW8260B	Dibromofluoromethane	99	80	122
680-165186-1	PPMP-66-MW07	2/25/19	WG	FD	SW8260B	Toluene-D8	103	80	120
680-169435-1	PPMP-66-MW07	5/20/19	WG	NS	8260B	1,2-Dichloroethane-D4	98	73	131
680-169435-1	PPMP-66-MW07	5/20/19	WG	NS	8260B	4-Bromofluorobenzene	93	80	120
680-169435-1	PPMP-66-MW07	5/20/19	WG	NS	8260B	Dibromofluoromethane	103	80	122
680-169435-1	PPMP-66-MW07	5/20/19	WG	NS	8260B	Toluene-D8	102	80	120
680-172792-1	PPMP-66-MW07	8/6/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-172792-1	PPMP-66-MW07	8/6/19	WG	NS	SW8260B	4-Bromofluorobenzene	102	80	120
680-172792-1	PPMP-66-MW07	8/6/19	WG	NS	SW8260B	Dibromofluoromethane	104	80	122
680-172792-1	PPMP-66-MW07	8/6/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-176441-1	PPMP-66-MW07	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-176441-1	PPMP-66-MW07	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW07	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	104	80	122
680-176441-1	PPMP-66-MW07	11/4/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-176441-1	PPMP-66-MW07	11/4/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	105	73	131
680-176441-1	PPMP-66-MW07	11/4/19	WG	FD	SW8260B	4-Bromofluorobenzene	102	80	120
680-176441-1	PPMP-66-MW07	11/4/19	WG	FD	SW8260B	Dibromofluoromethane	108	80	122
680-176441-1	PPMP-66-MW07	11/4/19	WG	FD	SW8260B	Toluene-D8	102	80	120
680-165186-2	PPMP-66-MW08	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	101	73	131
680-165186-2	PPMP-66-MW08	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	95	80	120
680-165186-2	PPMP-66-MW08	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	99	80	122
680-165186-2	PPMP-66-MW08	2/26/19	WG	NS	SW8260B	Toluene-D8	102	80	120
680-169435-2	PPMP-66-MW08	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	102	73	131
680-169435-2	PPMP-66-MW08	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	103	80	120
680-169435-2	PPMP-66-MW08	5/21/19	WG	NS	8260B	Dibromofluoromethane	111	80	122

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-169435-2	PPMP-66-MW08	5/21/19	WG	NS	8260B	Toluene-D8	106	80	120
680-172792-1	PPMP-66-MW08	8/7/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	92	73	131
680-172792-1	PPMP-66-MW08	8/7/19	WG	NS	SW8260B	4-Bromofluorobenzene	104	80	120
680-172792-1	PPMP-66-MW08	8/7/19	WG	NS	SW8260B	Dibromofluoromethane	97	80	122
680-172792-1	PPMP-66-MW08	8/7/19	WG	NS	SW8260B	Toluene-D8	104	80	120
680-176441-1	PPMP-66-MW08	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	73	131
680-176441-1	PPMP-66-MW08	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW08	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	107	80	122
680-176441-1	PPMP-66-MW08	11/4/19	WG	NS	SW8260B	Toluene-D8	102	80	120
680-165186-1	PPMP-66-MW11	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	73	131
680-165186-1	PPMP-66-MW11	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	96	80	120
680-165186-1	PPMP-66-MW11	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	98	80	122
680-165186-1	PPMP-66-MW11	2/25/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-169435-1	PPMP-66-MW11	5/20/19	WG	NS	8260B	1,2-Dichloroethane-D4	97	73	131
680-169435-1	PPMP-66-MW11	5/20/19	WG	NS	8260B	4-Bromofluorobenzene	93	80	120
680-169435-1	PPMP-66-MW11	5/20/19	WG	NS	8260B	Dibromofluoromethane	99	80	122
680-169435-1	PPMP-66-MW11	5/20/19	WG	NS	8260B	Toluene-D8	100	80	120
680-172792-1	PPMP-66-MW11	8/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	73	131
680-172792-1	PPMP-66-MW11	8/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	104	80	120
680-172792-1	PPMP-66-MW11	8/5/19	WG	NS	SW8260B	Dibromofluoromethane	103	80	122
680-172792-1	PPMP-66-MW11	8/5/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-176441-1	PPMP-66-MW11	11/1/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	73	131
680-176441-1	PPMP-66-MW11	11/1/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW11	11/1/19	WG	NS	SW8260B	Dibromofluoromethane	106	80	122
680-176441-1	PPMP-66-MW11	11/1/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-165186-1	PPMP-66-MW13	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	73	131
680-165186-1	PPMP-66-MW13	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	73	131
680-165186-1	PPMP-66-MW13	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	97	73	131
680-165186-1	PPMP-66-MW13	2/25/19	WG	NS	SW8260B	Toluene-D8	99	80	120
680-169435-1	PPMP-66-MW13	5/20/19	WG	NS	8260B	1,2-Dichloroethane-D4	101	80	120
680-169435-1	PPMP-66-MW13	5/20/19	WG	NS	8260B	4-Bromofluorobenzene	103	80	120
680-169435-1	PPMP-66-MW13	5/20/19	WG	NS	8260B	Dibromofluoromethane	110	80	122
680-169435-1	PPMP-66-MW13	5/20/19	WG	NS	8260B	Toluene-D8	107	80	122

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-172792-1	PPMP-66-MW13	8/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	80	122
680-172792-1	PPMP-66-MW13	8/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	107	80	120
680-172792-1	PPMP-66-MW13	8/5/19	WG	NS	SW8260B	Dibromofluoromethane	104	80	120
680-172792-1	PPMP-66-MW13	8/5/19	WG	NS	SW8260B	Toluene-D8	82	80	120
680-176441-1	PPMP-66-MW13	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	80	122
680-176441-1	PPMP-66-MW13	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW13	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	107	73	131
680-176441-1	PPMP-66-MW13	11/4/19	WG	NS	SW8260B	Toluene-D8	104	80	120
680-165186-1	PPMP-66-MW14	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	80	122
680-165186-1	PPMP-66-MW14	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	98	80	120
680-165186-1	PPMP-66-MW14	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	97	73	131
680-165186-1	PPMP-66-MW14	2/25/19	WG	NS	SW8260B	Toluene-D8	99	80	120
680-169435-1	PPMP-66-MW14	5/20/19	WG	NS	8260B	1,2-Dichloroethane-D4	101	80	122
680-169435-1	PPMP-66-MW14	5/20/19	WG	NS	8260B	4-Bromofluorobenzene	103	80	120
680-169435-1	PPMP-66-MW14	5/20/19	WG	NS	8260B	Dibromofluoromethane	110	73	131
680-169435-1	PPMP-66-MW14	5/20/19	WG	NS	8260B	Toluene-D8	107	80	120
680-169435-1	PPMP-66-MW14	5/20/19	WG	FD	8260B	1,2-Dichloroethane-D4	102	80	122
680-169435-1	PPMP-66-MW14	5/20/19	WG	FD	8260B	4-Bromofluorobenzene	104	80	120
680-169435-1	PPMP-66-MW14	5/20/19	WG	FD	8260B	Dibromofluoromethane	110	73	131
680-169435-1	PPMP-66-MW14	5/20/19	WG	FD	8260B	Toluene-D8	106	80	120
680-172792-1	PPMP-66-MW14	8/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	80	122
680-172792-1	PPMP-66-MW14	8/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	106	80	120
680-172792-1	PPMP-66-MW14	8/5/19	WG	NS	SW8260B	Dibromofluoromethane	104	73	131
680-172792-1	PPMP-66-MW14	8/5/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-172792-1	PPMP-66-MW14	8/5/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	111	80	122
680-172792-1	PPMP-66-MW14	8/5/19	WG	FD	SW8260B	4-Bromofluorobenzene	104	80	120
680-172792-1	PPMP-66-MW14	8/5/19	WG	FD	SW8260B	Dibromofluoromethane	112	73	131
680-172792-1	PPMP-66-MW14	8/5/19	WG	FD	SW8260B	Toluene-D8	96	80	120
680-176441-1	PPMP-66-MW14	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	80	122
680-176441-1	PPMP-66-MW14	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW14	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	104	73	131
680-176441-1	PPMP-66-MW14	11/4/19	WG	NS	SW8260B	Toluene-D8	104	80	120
680-165186-2	PPMP-66-MW16	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	80	122

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-165186-2	PPMP-66-MW16	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	98	80	120
680-165186-2	PPMP-66-MW16	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	97	73	131
680-165186-2	PPMP-66-MW16	2/26/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-169435-2	PPMP-66-MW16	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	101	80	122
680-169435-2	PPMP-66-MW16	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	102	80	120
680-169435-2	PPMP-66-MW16	5/21/19	WG	NS	8260B	Dibromofluoromethane	108	73	131
680-169435-2	PPMP-66-MW16	5/21/19	WG	NS	8260B	Toluene-D8	105	80	120
680-172792-1	PPMP-66-MW16	8/7/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	80	122
680-172792-1	PPMP-66-MW16	8/7/19	WG	NS	SW8260B	4-Bromofluorobenzene	132	80	120
680-172792-1	PPMP-66-MW16	8/7/19	WG	NS	SW8260B	Dibromofluoromethane	102	73	131
680-172792-1	PPMP-66-MW16	8/7/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-176441-1	PPMP-66-MW16	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	80	122
680-176441-1	PPMP-66-MW16	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	98	80	120
680-176441-1	PPMP-66-MW16	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	105	73	131
680-176441-1	PPMP-66-MW16	11/4/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-165186-1	PPMP-66-MW17	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	89	80	122
680-165186-1	PPMP-66-MW17	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	105	80	120
680-165186-1	PPMP-66-MW17	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	97	73	131
680-165186-1	PPMP-66-MW17	2/25/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-169435-1	PPMP-66-MW17	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	99	80	122
680-169435-1	PPMP-66-MW17	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	105	80	120
680-169435-1	PPMP-66-MW17	5/21/19	WG	NS	8260B	Dibromofluoromethane	108	73	131
680-169435-1	PPMP-66-MW17	5/21/19	WG	NS	8260B	Toluene-D8	106	80	120
680-172792-1	PPMP-66-MW17	8/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	80	122
680-172792-1	PPMP-66-MW17	8/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	105	80	120
680-172792-1	PPMP-66-MW17	8/5/19	WG	NS	SW8260B	Dibromofluoromethane	105	73	131
680-172792-1	PPMP-66-MW17	8/5/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-172792-1	PPMP-66-MW17	8/5/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	105	80	122
680-172792-1	PPMP-66-MW17	8/5/19	WG	FD	SW8260B	4-Bromofluorobenzene	130	80	120
680-172792-1	PPMP-66-MW17	8/5/19	WG	FD	SW8260B	Dibromofluoromethane	105	73	131
680-172792-1	PPMP-66-MW17	8/5/19	WG	FD	SW8260B	Toluene-D8	103	80	120
680-176441-1	PPMP-66-MW17	11/1/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	105	80	122
680-176441-1	PPMP-66-MW17	11/1/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-176441-1	PPMP-66-MW17	11/1/19	WG	NS	SW8260B	Dibromofluoromethane	107	73	131
680-176441-1	PPMP-66-MW17	11/1/19	WG	NS	SW8260B	Toluene-D8	102	80	120
680-176441-1	PPMP-66-MW17	11/1/19	WG	FD	SW8260B	1,2-Dichloroethane-D4	105	80	122
680-176441-1	PPMP-66-MW17	11/1/19	WG	FD	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW17	11/1/19	WG	FD	SW8260B	Dibromofluoromethane	106	73	131
680-176441-1	PPMP-66-MW17	11/1/19	WG	FD	SW8260B	Toluene-D8	103	80	120
680-165186-1	PPMP-66-MW18R	2/25/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	98	80	122
680-165186-1	PPMP-66-MW18R	2/25/19	WG	NS	SW8260B	4-Bromofluorobenzene	96	80	120
680-165186-1	PPMP-66-MW18R	2/25/19	WG	NS	SW8260B	Dibromofluoromethane	98	73	131
680-165186-1	PPMP-66-MW18R	2/25/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-169435-1	PPMP-66-MW18R	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	101	80	122
680-169435-1	PPMP-66-MW18R	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	101	80	120
680-169435-1	PPMP-66-MW18R	5/21/19	WG	NS	8260B	Dibromofluoromethane	106	73	131
680-169435-1	PPMP-66-MW18R	5/21/19	WG	NS	8260B	Toluene-D8	106	80	120
680-169435-2	PPMP-66-MW18R	5/21/19	WG	FD	8260B	1,2-Dichloroethane-D4	101	80	122
680-169435-2	PPMP-66-MW18R	5/21/19	WG	FD	8260B	4-Bromofluorobenzene	104	80	120
680-169435-2	PPMP-66-MW18R	5/21/19	WG	FD	8260B	Dibromofluoromethane	111	73	131
680-169435-2	PPMP-66-MW18R	5/21/19	WG	FD	8260B	Toluene-D8	107	80	120
680-172792-1	PPMP-66-MW18R	8/6/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	80	122
680-172792-1	PPMP-66-MW18R	8/6/19	WG	NS	SW8260B	4-Bromofluorobenzene	102	80	120
680-172792-1	PPMP-66-MW18R	8/6/19	WG	NS	SW8260B	Dibromofluoromethane	102	73	131
680-172792-1	PPMP-66-MW18R	8/6/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-176441-1	PPMP-66-MW18R	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	103	80	122
680-176441-1	PPMP-66-MW18R	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW18R	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	106	73	131
680-176441-1	PPMP-66-MW18R	11/4/19	WG	NS	SW8260B	Toluene-D8	104	80	120
680-165186-2	PPMP-66-MW22	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	100	80	122
680-165186-2	PPMP-66-MW22	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	97	80	120
680-165186-2	PPMP-66-MW22	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	95	73	131
680-165186-2	PPMP-66-MW22	2/26/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-169435-2	PPMP-66-MW22	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	100	80	122
680-169435-2	PPMP-66-MW22	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	103	80	120
680-169435-2	PPMP-66-MW22	5/21/19	WG	NS	8260B	Dibromofluoromethane	108	73	131

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-169435-2	PPMP-66-MW22	5/21/19	WG	NS	8260B	Toluene-D8	106	80	120
680-172792-1	PPMP-66-MW22	8/6/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	102	80	122
680-172792-1	PPMP-66-MW22	8/6/19	WG	NS	SW8260B	4-Bromofluorobenzene	108	80	120
680-172792-1	PPMP-66-MW22	8/6/19	WG	NS	SW8260B	Dibromofluoromethane	102	73	131
680-172792-1	PPMP-66-MW22	8/6/19	WG	NS	SW8260B	Toluene-D8	100	80	120
680-176441-1	PPMP-66-MW22	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	107	80	122
680-176441-1	PPMP-66-MW22	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	97	80	120
680-176441-1	PPMP-66-MW22	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	108	73	131
680-176441-1	PPMP-66-MW22	11/4/19	WG	NS	SW8260B	Toluene-D8	102	80	120
680-165186-2	PPMP-66-MW23R	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	99	73	131
680-165186-2	PPMP-66-MW23R	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-165186-2	PPMP-66-MW23R	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	96	80	122
680-165186-2	PPMP-66-MW23R	2/26/19	WG	NS	SW8260B	Toluene-D8	102	80	120
680-169435-2	PPMP-66-MW23R	5/21/19	WG	NS	8260B	1,2-Dichloroethane-D4	100	73	131
680-169435-2	PPMP-66-MW23R	5/21/19	WG	NS	8260B	4-Bromofluorobenzene	101	80	120
680-169435-2	PPMP-66-MW23R	5/21/19	WG	NS	8260B	Dibromofluoromethane	100	80	122
680-169435-2	PPMP-66-MW23R	5/21/19	WG	NS	8260B	Toluene-D8	107	80	120
680-172792-1	PPMP-66-MW23R	8/6/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	101	73	131
680-172792-1	PPMP-66-MW23R	8/6/19	WG	NS	SW8260B	4-Bromofluorobenzene	103	80	120
680-172792-1	PPMP-66-MW23R	8/6/19	WG	NS	SW8260B	Dibromofluoromethane	103	80	122
680-172792-1	PPMP-66-MW23R	8/6/19	WG	NS	SW8260B	Toluene-D8	99	80	120
680-176441-1	PPMP-66-MW23R	11/5/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	104	73	131
680-176441-1	PPMP-66-MW23R	11/5/19	WG	NS	SW8260B	4-Bromofluorobenzene	99	80	120
680-176441-1	PPMP-66-MW23R	11/5/19	WG	NS	SW8260B	Dibromofluoromethane	109	80	122
680-176441-1	PPMP-66-MW23R	11/5/19	WG	NS	SW8260B	Toluene-D8	105	80	120
680-165186-2	PPMP-66-MW24R	2/26/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	89	73	131
680-165186-2	PPMP-66-MW24R	2/26/19	WG	NS	SW8260B	4-Bromofluorobenzene	108	80	120
680-165186-2	PPMP-66-MW24R	2/26/19	WG	NS	SW8260B	Dibromofluoromethane	96	80	122
680-165186-2	PPMP-66-MW24R	2/26/19	WG	NS	SW8260B	Toluene-D8	101	80	120
680-169435-2	PPMP-66-MW24R	5/22/19	WG	NS	8260B	1,2-Dichloroethane-D4	103	73	131
680-169435-2	PPMP-66-MW24R	5/22/19	WG	NS	8260B	4-Bromofluorobenzene	109	80	120
680-169435-2	PPMP-66-MW24R	5/22/19	WG	NS	8260B	Dibromofluoromethane	107	80	122
680-169435-2	PPMP-66-MW24R	5/22/19	WG	NS	8260B	Toluene-D8	103	80	120

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-172792-1	PPMP-66-MW24R	8/7/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	97	73	131
680-172792-1	PPMP-66-MW24R	8/7/19	WG	NS	SW8260B	4-Bromofluorobenzene	104	80	120
680-172792-1	PPMP-66-MW24R	8/7/19	WG	NS	SW8260B	Dibromofluoromethane	100	80	122
680-172792-1	PPMP-66-MW24R	8/7/19	WG	NS	SW8260B	Toluene-D8	105	80	120
680-176441-1	PPMP-66-MW24R	11/4/19	WG	NS	SW8260B	1,2-Dichloroethane-D4	106	73	131
680-176441-1	PPMP-66-MW24R	11/4/19	WG	NS	SW8260B	4-Bromofluorobenzene	100	80	120
680-176441-1	PPMP-66-MW24R	11/4/19	WG	NS	SW8260B	Dibromofluoromethane	107	80	122
680-176441-1	PPMP-66-MW24R	11/4/19	WG	NS	SW8260B	Toluene-D8	103	80	120
680-172792-1	IDW WASTE040	8/8/19	W	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-172792-1	IDW WASTE040	8/8/19	W	NS	SW8260B	4-Bromofluorobenzene	105	80	120
680-172792-1	IDW WASTE040	8/8/19	W	NS	SW8260B	Dibromofluoromethane	103	80	122
680-172792-1	IDW WASTE040	8/8/19	W	NS	SW8260B	Toluene-D8	102	80	120
680-165186-2	MATERIAL BLANK	2/27/19	W	NS	SW8260B	1,2-Dichloroethane-D4	90	73	131
680-165186-2	MATERIAL BLANK	2/27/19	W	NS	SW8260B	4-Bromofluorobenzene	107	80	120
680-165186-2	MATERIAL BLANK	2/27/19	W	NS	SW8260B	Dibromofluoromethane	96	80	122
680-165186-2	MATERIAL BLANK	2/27/19	W	NS	SW8260B	Toluene-D8	100	80	120
680-172792-1	MATERIAL BLANK	8/7/19	W	NS	SW8260B	1,2-Dichloroethane-D4	102	73	131
680-172792-1	MATERIAL BLANK	8/7/19	W	NS	SW8260B	4-Bromofluorobenzene	103	80	120
680-172792-1	MATERIAL BLANK	8/7/19	W	NS	SW8260B	Dibromofluoromethane	101	80	122
680-172792-1	MATERIAL BLANK	8/7/19	W	NS	SW8260B	Toluene-D8	102	80	120
680-176441-1	MATERIAL BLANK	11/5/19	W	NS	SW8260B	1,2-Dichloroethane-D4	103	73	131
680-176441-1	MATERIAL BLANK	11/5/19	W	NS	SW8260B	4-Bromofluorobenzene	108	80	120
680-176441-1	MATERIAL BLANK	11/5/19	W	NS	SW8260B	Dibromofluoromethane	104	80	122
680-176441-1	MATERIAL BLANK	11/5/19	W	NS	SW8260B	Toluene-D8	105	80	120
680-165186-1	TRIP BLANK (TB519)	2/25/19	W	TB	SW8260B	1,2-Dichloroethane-D4	102	73	131
680-165186-1	TRIP BLANK (TB519)	2/25/19	W	TB	SW8260B	4-Bromofluorobenzene	98	80	120
680-165186-1	TRIP BLANK (TB519)	2/25/19	W	TB	SW8260B	Dibromofluoromethane	98	80	122
680-165186-1	TRIP BLANK (TB519)	2/25/19	W	TB	SW8260B	Toluene-D8	99	80	120
680-165186-2	TRIP BLANK (TB520)	2/27/19	W	TB	SW8260B	1,2-Dichloroethane-D4	87	73	131
680-165186-2	TRIP BLANK (TB520)	2/27/19	W	TB	SW8260B	4-Bromofluorobenzene	105	80	120
680-165186-2	TRIP BLANK (TB520)	2/27/19	W	TB	SW8260B	Dibromofluoromethane	95	80	122
680-165186-2	TRIP BLANK (TB520)	2/27/19	W	TB	SW8260B	Toluene-D8	100	80	120
680-169435-1	TRIP BLANK (TB533)	5/22/19	W	TB	8260B	1,2-Dichloroethane-D4	103	73	131

Table C5-6: Summary of Surrogate Recoveries
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Delivery Group	Station Name	Sample Date	Matrix	QC Code	Method	Parameter Name	%R	LCL	UCL
680-169435-1	TRIP BLANK (TB533)	5/22/19	W	TB	8260B	4-Bromofluorobenzene	110	80	120
680-169435-1	TRIP BLANK (TB533)	5/22/19	W	TB	8260B	Dibromofluoromethane	122	80	122
680-169435-1	TRIP BLANK (TB533)	5/22/19	W	TB	8260B	Toluene-D8	119	80	120
680-169435-2	TRIP BLANK (TB534)	5/22/19	W	TB	8260B	1,2-Dichloroethane-D4	99	73	131
680-169435-2	TRIP BLANK (TB534)	5/22/19	W	TB	8260B	4-Bromofluorobenzene	113	80	120
680-169435-2	TRIP BLANK (TB534)	5/22/19	W	TB	8260B	Dibromofluoromethane	104	80	122
680-169435-2	TRIP BLANK (TB534)	5/22/19	W	TB	8260B	Toluene-D8	102	80	120
680-172792-1	TRIP BLANK (TB535)	8/7/19	W	TB	SW8260B	1,2-Dichloroethane-D4	99	73	131
680-172792-1	TRIP BLANK (TB535)	8/7/19	W	TB	SW8260B	4-Bromofluorobenzene	83	80	120
680-172792-1	TRIP BLANK (TB535)	8/7/19	W	TB	SW8260B	Dibromofluoromethane	93	80	122
680-172792-1	TRIP BLANK (TB535)	8/7/19	W	TB	SW8260B	Toluene-D8	100	80	120
680-172792-1	TRIP BLANK (TB536)	8/7/19	W	TB	SW8260B	1,2-Dichloroethane-D4	99	73	131
680-172792-1	TRIP BLANK (TB536)	8/7/19	W	TB	SW8260B	4-Bromofluorobenzene	100	80	120
680-172792-1	TRIP BLANK (TB536)	8/7/19	W	TB	SW8260B	Dibromofluoromethane	93	80	122
680-172792-1	TRIP BLANK (TB536)	8/7/19	W	TB	SW8260B	Toluene-D8	99	80	120
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	1,2-Dichloroethane-D4	102	73	131
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	1,2-Dichloroethane-D4	102	80	120
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	4-Bromofluorobenzene	101	80	122
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	4-Bromofluorobenzene	102	80	120
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	Dibromofluoromethane	104	73	131
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	Dibromofluoromethane	107	80	120
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	Toluene-D8	104	80	122
680-176441-1	TRIP BLANK	11/5/19	W	TB	SW8260B	Toluene-D8	105	80	120

Notes:

FD = Field duplicate
LCL = Lower control limit
NS = Normal sample
QC = Quality control
%R = Percent recovery
TB = Trip blank
UCL = Upper control limit
W = Water
WG = Groundwater
WS = Source water

Indicates the %R is less than the LCL.
Indicates the %R is greater than the UCL.

Table C6-1: Reporting Limits and Method Detection Limits Compared to RBTLs
Small Weapons Repair Shop, Parcel 66(7)
McClellan, Annison, Alabama

Matrix	Method	Parameter Name	MDL	RL	Units	GS RBTL
WG	SW8260B	1,1-Dichloroethene	0.36	1	µg/L	4800
WG	SW8260B	Cis-1,2-Dichloroethene	0.41	1	µg/L	991
WG	SW8260B	Trans-1,2-Dichloroethene	0.37	1	µg/L	1950
WG	SW8260B	Trichloroethene	0.48	1	µg/L	205
WG	SW8260B	Vinyl Chloride	0.5	1	µg/L	3.86

Notes:
-- = Not applicable
GS = Groundskeeper
MDL = Method detection limit
µg/L = micrograms per liter
RL = Reporting limit
RBTL = Risk-Based Target Level
WG = Groundwater

ATTACHMENT C1

Laboratory Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-183592-1
Client Project/Site: Parcel 66(7), Fmr SWRS

For:
Matrix Environmental Services, LLC
1601 Blake Street
Suite 200
Denver, Colorado 80202

Attn: Ms. Betty Van Pelt

Authorized for release by:
5/20/2020 5:43:28 PM

Jon Lawhon, Project Manager I
(912)250-0283
jon.lawhon@testamericainc.com

Definitions/Glossary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate recovery exceeds control limits

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-183592-1	PPMP-66-MW04	Water	05/05/20 10:46	05/08/20 10:00	
680-183592-2	PPMP-66-MW11	Water	05/05/20 11:51	05/08/20 10:00	
680-183592-3	PPMP-66-MW07	Water	05/05/20 14:21	05/08/20 10:00	
680-183592-4	PPMP-66-MW13	Water	05/05/20 13:06	05/08/20 10:00	
680-183592-5	PPMP-66-MW03	Water	05/05/20 11:10	05/08/20 10:00	
680-183592-6	PPMP-66-MW14	Water	05/05/20 12:30	05/08/20 10:00	
680-183592-7	PPMP-66-MW17	Water	05/05/20 13:50	05/08/20 10:00	
680-183592-8	PPMP-66-MW18R	Water	05/06/20 09:30	05/08/20 10:00	
680-183592-9	PPMP-66-MW01	Water	05/06/20 11:05	05/08/20 10:00	
680-183592-10	DUP344	Water	05/06/20 00:00	05/08/20 10:00	
680-183592-11	TB552	Water	05/07/20 12:07	05/08/20 10:00	
680-183592-12	PPMP-66-MW22	Water	05/06/20 11:06	05/08/20 10:00	
680-183592-13	PPMP-66-MW16	Water	05/06/20 14:01	05/08/20 10:00	
680-183592-14	PPMP-66-MW21	Water	05/06/20 12:26	05/08/20 10:00	
680-183592-15	PPMP-66-MW08	Water	05/06/20 12:35	05/08/20 10:00	
680-183592-16	PPMP-66-MW23R	Water	05/06/20 16:15	05/08/20 10:00	
680-183592-17	PPMP-66-MW02RR	Water	05/06/20 14:45	05/08/20 10:00	
680-183592-18	PPMP-66-MW24R	Water	05/07/20 11:01	05/08/20 10:00	
680-183592-19	PPMP-66-MW06R	Water	05/07/20 09:06	05/08/20 10:00	
680-183592-20	DUP345	Water	05/07/20 00:00	05/08/20 10:00	
680-183592-21	EB133	Water	05/07/20 12:25	05/08/20 10:00	
680-183592-22	MATERIAL103	Water	05/07/20 12:40	05/08/20 10:00	
680-183592-23	TB553	Water	05/07/20 12:15	05/08/20 10:00	

Job ID: 680-183592-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

CASE NARRATIVE

Client: Matrix Environmental Services, LLC

Project: Parcel 66(7), Fmr SWRS

Report Number: 680-183592-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 5/8/2020 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6º C and 2.8º C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples PPMP-66-MW04 (680-183592-1), PPMP-66-MW11 (680-183592-2), PPMP-66-MW07 (680-183592-3), PPMP-66-MW13 (680-183592-4), PPMP-66-MW14 (680-183592-6), PPMP-66-MW17 (680-183592-7), PPMP-66-MW18R (680-183592-8), PPMP-66-MW01 (680-183592-9), DUP344 (680-183592-10), TB552 (680-183592-11), PPMP-66-MW22 (680-183592-12), PPMP-66-MW16 (680-183592-13), PPMP-66-MW08 (680-183592-15), PPMP-66-MW23R (680-183592-16), PPMP-66-MW02RR (680-183592-17), PPMP-66-MW24R (680-183592-18), PPMP-66-MW06R (680-183592-19), DUP345 (680-183592-20), EB133 (680-183592-21), MATERIAL103 (680-183592-22) and TB553 (680-183592-23) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/12/2020 and 05/13/2020.

Method 8260B: The following sample(s) was collected in a properly preserved vial; however, the pH >2 & outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: PPMP-66-MW14 (680-183592-6).

Method 8260B: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) samples: PPMP-66-MW16 (680-183592-13[MS]) and PPMP-66-MW16 (680-183592-13[MSD]). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-618512 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 680-618512 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260B: The following sample(s) was collected in a properly preserved vial; however, the pH was >2 & outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: PPMP-66-MW16 (680-183592-13[MSD]).

Method 8260B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 680-619019 recovered outside control limits for the following analytes: Vinyl chloride.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with

Job ID: 680-183592-1 (Continued)

Laboratory: Eurofins TestAmerica, Savannah (Continued)

analytical batch 680-619019.

Several analytes exceeded the RPD limit for the MSD of sample PPMP-66-MW16MSD (680-183592-13) in batch 680-618512.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS) - DISSOLVED

Samples PPMP-66-MW04 (680-183592-1), PPMP-66-MW07 (680-183592-3), PPMP-66-MW03 (680-183592-5), PPMP-66-MW14 (680-183592-6), PPMP-66-MW21 (680-183592-14), EB133 (680-183592-21) and MATERIAL103 (680-183592-22) were analyzed for Metals (ICPMS) - Dissolved in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/11/2020 and analyzed on 05/13/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples PPMP-66-MW04 (680-183592-1), PPMP-66-MW07 (680-183592-3), PPMP-66-MW03 (680-183592-5), PPMP-66-MW14 (680-183592-6), PPMP-66-MW21 (680-183592-14), EB133 (680-183592-21) and MATERIAL103 (680-183592-22) were analyzed for metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/11/2020 and analyzed on 05/12/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS BY ION CHROMATOGRAPHY (28 DAY)

Samples PPMP-66-MW04 (680-183592-1), PPMP-66-MW07 (680-183592-3), PPMP-66-MW03 (680-183592-5), PPMP-66-MW14 (680-183592-6), PPMP-66-MW21 (680-183592-14), EB133 (680-183592-21) and MATERIAL103 (680-183592-22) were analyzed for Anions by Ion Chromatography (28 Day) in accordance with SW 846 9056A. The samples were analyzed on 05/16/2020 and 05/19/2020.

Samples PPMP-66-MW04 (680-183592-1), PPMP-66-MW07 (680-183592-3), PPMP-66-MW03 (680-183592-5) and PPMP-66-MW14 (680-183592-6) required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample ID: PPMP-66-MW04
Lab Sample ID: 680-183592-1
Date Collected: 05/05/20 10:46
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 19:17	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 19:17	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 19:17	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 19:17	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/12/20 19:17*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 19:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/12/20 19:17*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 19:17*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**830**		10	4.0	mg/L			05/19/20 18:56	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2000**		100	25	ug/L		05/11/20 14:14	05/12/20 16:58	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**500**		100	25	ug/L		05/11/20 12:24	05/13/20 17:28	1

Client Sample ID: PPMP-66-MW11
Lab Sample ID: 680-183592-2
Date Collected: 05/05/20 11:51
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/13/20 14:42	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/13/20 14:42	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/13/20 14:42	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/13/20 14:42	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/13/20 14:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/13/20 14:42*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/13/20 14:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*73 - 131*		*05/13/20 14:42*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/13/20 14:42*	*1*

Client Sample ID: PPMP-66-MW07
Lab Sample ID: 680-183592-3
Date Collected: 05/05/20 14:21
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/13/20 15:05	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/13/20 15:05	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/13/20 15:05	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/13/20 15:05	1

Client Sample ID: PPMP-66-MW07

Lab Sample ID: 680-183592-3
Matrix: Water
Date Collected: 05/05/20 14:21
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/13/20 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*05/13/20 15:05*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/13/20 15:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/13/20 15:05*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/13/20 15:05*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**610**		25	10	mg/L			05/16/20 20:26	25

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1200**		100	25	ug/L		05/11/20 14:14	05/12/20 17:11	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**290**		100	25	ug/L		05/11/20 12:24	05/13/20 17:35	1

Client Sample ID: PPMP-66-MW13

Lab Sample ID: 680-183592-4
Matrix: Water
Date Collected: 05/05/20 13:06
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/13/20 15:29	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/13/20 15:29	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/13/20 15:29	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/13/20 15:29	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/13/20 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/13/20 15:29*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/13/20 15:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*73 - 131*		*05/13/20 15:29*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/13/20 15:29*	*1*

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-183592-5
Matrix: Water
Date Collected: 05/05/20 11:10
Date Received: 05/08/20 10:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1100**		25	10	mg/L			05/16/20 20:39	25

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2000**		100	25	ug/L		05/11/20 14:14	05/12/20 17:01	1

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-183592-5
Matrix: Water
Date Collected: 05/05/20 11:10
Date Received: 05/08/20 10:00

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**180**		100	25	ug/L		05/11/20 12:24	05/13/20 17:32	1

Client Sample ID: PPMP-66-MW14

Lab Sample ID: 680-183592-6
Matrix: Water
Date Collected: 05/05/20 12:30
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 21:38	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 21:38	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 21:38	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 21:38	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/12/20 21:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 21:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*73 - 131*		*05/12/20 21:38*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 21:38*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**630**		25	10	mg/L			05/16/20 20:52	25

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2900**		100	25	ug/L		05/11/20 14:14	05/12/20 17:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**300**		100	25	ug/L		05/11/20 12:24	05/13/20 17:25	1

Client Sample ID: PPMP-66-MW17

Lab Sample ID: 680-183592-7
Matrix: Water
Date Collected: 05/05/20 13:50
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 21:14	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 21:14	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 21:14	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 21:14	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 21:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 21:14*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 21:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*73 - 131*		*05/12/20 21:14*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 21:14*	*1*

Client Sample ID: PPMP-66-MW18R

Lab Sample ID: 680-183592-8
Date Collected: 05/06/20 09:30
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 20:51	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 20:51	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 20:51	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 20:51	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/12/20 20:51*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*05/12/20 20:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/12/20 20:51*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 20:51*	*1*

Client Sample ID: PPMP-66-MW01

Lab Sample ID: 680-183592-9
Date Collected: 05/06/20 11:05
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 20:28	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 20:28	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 20:28	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 20:28	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 20:28*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 122*		*05/12/20 20:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/12/20 20:28*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 20:28*	*1*

Client Sample ID: DUP344

Lab Sample ID: 680-183592-10
Date Collected: 05/06/20 00:00
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 20:04	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 20:04	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 20:04	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 20:04	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 20:04*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 20:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/12/20 20:04*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 20:04*	*1*

Client Sample ID: TB552

Lab Sample ID: 680-183592-11

Date Collected: 05/07/20 12:07

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 16:11	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 16:11	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 16:11	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 16:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*05/12/20 16:11*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 16:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*73 - 131*		*05/12/20 16:11*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 16:11*	*1*

Client Sample ID: PPMP-66-MW22

Lab Sample ID: 680-183592-12

Date Collected: 05/06/20 11:06

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/13/20 15:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/13/20 15:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/13/20 15:52	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/13/20 15:52	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/13/20 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*05/13/20 15:52*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/13/20 15:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*73 - 131*		*05/13/20 15:52*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/13/20 15:52*	*1*

Client Sample ID: PPMP-66-MW16

Lab Sample ID: 680-183592-13

Date Collected: 05/06/20 14:01

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U F1	1.0	0.41	ug/L			05/12/20 22:01	1
1,1-Dichloroethene	0.36	U F1	1.0	0.36	ug/L			05/12/20 22:01	1
trans-1,2-Dichloroethene	0.37	U F1	1.0	0.37	ug/L			05/12/20 22:01	1
Trichloroethene	0.48	U F1	1.0	0.48	ug/L			05/12/20 22:01	1
Vinyl chloride	0.50	U F1	1.0	0.50	ug/L			05/12/20 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 22:01*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 22:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*73 - 131*		*05/12/20 22:01*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 22:01*	*1*

Client Sample ID: PPMP-66-MW21

Lab Sample ID: 680-183592-14

Date Collected: 05/06/20 12:26
Matrix: Water
Date Received: 05/08/20 10:00

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**55**		1.0	0.40	mg/L			05/16/20 17:51	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2700**		100	25	ug/L		05/11/20 14:14	05/12/20 16:32	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**1600**		100	25	ug/L		05/11/20 12:24	05/13/20 17:48	1

Client Sample ID: PPMP-66-MW08

Lab Sample ID: 680-183592-15

Date Collected: 05/06/20 12:35
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 18:54	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 18:54	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 18:54	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 18:54	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 18:54*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*05/12/20 18:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*73 - 131*		*05/12/20 18:54*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 18:54*	*1*

Client Sample ID: PPMP-66-MW23R

Lab Sample ID: 680-183592-16

Date Collected: 05/06/20 16:15
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**62**		1.0	0.41	ug/L			05/12/20 18:31	1
1,1-Dichloroethene	**2.0**		1.0	0.36	ug/L			05/12/20 18:31	1
trans-1,2-Dichloroethene	**62**		1.0	0.37	ug/L			05/12/20 18:31	1
Trichloroethene	**180**		1.0	0.48	ug/L			05/12/20 18:31	1
Vinyl chloride	**6.1**		1.0	0.50	ug/L			05/12/20 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/12/20 18:31*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 18:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*73 - 131*		*05/12/20 18:31*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 18:31*	*1*

Client Sample ID: PPMP-66-MW02RR
Lab Sample ID: 680-183592-17
Date Collected: 05/06/20 14:45
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**14**		1.0	0.41	ug/L			05/12/20 18:07	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 18:07	1
trans-1,2-Dichloroethene	**3.8**		1.0	0.37	ug/L			05/12/20 18:07	1
Trichloroethene	**2.8**		1.0	0.48	ug/L			05/12/20 18:07	1
Vinyl chloride	**5.2**		1.0	0.50	ug/L			05/12/20 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 18:07*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*05/12/20 18:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*73 - 131*		*05/12/20 18:07*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 18:07*	*1*

Client Sample ID: PPMP-66-MW24R
Lab Sample ID: 680-183592-18
Date Collected: 05/07/20 11:01
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.72**	**J**	1.0	0.41	ug/L			05/12/20 17:44	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 17:44	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 17:44	1
Trichloroethene	**0.60**	**J**	1.0	0.48	ug/L			05/12/20 17:44	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*05/12/20 17:44*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 17:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*73 - 131*		*05/12/20 17:44*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/12/20 17:44*	*1*

Client Sample ID: PPMP-66-MW06R
Lab Sample ID: 680-183592-19
Date Collected: 05/07/20 09:06
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4.1**		1.0	0.41	ug/L			05/12/20 17:21	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 17:21	1
trans-1,2-Dichloroethene	**2.3**		1.0	0.37	ug/L			05/12/20 17:21	1
Trichloroethene	**28**		1.0	0.48	ug/L			05/12/20 17:21	1
Vinyl chloride	**0.53**	**J**	1.0	0.50	ug/L			05/12/20 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*05/12/20 17:21*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 17:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*73 - 131*		*05/12/20 17:21*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 17:21*	*1*

Client Sample ID: DUP345

Lab Sample ID: 680-183592-20

Date Collected: 05/07/20 00:00

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4.1**		1.0	0.41	ug/L			05/12/20 16:57	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 16:57	1
trans-1,2-Dichloroethene	**2.2**		1.0	0.37	ug/L			05/12/20 16:57	1
Trichloroethene	**28**		1.0	0.48	ug/L			05/12/20 16:57	1
Vinyl chloride	**0.52**	**J**	1.0	0.50	ug/L			05/12/20 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*05/12/20 16:57*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 16:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*73 - 131*		*05/12/20 16:57*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/12/20 16:57*	*1*

Client Sample ID: EB133

Lab Sample ID: 680-183592-21

Date Collected: 05/07/20 12:25

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 15:47	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 15:47	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 15:47	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 15:47	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 15:47*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 15:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*73 - 131*		*05/12/20 15:47*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/12/20 15:47*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/16/20 20:01	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		05/11/20 14:14	05/12/20 16:29	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		05/11/20 12:24	05/13/20 17:45	1

Client Sample ID: MATERIAL103

Lab Sample ID: 680-183592-22

Date Collected: 05/07/20 12:40

Matrix: Water

Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 16:34	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 16:34	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 16:34	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 16:34	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: MATERIAL103

Lab Sample ID: 680-183592-22
Date Collected: 05/07/20 12:40
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 16:34*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*05/12/20 16:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*73 - 131*		*05/12/20 16:34*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 16:34*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/16/20 20:13	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		05/11/20 14:14	05/12/20 17:08	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		05/11/20 12:24	05/13/20 17:15	1

Client Sample ID: TB553

Lab Sample ID: 680-183592-23
Date Collected: 05/07/20 12:15
Matrix: Water
Date Received: 05/08/20 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 15:24	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 15:24	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 15:24	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 15:24	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*05/12/20 15:24*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 15:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*73 - 131*		*05/12/20 15:24*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 15:24*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-618363/10
Matrix: Water
Analysis Batch: 618363

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/12/20 15:00	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/12/20 15:00	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/12/20 15:00	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/12/20 15:00	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/12/20 15:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*05/12/20 15:00*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/12/20 15:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*73 - 131*		*05/12/20 15:00*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*05/12/20 15:00*	*1*

Lab Sample ID: LCS 680-618363/4
Matrix: Water
Analysis Batch: 618363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	80 - 120
1,1-Dichloroethene	50.0	50.2		ug/L		100	76 - 120
trans-1,2-Dichloroethene	50.0	51.0		ug/L		102	80 - 120
Trichloroethene	50.0	51.7		ug/L		103	80 - 120
Vinyl chloride	50.0	45.9		ug/L		92	71 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*98*		*73 - 131*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: LCSD 680-618363/5
Matrix: Water
Analysis Batch: 618363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	50.0	50.1		ug/L		100	80 - 120	0	20
1,1-Dichloroethene	50.0	48.5		ug/L		97	76 - 120	4	20
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	80 - 120	1	20
Trichloroethene	50.0	51.4		ug/L		103	80 - 120	1	20
Vinyl chloride	50.0	44.1		ug/L		88	71 - 128	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*101*		*73 - 131*
Toluene-d8 (Surr)	*103*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-618512/11
Matrix: Water
Analysis Batch: 618512

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			05/13/20 14:18	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			05/13/20 14:18	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			05/13/20 14:18	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			05/13/20 14:18	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			05/13/20 14:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*05/13/20 14:18*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*05/13/20 14:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*73 - 131*		*05/13/20 14:18*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*05/13/20 14:18*	*1*

Lab Sample ID: LCS 680-618512/4
Matrix: Water
Analysis Batch: 618512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	50.0	51.3		ug/L		103	80 - 120
1,1-Dichloroethene	50.0	49.1		ug/L		98	76 - 120
trans-1,2-Dichloroethene	50.0	50.9		ug/L		102	80 - 120
Trichloroethene	50.0	50.2		ug/L		100	80 - 120
Vinyl chloride	50.0	44.5		ug/L		89	71 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*100*		*73 - 131*
Toluene-d8 (Surr)	*100*		*80 - 120*

Lab Sample ID: LCSD 680-618512/5
Matrix: Water
Analysis Batch: 618512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	50.0	49.7		ug/L		99	80 - 120	3	20
1,1-Dichloroethene	50.0	49.1		ug/L		98	76 - 120	0	20
trans-1,2-Dichloroethene	50.0	50.0		ug/L		100	80 - 120	2	20
Trichloroethene	50.0	49.8		ug/L		100	80 - 120	1	20
Vinyl chloride	50.0	44.4		ug/L		89	71 - 128	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*95*		*73 - 131*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-183592-13 MS
Matrix: Water
Analysis Batch: 618512

Client Sample ID: PPMP-66-MW16
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.41	U F1	50.0	27.6	F1	ug/L		55	80 - 122
1,1-Dichloroethene	0.36	U F1	50.0	28.7	F1	ug/L		57	74 - 125
trans-1,2-Dichloroethene	0.37	U F1	50.0	28.9	F1	ug/L		58	78 - 123
Trichloroethene	0.48	U F1	50.0	27.8	F1	ug/L		56	80 - 123
Vinyl chloride	0.50	U F1	50.0	26.9	F1	ug/L		54	68 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*52*	*X*	*80 - 120*
Dibromofluoromethane (Surr)	*54*	*X*	*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*52*	*X*	*73 - 131*
Toluene-d8 (Surr)	*54*	*X*	*80 - 120*

Lab Sample ID: 680-183592-13 MSD
Matrix: Water
Analysis Batch: 618512

Client Sample ID: PPMP-66-MW16
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	0.41	U F1	50.0	40.2	F2	ug/L		80	80 - 122	37	20
1,1-Dichloroethene	0.36	U F1	50.0	41.7	F2	ug/L		83	74 - 125	37	20
trans-1,2-Dichloroethene	0.37	U F1	50.0	42.0	F2	ug/L		84	78 - 123	37	20
Trichloroethene	0.48	U F1	50.0	40.2	F2	ug/L		80	80 - 123	37	20
Vinyl chloride	0.50	U F1	50.0	39.0	F2	ug/L		78	68 - 132	37	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*71*	*X*	*80 - 120*
Dibromofluoromethane (Surr)	*79*	*X*	*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*75*		*73 - 131*
Toluene-d8 (Surr)	*78*	*X*	*80 - 120*

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-618957/2
Matrix: Water
Analysis Batch: 618957

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/16/20 13:59	1

Lab Sample ID: LCS 680-618957/3
Matrix: Water
Analysis Batch: 618957

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	10.2		mg/L		102	87 - 112

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-618957/4
Matrix: Water
Analysis Batch: 618957

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			10.0	10.2		mg/L		102	87 - 112	0	15

Lab Sample ID: MB 680-619264/2
Matrix: Water
Analysis Batch: 619264

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			05/19/20 14:25	1

Lab Sample ID: LCS 680-619264/3
Matrix: Water
Analysis Batch: 619264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			10.0	10.3		mg/L		103	87 - 112		

Lab Sample ID: LCSD 680-619264/4
Matrix: Water
Analysis Batch: 619264

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			10.0	10.4		mg/L		104	87 - 112	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-618291/1-A
Matrix: Water
Analysis Batch: 618495

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 618291

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		05/11/20 14:14	05/12/20 16:06	1

Lab Sample ID: LCS 680-618291/2-A
Matrix: Water
Analysis Batch: 618495

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 618291

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron			5010	4820		ug/L		96	80 - 120		

Lab Sample ID: MB 680-618240/1-B
Matrix: Water
Analysis Batch: 618669

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 618241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		05/11/20 12:24	05/13/20 17:06	1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 680-618240/2-B
Matrix: Water
Analysis Batch: 618669

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 618241

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dissolved Iron			5010	4520		ug/L		90	80 - 120		

Lab Sample ID: LCSD 680-618240/3-B
Matrix: Water
Analysis Batch: 618669

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 618241

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Iron			5010	4540		ug/L		91	80 - 120	0	20

GC/MS VOA

Analysis Batch: 618363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Total/NA	Water	8260B	
680-183592-6	PPMP-66-MW14	Total/NA	Water	8260B	
680-183592-7	PPMP-66-MW17	Total/NA	Water	8260B	
680-183592-8	PPMP-66-MW18R	Total/NA	Water	8260B	
680-183592-9	PPMP-66-MW01	Total/NA	Water	8260B	
680-183592-10	DUP344	Total/NA	Water	8260B	
680-183592-11	TB552	Total/NA	Water	8260B	
680-183592-13	PPMP-66-MW16	Total/NA	Water	8260B	
680-183592-15	PPMP-66-MW08	Total/NA	Water	8260B	
680-183592-16	PPMP-66-MW23R	Total/NA	Water	8260B	
680-183592-17	PPMP-66-MW02RR	Total/NA	Water	8260B	
680-183592-18	PPMP-66-MW24R	Total/NA	Water	8260B	
680-183592-19	PPMP-66-MW06R	Total/NA	Water	8260B	
680-183592-20	DUP345	Total/NA	Water	8260B	
680-183592-21	EB133	Total/NA	Water	8260B	
680-183592-22	MATERIAL103	Total/NA	Water	8260B	
680-183592-23	TB553	Total/NA	Water	8260B	
MB 680-618363/10	Method Blank	Total/NA	Water	8260B	
LCS 680-618363/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-618363/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 618512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-2	PPMP-66-MW11	Total/NA	Water	8260B	
680-183592-3	PPMP-66-MW07	Total/NA	Water	8260B	
680-183592-4	PPMP-66-MW13	Total/NA	Water	8260B	
680-183592-12	PPMP-66-MW22	Total/NA	Water	8260B	
MB 680-618512/11	Method Blank	Total/NA	Water	8260B	
LCS 680-618512/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-618512/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-183592-13 MS	PPMP-66-MW16	Total/NA	Water	8260B	
680-183592-13 MSD	PPMP-66-MW16	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 618957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-3	PPMP-66-MW07	Total/NA	Water	9056A	
680-183592-5	PPMP-66-MW03	Total/NA	Water	9056A	
680-183592-6	PPMP-66-MW14	Total/NA	Water	9056A	
680-183592-14	PPMP-66-MW21	Total/NA	Water	9056A	
680-183592-21	EB133	Total/NA	Water	9056A	
680-183592-22	MATERIAL103	Total/NA	Water	9056A	
MB 680-618957/2	Method Blank	Total/NA	Water	9056A	
LCS 680-618957/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-618957/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 619264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Total/NA	Water	9056A	
MB 680-619264/2	Method Blank	Total/NA	Water	9056A	

HPLC/IC (Continued)

Analysis Batch: 619264 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 680-619264/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-619264/4	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Filtration Batch: 618240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Dissolved	Water	FILTRATION	
680-183592-3	PPMP-66-MW07	Dissolved	Water	FILTRATION	
680-183592-5	PPMP-66-MW03	Dissolved	Water	FILTRATION	
680-183592-6	PPMP-66-MW14	Dissolved	Water	FILTRATION	
680-183592-14	PPMP-66-MW21	Dissolved	Water	FILTRATION	
680-183592-21	EB133	Dissolved	Water	FILTRATION	
680-183592-22	MATERIAL103	Dissolved	Water	FILTRATION	
MB 680-618240/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 680-618240/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 680-618240/3-B	Lab Control Sample Dup	Dissolved	Water	FILTRATION	

Prep Batch: 618241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Dissolved	Water	3005A	618240
680-183592-3	PPMP-66-MW07	Dissolved	Water	3005A	618240
680-183592-5	PPMP-66-MW03	Dissolved	Water	3005A	618240
680-183592-6	PPMP-66-MW14	Dissolved	Water	3005A	618240
680-183592-14	PPMP-66-MW21	Dissolved	Water	3005A	618240
680-183592-21	EB133	Dissolved	Water	3005A	618240
680-183592-22	MATERIAL103	Dissolved	Water	3005A	618240
MB 680-618240/1-B	Method Blank	Dissolved	Water	3005A	618240
LCS 680-618240/2-B	Lab Control Sample	Dissolved	Water	3005A	618240
LCSD 680-618240/3-B	Lab Control Sample Dup	Dissolved	Water	3005A	618240

Prep Batch: 618291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Total Recoverable	Water	3005A	
680-183592-3	PPMP-66-MW07	Total Recoverable	Water	3005A	
680-183592-5	PPMP-66-MW03	Total Recoverable	Water	3005A	
680-183592-6	PPMP-66-MW14	Total Recoverable	Water	3005A	
680-183592-14	PPMP-66-MW21	Total Recoverable	Water	3005A	
680-183592-21	EB133	Total Recoverable	Water	3005A	
680-183592-22	MATERIAL103	Total Recoverable	Water	3005A	
MB 680-618291/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-618291/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 618495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Total Recoverable	Water	6020A	618291
680-183592-3	PPMP-66-MW07	Total Recoverable	Water	6020A	618291
680-183592-5	PPMP-66-MW03	Total Recoverable	Water	6020A	618291
680-183592-6	PPMP-66-MW14	Total Recoverable	Water	6020A	618291
680-183592-14	PPMP-66-MW21	Total Recoverable	Water	6020A	618291
680-183592-21	EB133	Total Recoverable	Water	6020A	618291

Metals (Continued)

Analysis Batch: 618495 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-22	MATERIAL103	Total Recoverable	Water	6020A	618291
MB 680-618291/1-A	Method Blank	Total Recoverable	Water	6020A	618291
LCS 680-618291/2-A	Lab Control Sample	Total Recoverable	Water	6020A	618291

Analysis Batch: 618669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-183592-1	PPMP-66-MW04	Dissolved	Water	6020A	618241
680-183592-3	PPMP-66-MW07	Dissolved	Water	6020A	618241
680-183592-5	PPMP-66-MW03	Dissolved	Water	6020A	618241
680-183592-6	PPMP-66-MW14	Dissolved	Water	6020A	618241
680-183592-14	PPMP-66-MW21	Dissolved	Water	6020A	618241
680-183592-21	EB133	Dissolved	Water	6020A	618241
680-183592-22	MATERIAL103	Dissolved	Water	6020A	618241
MB 680-618240/1-B	Method Blank	Dissolved	Water	6020A	618241
LCS 680-618240/2-B	Lab Control Sample	Dissolved	Water	6020A	618241
LCSD 680-618240/3-B	Lab Control Sample Dup	Dissolved	Water	6020A	618241

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: PPMP-66-MW04

Lab Sample ID: 680-183592-1

Date Collected: 05/05/20 10:46

Matrix: Water

Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 19:17	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	9056A		10	5 mL	5 mL	619264	05/19/20 18:56	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:28	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 16:58	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: PPMP-66-MW11

Lab Sample ID: 680-183592-2

Date Collected: 05/05/20 11:51

Matrix: Water

Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618512	05/13/20 14:42	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW07

Lab Sample ID: 680-183592-3

Date Collected: 05/05/20 14:21

Matrix: Water

Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618512	05/13/20 15:05	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	9056A		25	5 mL	5 mL	618957	05/16/20 20:26	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:35	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 17:11	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: PPMP-66-MW13

Lab Sample ID: 680-183592-4

Date Collected: 05/05/20 13:06

Matrix: Water

Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618512	05/13/20 15:29	Y1S	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-183592-5
Date Collected: 05/05/20 11:10
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		25	5 mL	5 mL	618957	05/16/20 20:39	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:32	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 17:01	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: PPMP-66-MW14

Lab Sample ID: 680-183592-6
Date Collected: 05/05/20 12:30
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 21:38	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	9056A		25	5 mL	5 mL	618957	05/16/20 20:52	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:25	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 17:05	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: PPMP-66-MW17

Lab Sample ID: 680-183592-7
Date Collected: 05/05/20 13:50
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 21:14	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW18R

Lab Sample ID: 680-183592-8
Date Collected: 05/06/20 09:30
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 20:51	Y1S	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: PPMP-66-MW01
Date Collected: 05/06/20 11:05
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 20:28	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: DUP344
Date Collected: 05/06/20 00:00
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 20:04	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: TB552
Date Collected: 05/07/20 12:07
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 16:11	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW22
Date Collected: 05/06/20 11:06
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618512	05/13/20 15:52	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW16
Date Collected: 05/06/20 14:01
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 22:01	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW21
Date Collected: 05/06/20 12:26
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	618957	05/16/20 17:51	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:48	BJB	TAL SAV
	Instrument ID: ICPMSD									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: PPMP-66-MW21
Lab Sample ID: 680-183592-14
Date Collected: 05/06/20 12:26
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 16:32	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: PPMP-66-MW08
Lab Sample ID: 680-183592-15
Date Collected: 05/06/20 12:35
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 18:54	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW23R
Lab Sample ID: 680-183592-16
Date Collected: 05/06/20 16:15
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 18:31	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW02RR
Lab Sample ID: 680-183592-17
Date Collected: 05/06/20 14:45
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 18:07	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW24R
Lab Sample ID: 680-183592-18
Date Collected: 05/07/20 11:01
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 17:44	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: PPMP-66-MW06R
Lab Sample ID: 680-183592-19
Date Collected: 05/07/20 09:06
Matrix: Water
Date Received: 05/08/20 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 17:21	Y1S	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Client Sample ID: DUP345

Date Collected: 05/07/20 00:00
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 16:57	Y1S	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: EB133

Date Collected: 05/07/20 12:25
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 15:47	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	9056A		1	5 mL	5 mL	618957	05/16/20 20:01	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:45	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 16:29	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: MATERIAL103

Date Collected: 05/07/20 12:40
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 16:34	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	9056A		1	5 mL	5 mL	618957	05/16/20 20:13	UI	TAL SAV
	Instrument ID: CICH									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	618240	05/11/20 12:23	AJR	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	618241	05/11/20 12:24	AJR	TAL SAV
Dissolved	Analysis	6020A		1			618669	05/13/20 17:15	BJB	TAL SAV
	Instrument ID: ICPMSD									
Total Recoverable	Prep	3005A			50 mL	250 mL	618291	05/11/20 14:14	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			618495	05/12/20 17:08	BJB	TAL SAV
	Instrument ID: ICPMSD									

Client Sample ID: TB553

Date Collected: 05/07/20 12:15
Date Received: 05/08/20 10:00

Lab Sample ID: 680-183592-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	618363	05/12/20 15:24	Y1S	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-183592-1
Project/Site: Parcel 66(7), Fmr SWRS

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-20

Method Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), Fmr SWRS

Job ID: 680-183592-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV
FILTRATION	Sample Filtration	None	TAL SAV

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6017
Cooler ID 1 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 19.094.20-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3-40 mL vials, HCl	SW6020A Iron (total) 1-250 mL poly, HNO3	SW6020A Iron (dissolved) 1-250 mL poly, none	SW9056A Sulfate 1-125mL poly, none	SW8260B - VOC* TB 2-40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW04 ✓	NS	MW	WQ	G	5/5/2020	10:46	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW11	NS	MW	WQ	G	5/5/2020	11:51	1			X BVP	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07 ✓	NS	MW	WQ	G	5/5/2020	14:21	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW13	NS	MW	WQ	G	5/5/2020	13:06	1			X BVP	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW03 ✓	NS	MW	WQ	G	5/5/2020	11:10		1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW14 ✓	NS	MW	WQ	G	5/5/2020	12:30	1	1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW17	NS	MW	WQ	G	5/5/2020	13:50	1	X	BVP X	BVP X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW18R	NS	MW	WQ	G	5/6/2020	09:30	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW01	NS	MW	WQ	G	5/6/2020	11:05	1	X	X	X	
McClellan Field QC	DUP344	FD	WQ	W	G	5/6/2020	N/A	1	X	X	X	
McClellan Field QC	TB552	TB	WQ	W	G	5/7/2020	12:07					1

BVP 5/7/20

NOTES:

Double the number of bottles for MS/MSD

*VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature):

Date/Time: 5/7/2020 16:00

Received by (Signature): FedEX

Relinquished by (Signature):

Date/Time:

Received by (Signature): 5/8/2020 1000

2.4/2.8 2.2/2.6

680-183592 Chain of Custody

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6021
Cooler ID 2 of 2
Page 1 of 2

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 19.094.20-22.1
Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3-40 mL vials, HCl	SW6020A Iron (total) 1-250 mL poly, HNO3	SW6020A Iron (dissolved) 1-250 mL poly, none	SW9056A Sulfate 1-125mL poly, none	SW8260B - VOC* TB 2-40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW22	NS	MW	WQ	G	5/6/2020	11:06	1			X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	NS	MW	WQ	G	5/6/2020	14:01	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	MS/MSD	MW	WQ	G	5/6/2020	14:01	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW21 ✓	NS	MW	WQ	G	5/6/2020	12:26		1	1	1	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW08	NS	MW	WQ	G	5/6	12:35	1			X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW23R	NS	MW	WQ	G	5/6/2020	16:15	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW02RR	NS	MW	WQ	G	5/6/2020	14:45	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW24R	NS	MW	WQ	G	5/7/2020	11:01	1	X	X	X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW06R	NS	MW	WQ	G	5/7/2020	9:06	1	X	X	X	
McClellan Field QC	DUP345	FD	WQ	W	G	5/7/2020	N/A	1	X	X	X	
McClellan Field QC	EB133	EB	WQ	W	G	5/7/2020	12:25	1	1	1	1	
McClellan Field QC	MATERIAL103	Material Blank	WQ	W	G	5/7/2020	12:40	1	1	1	1	
McClellan Field QC	TB553	TB	WQ	W	G	5/7/2020	12:15					1

NOTES:
*VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC
Double the number of bottles for MS/MSD
QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water
Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water
White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

BVP 5/7/20

Relinquished by (Signature):
Date/Time: 5/7/2020 16:00
Received by (Signature): FedEX

Relinquished by (Signature):
Date/Time:
Received by (Signature): 5/8/2020 1000

2.4/2.8 2.2/2.6

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-183592-1

Login Number: 183592
List Number: 1
Creator: Laughlin, Paul D

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190652-1
Client Project/Site: Parcel 66(7), FSWRS

For:
Matrix Environmental Services, LLC
1601 Blake Street
Suite 200
Denver, Colorado 80202

Attn: Ms. Betty Van Pelt

Authorized for release by:
11/12/2020 7:44:11 AM

Ken Hayes, Project Manager II
(615)301-5035
Ken.Hayes@Eurofinset.com

Definitions/Glossary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190652-1	PPMP-66-MW04	Water	10/26/20 09:01	10/28/20 09:50	
680-190652-2	PPMP-66-MW11	Water	10/26/20 10:26	10/28/20 09:50	
680-190652-3	PPMP-66-MW07	Water	10/26/20 13:16	10/28/20 09:50	
680-190652-4	PPMP-66-MW13	Water	10/26/20 11:56	10/28/20 09:50	
680-190652-5	PPMP-66-MW03	Water	10/26/20 14:30	10/28/20 09:50	
680-190652-6	PPMP-66-MW14	Water	10/26/20 15:16	10/28/20 09:50	
680-190652-7	PPMP-66-MW17	Water	10/27/20 08:25	10/28/20 09:50	
680-190652-8	PPMP-66-MW18R	Water	10/27/20 09:45	10/28/20 09:50	
680-190652-9	PPMP-66-MW01	Water	10/26/20 08:55	10/28/20 09:50	
680-190652-10	DUP359	Water	10/26/20 00:00	10/28/20 09:50	
680-190652-11	TB567	Water	10/27/20 14:30	10/28/20 09:50	
680-190652-12	PPMP-66-MW22	Water	10/26/20 10:20	10/28/20 09:50	
680-190652-13	PPMP-66-MW16	Water	10/26/20 11:30	10/28/20 09:50	
680-190652-14	PPMP-66-MW21	Water	10/26/20 12:45	10/28/20 09:50	
680-190652-15	PPMP-66-MW08	Water	10/27/20 09:01	10/28/20 09:50	
680-190652-16	PPMP-66-MW23R	Water	10/27/20 12:31	10/28/20 09:50	
680-190652-17	PPMP-66-MW02RR	Water	10/27/20 11:16	10/28/20 09:50	
680-190652-18	PPMP-66-MW24R	Water	10/27/20 12:45	10/28/20 09:50	
680-190652-19	PPMP-66-MW06R	Water	10/27/20 11:10	10/28/20 09:50	
680-190652-20	DUP360	Water	10/26/20 00:00	10/28/20 09:50	
680-190652-21	EB135	Water	10/27/20 15:00	10/28/20 09:50	
680-190652-22	MATERIAL105	Water	10/27/20 14:45	10/28/20 09:50	
680-190652-23	TB568	Water	10/27/20 15:10	10/28/20 09:50	

Job ID: 680-190652-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

Job Narrative
680-190652-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2020 9:50 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.0º C and 4.9º C.

GC/MS VOA
Method 8260B: The matrix spike/the matrix spike duplicate analyzed in batch 642949 was outside the method criteria for the 12 hour window. The data integrity was not impacted and the data has been reported and addressed. All other QC criteria have been met. PPMP-66-MW07 (680-190652-3[MS]) and PPMP-66-MW07 (680-190652-3[MSD])

Method 8260B: The method blank for analytical batch 680-643059 contained cis-1,2-Dichloroethene above the method detection limit (MDL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-643059.

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-643200.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Methods 300.0, 9056A: Due to the high concentration of Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 680-642353 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client Sample ID: PPMP-66-MW04

Lab Sample ID: 680-190652-1

Date Collected: 10/26/20 09:01

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 16:04	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 16:04	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 16:04	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 16:04	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*11/08/20 16:04*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 122*		*11/08/20 16:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*73 - 131*		*11/08/20 16:04*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 16:04*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**68**		1.0	0.40	mg/L			11/04/20 23:47	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**900**		100	25	ug/L		10/30/20 13:42	10/31/20 13:37	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**510**		100	25	ug/L		11/05/20 12:51	11/06/20 01:42	1

Client Sample ID: PPMP-66-MW11

Lab Sample ID: 680-190652-2

Date Collected: 10/26/20 10:26

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 16:28	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 16:28	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 16:28	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 16:28	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*11/08/20 16:28*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/08/20 16:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 16:28*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/08/20 16:28*	*1*

Client Sample ID: PPMP-66-MW07

Lab Sample ID: 680-190652-3

Date Collected: 10/26/20 13:16

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 16:52	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 16:52	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 16:52	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 16:52	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Client Sample ID: PPMP-66-MW07

Lab Sample ID: 680-190652-3
Date Collected: 10/26/20 13:16
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*80 - 120*		*11/08/20 16:52*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 122*		*11/08/20 16:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*73 - 131*		*11/08/20 16:52*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 16:52*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1300**		25	10	mg/L			11/05/20 12:00	25

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2600**		100	25	ug/L		10/30/20 13:42	10/31/20 13:16	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**360**		100	25	ug/L		11/05/20 12:51	11/06/20 01:24	1

Client Sample ID: PPMP-66-MW13

Lab Sample ID: 680-190652-4
Date Collected: 10/26/20 11:56
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 17:16	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 17:16	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 17:16	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 17:16	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*80 - 120*		*11/08/20 17:16*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/08/20 17:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*73 - 131*		*11/08/20 17:16*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 17:16*	*1*

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-190652-5
Date Collected: 10/26/20 14:30
Matrix: Water
Date Received: 10/28/20 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1200**		25	10	mg/L			11/05/20 12:38	25

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1900**		100	25	ug/L		10/30/20 13:42	10/31/20 13:58	1

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-190652-5

Date Collected: 10/26/20 14:30

Matrix: Water

Date Received: 10/28/20 09:50

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**200**		100	25	ug/L		11/05/20 12:51	11/06/20 01:49	1

Client Sample ID: PPMP-66-MW14

Lab Sample ID: 680-190652-6

Date Collected: 10/26/20 15:16

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 17:40	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 17:40	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 17:40	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 17:40	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*80 - 120*		*11/08/20 17:40*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/08/20 17:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*73 - 131*		*11/08/20 17:40*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 17:40*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**620**		10	4.0	mg/L			11/05/20 13:16	10

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3100**		100	25	ug/L		10/30/20 13:42	10/31/20 13:41	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**130**		100	25	ug/L		11/05/20 12:51	11/06/20 01:45	1

Client Sample ID: PPMP-66-MW17

Lab Sample ID: 680-190652-7

Date Collected: 10/27/20 08:25

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 14:11	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 14:11	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 14:11	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 14:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*11/10/20 14:11*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 122*		*11/10/20 14:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*73 - 131*		*11/10/20 14:11*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 14:11*	*1*

Client Sample ID: PPMP-66-MW18R

Lab Sample ID: 680-190652-8

Date Collected: 10/27/20 09:45

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 14:36	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 14:36	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 14:36	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 14:36	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*11/10/20 14:36*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*11/10/20 14:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*73 - 131*		*11/10/20 14:36*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 14:36*	*1*

Client Sample ID: PPMP-66-MW01

Lab Sample ID: 680-190652-9

Date Collected: 10/26/20 08:55

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 18:03	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 18:03	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 18:03	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 18:03	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*80 - 120*		*11/08/20 18:03*	*1*
Dibromofluoromethane (Surr)	*88*		*80 - 122*		*11/08/20 18:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 18:03*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/08/20 18:03*	*1*

Client Sample ID: DUP359

Lab Sample ID: 680-190652-10

Date Collected: 10/26/20 00:00

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 18:27	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 18:27	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 18:27	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 18:27	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*80 - 120*		*11/08/20 18:27*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 122*		*11/08/20 18:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*73 - 131*		*11/08/20 18:27*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/08/20 18:27*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**410**		10	4.0	mg/L			11/05/20 13:28	10

Client Sample ID: DUP359

Lab Sample ID: 680-190652-10
Date Collected: 10/26/20 00:00
Matrix: Water
Date Received: 10/28/20 09:50

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	2300		100	25	ug/L		10/30/20 13:42	10/31/20 14:02	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	120		100	25	ug/L		11/05/20 12:51	11/06/20 02:03	1

Client Sample ID: TB567

Lab Sample ID: 680-190652-11
Date Collected: 10/27/20 14:30
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 12:57	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 12:57	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 12:57	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 12:57	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 12:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/10/20 12:57*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 122*		*11/10/20 12:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*73 - 131*		*11/10/20 12:57*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*11/10/20 12:57*	*1*

Client Sample ID: PPMP-66-MW22

Lab Sample ID: 680-190652-12
Date Collected: 10/26/20 10:20
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 18:51	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 18:51	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 18:51	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 18:51	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*80 - 120*		*11/08/20 18:51*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/08/20 18:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 18:51*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 18:51*	*1*

Client Sample ID: PPMP-66-MW16

Lab Sample ID: 680-190652-13
Date Collected: 10/26/20 11:30
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 19:15	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 19:15	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 19:15	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 19:15	1

Client Sample ID: PPMP-66-MW16

Lab Sample ID: 680-190652-13

Date Collected: 10/26/20 11:30

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*		*11/08/20 19:15*	*1*
Dibromofluoromethane (Surr)	*86*		*80 - 122*		*11/08/20 19:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 19:15*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/08/20 19:15*	*1*

Client Sample ID: PPMP-66-MW21

Lab Sample ID: 680-190652-14

Date Collected: 10/26/20 12:45

Matrix: Water

Date Received: 10/28/20 09:50

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**47**		1.0	0.40	mg/L			11/05/20 00:38	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**1300**		100	25	ug/L		10/30/20 13:42	10/31/20 14:05	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	**510**		100	25	ug/L		11/05/20 12:51	11/06/20 02:06	1

Client Sample ID: PPMP-66-MW08

Lab Sample ID: 680-190652-15

Date Collected: 10/27/20 09:01

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 15:01	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 15:01	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 15:01	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 15:01	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/10/20 15:01*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*11/10/20 15:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*73 - 131*		*11/10/20 15:01*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*11/10/20 15:01*	*1*

Client Sample ID: PPMP-66-MW23R

Lab Sample ID: 680-190652-16

Date Collected: 10/27/20 12:31

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**50**	**B**	1.0	0.41	ug/L			11/09/20 17:52	1
1,1-Dichloroethene	**1.4**		1.0	0.36	ug/L			11/09/20 17:52	1
trans-1,2-Dichloroethene	**46**		1.0	0.37	ug/L			11/09/20 17:52	1
Trichloroethene	**140**		1.0	0.48	ug/L			11/09/20 17:52	1

Client Sample ID: PPMP-66-MW23R

Lab Sample ID: 680-190652-16
Date Collected: 10/27/20 12:31
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**5.7**		1.0	0.50	ug/L			11/09/20 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*11/09/20 17:52*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/09/20 17:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*73 - 131*		*11/09/20 17:52*	*1*
Toluene-d8 (Surr)	*88*		*80 - 120*		*11/09/20 17:52*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/06/20 20:07	1
Ethene	**1.1**		1.0	0.50	ug/L			11/06/20 20:07	1
Methane	**30**		0.58	0.29	ug/L			11/06/20 20:07	1

Client Sample ID: PPMP-66-MW02RR

Lab Sample ID: 680-190652-17
Date Collected: 10/27/20 11:16
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**9.5**	**B**	1.0	0.41	ug/L			11/09/20 18:15	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/09/20 18:15	1
trans-1,2-Dichloroethene	**3.3**		1.0	0.37	ug/L			11/09/20 18:15	1
Trichloroethene	**2.8**		1.0	0.48	ug/L			11/09/20 18:15	1
Vinyl chloride	**3.9**		1.0	0.50	ug/L			11/09/20 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*11/09/20 18:15*	*1*
Dibromofluoromethane (Surr)	*89*		*80 - 122*		*11/09/20 18:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*73 - 131*		*11/09/20 18:15*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*11/09/20 18:15*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/06/20 20:19	1
Ethene	**0.55**	**J**	1.0	0.50	ug/L			11/06/20 20:19	1
Methane	**18**		0.58	0.29	ug/L			11/06/20 20:19	1

Client Sample ID: PPMP-66-MW24R

Lab Sample ID: 680-190652-18
Date Collected: 10/27/20 12:45
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.60**	**J**	1.0	0.41	ug/L			11/10/20 15:25	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 15:25	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 15:25	1
Trichloroethene	**0.55**	**J**	1.0	0.48	ug/L			11/10/20 15:25	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/10/20 15:25*	*1*

Client Sample ID: PPMP-66-MW24R

Lab Sample ID: 680-190652-18

Date Collected: 10/27/20 12:45

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*104*		*80 - 122*		*11/10/20 15:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*73 - 131*		*11/10/20 15:25*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*11/10/20 15:25*	*1*

Client Sample ID: PPMP-66-MW06R

Lab Sample ID: 680-190652-19

Date Collected: 10/27/20 11:10

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**4.1**		1.0	0.41	ug/L			11/10/20 15:50	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 15:50	1
trans-1,2-Dichloroethene	**2.3**		1.0	0.37	ug/L			11/10/20 15:50	1
Trichloroethene	**28**		1.0	0.48	ug/L			11/10/20 15:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/10/20 15:50*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*11/10/20 15:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*73 - 131*		*11/10/20 15:50*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 15:50*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/06/20 20:32	1
Ethene	0.50	U	1.0	0.50	ug/L			11/06/20 20:32	1
Methane	**77**		0.58	0.29	ug/L			11/06/20 20:32	1

Client Sample ID: DUP360

Lab Sample ID: 680-190652-20

Date Collected: 10/26/20 00:00

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 19:39	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 19:39	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 19:39	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 19:39	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 19:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*		*80 - 120*		*11/08/20 19:39*	*1*
Dibromofluoromethane (Surr)	*87*		*80 - 122*		*11/08/20 19:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 19:39*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/08/20 19:39*	*1*

Client Sample ID: EB135

Lab Sample ID: 680-190652-21

Date Collected: 10/27/20 15:00

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 13:22	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 13:22	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 13:22	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 13:22	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*11/10/20 13:22*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 122*		*11/10/20 13:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*73 - 131*		*11/10/20 13:22*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 13:22*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			11/05/20 00:50	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		10/30/20 13:42	10/31/20 13:34	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		11/05/20 12:51	11/06/20 02:10	1

Client Sample ID: MATERIAL105

Lab Sample ID: 680-190652-22

Date Collected: 10/27/20 14:45

Matrix: Water

Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 16:15	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 16:15	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 16:15	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 16:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*11/10/20 16:15*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 122*		*11/10/20 16:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*73 - 131*		*11/10/20 16:15*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*11/10/20 16:15*	*1*

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			11/05/20 01:03	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		10/30/20 13:42	10/31/20 13:51	1

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Client Sample ID: MATERIAL105

Lab Sample ID: 680-190652-22

Date Collected: 10/27/20 14:45
Matrix: Water
Date Received: 10/28/20 09:50

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		11/05/20 12:51	11/06/20 01:59	1

Client Sample ID: TB568

Lab Sample ID: 680-190652-23

Date Collected: 10/27/20 15:10
Matrix: Water
Date Received: 10/28/20 09:50

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 13:46	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 13:46	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 13:46	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 13:46	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 13:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/10/20 13:46*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 122*		*11/10/20 13:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*73 - 131*		*11/10/20 13:46*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*11/10/20 13:46*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-642949/9
Matrix: Water
Analysis Batch: 642949

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/08/20 12:20	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/08/20 12:20	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/08/20 12:20	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/08/20 12:20	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/08/20 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*11/08/20 12:20*	*1*
Dibromofluoromethane (Surr)	*85*		*80 - 122*		*11/08/20 12:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*		*11/08/20 12:20*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/08/20 12:20*	*1*

Lab Sample ID: LCS 680-642949/4
Matrix: Water
Analysis Batch: 642949

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			50.0	43.4		ug/L		87	80 - 120		
1,1-Dichloroethene			50.0	44.2		ug/L		88	76 - 120		
trans-1,2-Dichloroethene			50.0	45.0		ug/L		90	80 - 120		
Trichloroethene			50.0	47.9		ug/L		96	80 - 120		
Vinyl chloride			50.0	42.7		ug/L		85	71 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*91*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*85*		*73 - 131*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: LCSD 680-642949/5
Matrix: Water
Analysis Batch: 642949

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			50.0	43.5		ug/L		87	80 - 120	0	20
1,1-Dichloroethene			50.0	42.9		ug/L		86	76 - 120	3	20
trans-1,2-Dichloroethene			50.0	42.8		ug/L		86	80 - 120	5	20
Trichloroethene			50.0	48.0		ug/L		96	80 - 120	0	20
Vinyl chloride			50.0	43.7		ug/L		87	71 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*84*		*73 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 680-190652-3 MS
Matrix: Water
Analysis Batch: 642949

Client Sample ID: PPMP-66-MW07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.41	U	50.0	42.6		ug/L		85	80 - 122
1,1-Dichloroethene	0.36	U	50.0	45.2		ug/L		90	74 - 125
trans-1,2-Dichloroethene	0.37	U	50.0	43.3		ug/L		87	78 - 123
Trichloroethene	0.48	U	50.0	47.2		ug/L		94	80 - 123
Vinyl chloride	0.50	U	50.0	45.3		ug/L		91	68 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*90*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*80*		*73 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: 680-190652-3 MSD
Matrix: Water
Analysis Batch: 642949

Client Sample ID: PPMP-66-MW07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	0.41	U	50.0	42.6		ug/L		85	80 - 122	0	20
1,1-Dichloroethene	0.36	U	50.0	43.9		ug/L		88	74 - 125	3	20
trans-1,2-Dichloroethene	0.37	U	50.0	43.0		ug/L		86	78 - 123	1	20
Trichloroethene	0.48	U	50.0	47.3		ug/L		95	80 - 123	0	20
Vinyl chloride	0.50	U	50.0	43.0		ug/L		86	68 - 132	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*86*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*82*		*73 - 131*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: MB 680-643059/9
Matrix: Water
Analysis Batch: 643059

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.570	J	1.0	0.41	ug/L			11/09/20 14:39	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/09/20 14:39	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/09/20 14:39	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/09/20 14:39	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/09/20 14:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*11/09/20 14:39*	*1*
Dibromofluoromethane (Surr)	*90*		*80 - 122*		*11/09/20 14:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*73 - 131*		*11/09/20 14:39*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*11/09/20 14:39*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-643059/4
Matrix: Water
Analysis Batch: 643059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			50.0	50.5		ug/L		101	80 - 120		
1,1-Dichloroethene			50.0	41.5		ug/L		83	76 - 120		
trans-1,2-Dichloroethene			50.0	45.6		ug/L		91	80 - 120		
Trichloroethene			50.0	47.2		ug/L		94	80 - 120		
Vinyl chloride			50.0	44.3		ug/L		89	71 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*102*		*73 - 131*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: LCSD 680-643059/5
Matrix: Water
Analysis Batch: 643059

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			50.0	50.2		ug/L		100	80 - 120	1	20
1,1-Dichloroethene			50.0	44.8		ug/L		90	76 - 120	8	20
trans-1,2-Dichloroethene			50.0	46.4		ug/L		93	80 - 120	2	20
Trichloroethene			50.0	47.8		ug/L		96	80 - 120	1	20
Vinyl chloride			50.0	48.2		ug/L		96	71 - 128	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*96*		*73 - 131*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: MB 680-643200/8
Matrix: Water
Analysis Batch: 643200

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.41	U	1.0	0.41	ug/L			11/10/20 09:40	1
1,1-Dichloroethene	0.36	U	1.0	0.36	ug/L			11/10/20 09:40	1
trans-1,2-Dichloroethene	0.37	U	1.0	0.37	ug/L			11/10/20 09:40	1
Trichloroethene	0.48	U	1.0	0.48	ug/L			11/10/20 09:40	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			11/10/20 09:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*11/10/20 09:40*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 122*		*11/10/20 09:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*73 - 131*		*11/10/20 09:40*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*11/10/20 09:40*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-643200/3
Matrix: Water
Analysis Batch: 643200

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
cis-1,2-Dichloroethene			50.0	46.9		ug/L		94	80 - 120		
1,1-Dichloroethene			50.0	51.8		ug/L		104	76 - 120		
trans-1,2-Dichloroethene			50.0	53.1		ug/L		106	80 - 120		
Trichloroethene			50.0	55.6		ug/L		111	80 - 120		
Vinyl chloride			50.0	49.7		ug/L		99	71 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*97*		*73 - 131*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: LCSD 680-643200/4
Matrix: Water
Analysis Batch: 643200

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene			50.0	46.8		ug/L		94	80 - 120	0	20
1,1-Dichloroethene			50.0	50.4		ug/L		101	76 - 120	3	20
trans-1,2-Dichloroethene			50.0	52.6		ug/L		105	80 - 120	1	20
Trichloroethene			50.0	54.9		ug/L		110	80 - 120	1	20
Vinyl chloride			50.0	49.4		ug/L		99	71 - 128	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 122*
1,2-Dichloroethane-d4 (Surr)	*99*		*73 - 131*
Toluene-d8 (Surr)	*101*		*80 - 120*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 680-642725/8
Matrix: Water
Analysis Batch: 642725

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	0.55	U	1.1	0.55	ug/L			11/06/20 16:37	1
Ethene	0.50	U	1.0	0.50	ug/L			11/06/20 16:37	1
Methane	0.29	U	0.58	0.29	ug/L			11/06/20 16:37	1
Methane (TCD)	39	U	390	39	ug/L			11/06/20 16:37	1

Lab Sample ID: LCS 680-642725/3
Matrix: Water
Analysis Batch: 642725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Methane (TCD)			1920	1970		ug/L		103	75 - 125		

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 680-642725/6
Matrix: Water
Analysis Batch: 642725

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	288	273		ug/L		95	75 - 125
Ethene	269	244		ug/L		91	75 - 125
Methane	154	140		ug/L		91	75 - 125

Lab Sample ID: LCSD 680-642725/4
Matrix: Water
Analysis Batch: 642725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	1920	1810		ug/L		94	75 - 125	9	30

Lab Sample ID: LCSD 680-642725/7
Matrix: Water
Analysis Batch: 642725

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	288	253		ug/L		88	75 - 125	8	30
Ethene	269	231		ug/L		86	75 - 125	5	30
Methane	154	135		ug/L		88	75 - 125	3	30

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 680-642353/33
Matrix: Water
Analysis Batch: 642353

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			11/04/20 22:19	1

Lab Sample ID: LCS 680-642353/34
Matrix: Water
Analysis Batch: 642353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	9.90		mg/L		99	87 - 112

Lab Sample ID: LCSD 680-642353/35
Matrix: Water
Analysis Batch: 642353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0	9.91		mg/L		99	87 - 112	0	15

Lab Sample ID: MB 680-642486/2
Matrix: Water
Analysis Batch: 642486

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.40	U	1.0	0.40	mg/L			11/05/20 09:08	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 680-642486/3
Matrix: Water
Analysis Batch: 642486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0	10.1		mg/L		101	87 - 112

Lab Sample ID: LCSD 680-642486/4
Matrix: Water
Analysis Batch: 642486

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0	10.1		mg/L		101	87 - 112	0	15

Lab Sample ID: 680-190652-3 MS
Matrix: Water
Analysis Batch: 642486

Client Sample ID: PPMP-66-MW07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	1300		250	1440	4	mg/L		75	87 - 112

Lab Sample ID: 680-190652-3 MSD
Matrix: Water
Analysis Batch: 642486

Client Sample ID: PPMP-66-MW07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1300		250	1460	4	mg/L		83	87 - 112	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-641657/1-A
Matrix: Water
Analysis Batch: 641777

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 641657

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	25	U	100	25	ug/L		10/30/20 13:42	10/31/20 13:09	1

Lab Sample ID: LCS 680-641657/2-A
Matrix: Water
Analysis Batch: 641777

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 641657

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	5000	5020		ug/L		100	80 - 120

Lab Sample ID: 680-190652-3 MS
Matrix: Water
Analysis Batch: 641777

Client Sample ID: PPMP-66-MW07
Prep Type: Total Recoverable
Prep Batch: 641657

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	2600		5000	7190		ug/L		91	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 680-190652-3 MSD
Matrix: Water
Analysis Batch: 641777

Client Sample ID: PPMP-66-MW07
Prep Type: Total Recoverable
Prep Batch: 641657

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	2600		5000	7140		ug/L		90	75 - 125	1	20

Lab Sample ID: MB 680-642522/1-B
Matrix: Water
Analysis Batch: 642635

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 642523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Iron	25	U	100	25	ug/L		11/05/20 12:51	11/06/20 01:17	1

Lab Sample ID: LCS 680-642522/2-B
Matrix: Water
Analysis Batch: 642635

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 642523

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dissolved Iron			5000	4940		ug/L		99	80 - 120		

Lab Sample ID: 680-190652-3 MS
Matrix: Water
Analysis Batch: 642635

Client Sample ID: PPMP-66-MW07
Prep Type: Dissolved
Prep Batch: 642523

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dissolved Iron	360		5000	5170		ug/L		96	75 - 125		

Lab Sample ID: 680-190652-3 MSD
Matrix: Water
Analysis Batch: 642635

Client Sample ID: PPMP-66-MW07
Prep Type: Dissolved
Prep Batch: 642523

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Iron	360		5000	5450		ug/L		102	75 - 125	5	20

GC/MS VOA

Analysis Batch: 642949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Total/NA	Water	8260B	
680-190652-2	PPMP-66-MW11	Total/NA	Water	8260B	
680-190652-3	PPMP-66-MW07	Total/NA	Water	8260B	
680-190652-4	PPMP-66-MW13	Total/NA	Water	8260B	
680-190652-6	PPMP-66-MW14	Total/NA	Water	8260B	
680-190652-9	PPMP-66-MW01	Total/NA	Water	8260B	
680-190652-10	DUP359	Total/NA	Water	8260B	
680-190652-12	PPMP-66-MW22	Total/NA	Water	8260B	
680-190652-13	PPMP-66-MW16	Total/NA	Water	8260B	
680-190652-20	DUP360	Total/NA	Water	8260B	
MB 680-642949/9	Method Blank	Total/NA	Water	8260B	
LCS 680-642949/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-642949/5	Lab Control Sample Dup	Total/NA	Water	8260B	
680-190652-3 MS	PPMP-66-MW07	Total/NA	Water	8260B	
680-190652-3 MSD	PPMP-66-MW07	Total/NA	Water	8260B	

Analysis Batch: 643059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-16	PPMP-66-MW23R	Total/NA	Water	8260B	
680-190652-17	PPMP-66-MW02RR	Total/NA	Water	8260B	
MB 680-643059/9	Method Blank	Total/NA	Water	8260B	
LCS 680-643059/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-643059/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 643200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-7	PPMP-66-MW17	Total/NA	Water	8260B	
680-190652-8	PPMP-66-MW18R	Total/NA	Water	8260B	
680-190652-11	TB567	Total/NA	Water	8260B	
680-190652-15	PPMP-66-MW08	Total/NA	Water	8260B	
680-190652-18	PPMP-66-MW24R	Total/NA	Water	8260B	
680-190652-19	PPMP-66-MW06R	Total/NA	Water	8260B	
680-190652-21	EB135	Total/NA	Water	8260B	
680-190652-22	MATERIAL105	Total/NA	Water	8260B	
680-190652-23	TB568	Total/NA	Water	8260B	
MB 680-643200/8	Method Blank	Total/NA	Water	8260B	
LCS 680-643200/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-643200/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 642725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-16	PPMP-66-MW23R	Total/NA	Water	RSK-175	
680-190652-17	PPMP-66-MW02RR	Total/NA	Water	RSK-175	
680-190652-19	PPMP-66-MW06R	Total/NA	Water	RSK-175	
MB 680-642725/8	Method Blank	Total/NA	Water	RSK-175	
LCS 680-642725/3	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 680-642725/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 680-642725/4	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 680-642725/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 642353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Total/NA	Water	9056A	
680-190652-14	PPMP-66-MW21	Total/NA	Water	9056A	
680-190652-21	EB135	Total/NA	Water	9056A	
680-190652-22	MATERIAL105	Total/NA	Water	9056A	
MB 680-642353/33	Method Blank	Total/NA	Water	9056A	
LCS 680-642353/34	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-642353/35	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 642486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-3	PPMP-66-MW07	Total/NA	Water	9056A	
680-190652-5	PPMP-66-MW03	Total/NA	Water	9056A	
680-190652-6	PPMP-66-MW14	Total/NA	Water	9056A	
680-190652-10	DUP359	Total/NA	Water	9056A	
MB 680-642486/2	Method Blank	Total/NA	Water	9056A	
LCS 680-642486/3	Lab Control Sample	Total/NA	Water	9056A	
LCSD 680-642486/4	Lab Control Sample Dup	Total/NA	Water	9056A	
680-190652-3 MS	PPMP-66-MW07	Total/NA	Water	9056A	
680-190652-3 MSD	PPMP-66-MW07	Total/NA	Water	9056A	

Metals

Prep Batch: 641657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Total Recoverable	Water	3005A	
680-190652-3	PPMP-66-MW07	Total Recoverable	Water	3005A	
680-190652-5	PPMP-66-MW03	Total Recoverable	Water	3005A	
680-190652-6	PPMP-66-MW14	Total Recoverable	Water	3005A	
680-190652-10	DUP359	Total Recoverable	Water	3005A	
680-190652-14	PPMP-66-MW21	Total Recoverable	Water	3005A	
680-190652-21	EB135	Total Recoverable	Water	3005A	
680-190652-22	MATERIAL105	Total Recoverable	Water	3005A	
MB 680-641657/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-641657/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
680-190652-3 MS	PPMP-66-MW07	Total Recoverable	Water	3005A	
680-190652-3 MSD	PPMP-66-MW07	Total Recoverable	Water	3005A	

Analysis Batch: 641777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Total Recoverable	Water	6020A	641657
680-190652-3	PPMP-66-MW07	Total Recoverable	Water	6020A	641657
680-190652-5	PPMP-66-MW03	Total Recoverable	Water	6020A	641657
680-190652-6	PPMP-66-MW14	Total Recoverable	Water	6020A	641657
680-190652-10	DUP359	Total Recoverable	Water	6020A	641657
680-190652-14	PPMP-66-MW21	Total Recoverable	Water	6020A	641657
680-190652-21	EB135	Total Recoverable	Water	6020A	641657
680-190652-22	MATERIAL105	Total Recoverable	Water	6020A	641657
MB 680-641657/1-A	Method Blank	Total Recoverable	Water	6020A	641657
LCS 680-641657/2-A	Lab Control Sample	Total Recoverable	Water	6020A	641657
680-190652-3 MS	PPMP-66-MW07	Total Recoverable	Water	6020A	641657
680-190652-3 MSD	PPMP-66-MW07	Total Recoverable	Water	6020A	641657

Metals

Filtration Batch: 642522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Dissolved	Water	FILTRATION	
680-190652-3	PPMP-66-MW07	Dissolved	Water	FILTRATION	
680-190652-5	PPMP-66-MW03	Dissolved	Water	FILTRATION	
680-190652-6	PPMP-66-MW14	Dissolved	Water	FILTRATION	
680-190652-10	DUP359	Dissolved	Water	FILTRATION	
680-190652-14	PPMP-66-MW21	Dissolved	Water	FILTRATION	
680-190652-21	EB135	Dissolved	Water	FILTRATION	
680-190652-22	MATERIAL105	Dissolved	Water	FILTRATION	
MB 680-642522/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 680-642522/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
680-190652-3 MS	PPMP-66-MW07	Dissolved	Water	FILTRATION	
680-190652-3 MSD	PPMP-66-MW07	Dissolved	Water	FILTRATION	

Prep Batch: 642523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Dissolved	Water	3005A	642522
680-190652-3	PPMP-66-MW07	Dissolved	Water	3005A	642522
680-190652-5	PPMP-66-MW03	Dissolved	Water	3005A	642522
680-190652-6	PPMP-66-MW14	Dissolved	Water	3005A	642522
680-190652-10	DUP359	Dissolved	Water	3005A	642522
680-190652-14	PPMP-66-MW21	Dissolved	Water	3005A	642522
680-190652-21	EB135	Dissolved	Water	3005A	642522
680-190652-22	MATERIAL105	Dissolved	Water	3005A	642522
MB 680-642522/1-B	Method Blank	Dissolved	Water	3005A	642522
LCS 680-642522/2-B	Lab Control Sample	Dissolved	Water	3005A	642522
680-190652-3 MS	PPMP-66-MW07	Dissolved	Water	3005A	642522
680-190652-3 MSD	PPMP-66-MW07	Dissolved	Water	3005A	642522

Analysis Batch: 642635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190652-1	PPMP-66-MW04	Dissolved	Water	6020A	642523
680-190652-3	PPMP-66-MW07	Dissolved	Water	6020A	642523
680-190652-5	PPMP-66-MW03	Dissolved	Water	6020A	642523
680-190652-6	PPMP-66-MW14	Dissolved	Water	6020A	642523
680-190652-10	DUP359	Dissolved	Water	6020A	642523
680-190652-14	PPMP-66-MW21	Dissolved	Water	6020A	642523
680-190652-21	EB135	Dissolved	Water	6020A	642523
680-190652-22	MATERIAL105	Dissolved	Water	6020A	642523
MB 680-642522/1-B	Method Blank	Dissolved	Water	6020A	642523
LCS 680-642522/2-B	Lab Control Sample	Dissolved	Water	6020A	642523
680-190652-3 MS	PPMP-66-MW07	Dissolved	Water	6020A	642523
680-190652-3 MSD	PPMP-66-MW07	Dissolved	Water	6020A	642523

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Client Sample ID: PPMP-66-MW04

Lab Sample ID: 680-190652-1

Date Collected: 10/26/20 09:01

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 16:04	Y1S	TAL SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	9056A		1	5 mL	5 mL	642353	11/04/20 23:47	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 01:42	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:37	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: PPMP-66-MW11

Lab Sample ID: 680-190652-2

Date Collected: 10/26/20 10:26

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 16:28	Y1S	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: PPMP-66-MW07

Lab Sample ID: 680-190652-3

Date Collected: 10/26/20 13:16

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 16:52	Y1S	TAL SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	9056A		25	5 mL	5 mL	642486	11/05/20 12:00	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 01:24	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:16	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: PPMP-66-MW13

Lab Sample ID: 680-190652-4

Date Collected: 10/26/20 11:56

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 17:16	Y1S	TAL SAV
	Instrument ID: CMSO2									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Client Sample ID: PPMP-66-MW03

Lab Sample ID: 680-190652-5
Date Collected: 10/26/20 14:30
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		25	5 mL	5 mL	642486	11/05/20 12:38	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 01:49	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:58	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: PPMP-66-MW14

Lab Sample ID: 680-190652-6
Date Collected: 10/26/20 15:16
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 17:40	Y1S	TAL SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	9056A		10	5 mL	5 mL	642486	11/05/20 13:16	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 01:45	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:41	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: PPMP-66-MW17

Lab Sample ID: 680-190652-7
Date Collected: 10/27/20 08:25
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 14:11	P1C	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: PPMP-66-MW18R

Lab Sample ID: 680-190652-8
Date Collected: 10/27/20 09:45
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 14:36	P1C	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: PPMP-66-MW01

Lab Sample ID: 680-190652-9

Date Collected: 10/26/20 08:55

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 18:03	Y1S	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: DUP359

Lab Sample ID: 680-190652-10

Date Collected: 10/26/20 00:00

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 18:27	Y1S	TAL SAV
	Instrument ID: CMSO2									
Total/NA	Analysis	9056A		10	5 mL	5 mL	642486	11/05/20 13:28	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 02:03	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 14:02	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: TB567

Lab Sample ID: 680-190652-11

Date Collected: 10/27/20 14:30

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 12:57	P1C	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: PPMP-66-MW22

Lab Sample ID: 680-190652-12

Date Collected: 10/26/20 10:20

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 18:51	Y1S	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: PPMP-66-MW16

Lab Sample ID: 680-190652-13

Date Collected: 10/26/20 11:30

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 19:15	Y1S	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: PPMP-66-MW21

Lab Sample ID: 680-190652-14
Date Collected: 10/26/20 12:45
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		1	5 mL	5 mL	642353	11/05/20 00:38	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 02:06	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 14:05	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: PPMP-66-MW08

Lab Sample ID: 680-190652-15
Date Collected: 10/27/20 09:01
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 15:01	P1C	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: PPMP-66-MW23R

Lab Sample ID: 680-190652-16
Date Collected: 10/27/20 12:31
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643059	11/09/20 17:52	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	642725	11/06/20 20:07	DBM	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: PPMP-66-MW02RR

Lab Sample ID: 680-190652-17
Date Collected: 10/27/20 11:16
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643059	11/09/20 18:15	Y1S	TAL SAV
	Instrument ID: CMSC									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	642725	11/06/20 20:19	DBM	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: PPMP-66-MW24R

Lab Sample ID: 680-190652-18
Date Collected: 10/27/20 12:45
Matrix: Water
Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 15:25	P1C	TAL SAV
	Instrument ID: CMSP2									

Client Sample ID: PPMP-66-MW06R

Lab Sample ID: 680-190652-19

Date Collected: 10/27/20 11:10

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 15:50	P1C	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	RSK-175		1	17 mL	17 mL	642725	11/06/20 20:32	DBM	TAL SAV
	Instrument ID: CVGU									

Client Sample ID: DUP360

Lab Sample ID: 680-190652-20

Date Collected: 10/26/20 00:00

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	642949	11/08/20 19:39	Y1S	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: EB135

Lab Sample ID: 680-190652-21

Date Collected: 10/27/20 15:00

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 13:22	P1C	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	9056A		1	5 mL	5 mL	642353	11/05/20 00:50	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 02:10	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:34	BJB	TAL SAV
	Instrument ID: ICPMSC									

Client Sample ID: MATERIAL105

Lab Sample ID: 680-190652-22

Date Collected: 10/27/20 14:45

Matrix: Water

Date Received: 10/28/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 16:15	P1C	TAL SAV
	Instrument ID: CMSP2									
Total/NA	Analysis	9056A		1	5 mL	5 mL	642353	11/05/20 01:03	OK	TAL SAV
	Instrument ID: CICK									
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	642522	11/05/20 12:49	BJB	TAL SAV
Dissolved	Prep	3005A			50 mL	250 mL	642523	11/05/20 12:51	BJB	TAL SAV
Dissolved	Analysis	6020A		1			642635	11/06/20 01:59	BWR	TAL SAV
	Instrument ID: ICPMSC									
Total Recoverable	Prep	3005A			50 mL	250 mL	641657	10/30/20 13:42	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			641777	10/31/20 13:51	BJB	TAL SAV
	Instrument ID: ICPMSC									

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Client Sample ID: TB568

Date Collected: 10/27/20 15:10
Date Received: 10/28/20 09:50

Lab Sample ID: 680-190652-23

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	643200	11/10/20 13:46	P1C	TAL SAV
	Instrument ID: CMSP2									

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-190652-1
Project/Site: Parcel 66(7), FSWRS

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-21

Method Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 66(7), FSWRS

Job ID: 680-190652-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV
RSK-175	Dissolved Gases (GC)	RSK	TAL SAV
9056A	Anions, Ion Chromatography	SW846	TAL SAV
6020A	Metals (ICP/MS)	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL SAV
FILTRATION	Sample Filtration	None	TAL SAV

Protocol References:

None = None

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

680-190652 Chain of Custody

COC Number 6188
Cooler ID 1 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 20.094.21-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3- 40 mL vials, HCl	SW6020A Iron (total) 1-250 mL poly, HNO3	SW6020A Iron (dissolved) 1-250 mL poly, none	SW9056A Sulfate 1 - 125mL poly, none	RSK 175 Methane, Ethane, Ethene 3-40 mL vials, HCL	SW8260B - VOC* TB 2- 40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW04	NS	MW	WQ	G	10-26-20	901	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW11	NS	MW	WQ	G	10-26-20	1026	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07	NS	MW	WQ	G	10-26-20	1316	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW07	MS/MSD	MW	WQ	G	10-26-20	1316	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW13	NS	MW	WQ	G	10-26-20	1156	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW03	NS	MW	WQ	G	10-26-20	1430		X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW14	NS	MW	WQ	G	10-26-20	1516	X	X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW17	NS	MW	WQ	G	10-27-20	0825	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW18R	NS	MW	WQ	G	10-27-20	0945	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW01	NS	MW	WQ	G	10-26-20	0855	X					
McClellan Field QC	DUP359	FD	WQ	W	G	10-26-20	N/A	X	X	X	X		
McClellan Field QC	TB567	TB	WQ	W	G	10-27-20	1430						X

Double the number of bottles for MS/MSD

NOTES:

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature): Date/Time: 10-27-20 1600 Received by (Signature): Fedex

Relinquished by (Signature): Date/Time: Received by (Signature): CooBaunda 10-28-20 0950

4.6/27 (GF) 4.9/3.0°C

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6191
Cooler ID 2 of 2
Page 1 of 1

Laboratory TestAmerica
Lab Contact Jon Lawhon
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 66(7), Fmr Small Weapons Repair Shop
Task # 20.094.21-22.1

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: SW8260B - VOC* 3- 40 mL vials, HCl	Analysis: SW6020A Iron (total) 1-250 mL poly, HNO3	Analysis: SW6020A Iron (dissolved) 1-250 mL poly, none	Analysis: SW9056A Sulfate 1 - 125mL poly, none	Analysis: RSK 175 Methane, Ethane, Ethene 3- 40 mL vials, HCL	Analysis: SW8260B - VOC* TB 2- 40 mL vials, HCl
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW22	NS	MW	WQ	G	10-26-20	1020	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW16	NS	MW	WQ	G	10-26-20	1130	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW21	NS	MW	WQ	G	10-26-20	1245		X	X	X		
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW08	NS	MW	WQ	G	10-27-20	901	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW23R	NS	MW	WQ	G	10-27-20	1231	X				X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW02RR	NS	MW	WQ	G	10-27-20	1116	X				X	
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW24R	NS	MW	WQ	G	10-27-20	1245	X					
Parcel 66(7), Fmr Small Weapons Repair Shop	PPMP-66-MW06R	NS	MW	WQ	G	10-27-20	1110	X				X	
McClellan Field QC	DUP360	FD	WQ	W	G	10-26-20	N/A	X					
McClellan Field QC	EB135	EB	WQ	W	G	10-27-20	1500	X	X	X	X		
McClellan Field QC	MATERIAL105	Material Blank	WQ	W	G	10-27-20	1445	X	X	X	X		
McClellan Field QC	TB568	TB	WQ	W	G	10-27-20	1510						X

NOTES:

***VOC Analytes List: 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, TCE, VC**

Double the number of bottles for MS/MSD

QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water

Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water

White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt

Relinquished by (Signature): Date/Time: 10-27-20 1600 Received by (Signature): Fedex

Relinquished by (Signature): Date/Time: Received by (Signature): 10-28-20 0950

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-190652-1

Login Number: 190652
List Number: 1
Creator: Banda, Christy S

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

Laboratory Job ID: 680-190668-1
Client Project/Site: Parcel 81(5), Landfill 4

For:
Matrix Environmental Services, LLC
1601 Blake Street
Suite 200
Denver, Colorado 80202

Attn: Ms. Betty Van Pelt

Authorized for release by:
11/10/2020 2:15:50 PM

Ken Hayes, Project Manager II
(615)301-5035
Ken.Hayes@Eurofinset.com

Definitions/Glossary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-190668-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Sample Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-190668-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
680-190668-1	DSN 040	Water	10/28/20 08:45	10/29/20 09:50	

Job ID: 680-190668-1

Laboratory: Eurofins TestAmerica, Savannah

Narrative

Job Narrative
680-190668-1

Comments
No additional comments.

Receipt
The sample was received on 10/29/2020 9:50 AM; the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.1º C.

HPLC/IC
Method 9060: The closing continuing calibration blank (CCB) associated with batch 680-641814 contained Total Organic Carbon greater than one-half the reporting limit (RL) but less than the RL. The sample results have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method 1664B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 680-642396.

Method SM 2540C: The sample duplicate precision for the following sample associated with analytical batch 680-642196 was outside control limits: (680-190668-E-1 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-190668-1

Client Sample ID: DSN 040

Date Collected: 10/28/20 08:45
Date Received: 10/29/20 09:50

Lab Sample ID: 680-190668-1

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF			SU			10/30/20 12:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	3.0	J	4.7	1.3	mg/L		11/05/20 07:29	11/05/20 09:50	1
Phosphorus, Total	0.10		0.10	0.041	mg/L		11/02/20 16:19	11/04/20 09:59	1
Chemical Oxygen Demand	75	J	100	50	mg/L			10/30/20 10:24	10
Total Organic Carbon	16		1.0	0.50	mg/L			10/31/20 08:45	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	14		4.0	4.0	mg/L			10/30/20 13:48	1
Total Dissolved Solids	190		20	20	mg/L			11/04/20 07:25	1
Biochemical Oxygen Demand	4.6		2.0	2.0	mg/L			10/29/20 13:50	1
Nitrogen, Total	1.0		0.25	0.25	mg/L			11/05/20 13:00	1

Method: 1664B - Oil and Grease

Lab Sample ID: MB 680-642396/1-A
Matrix: Water
Analysis Batch: 642420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 642396

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	1.4	U	5.0	1.4	mg/L		11/05/20 07:29	11/05/20 09:50	1

Lab Sample ID: LCS 680-642396/2-A
Matrix: Water
Analysis Batch: 642420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 642396

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oil & Grease	40.0	35.40		mg/L		88	78 - 114

Lab Sample ID: LCSD 680-642396/3-A
Matrix: Water
Analysis Batch: 642420

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 642396

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Oil & Grease	40.0	37.40		mg/L		93	78 - 114	5	18

Method: 2540 D-2011 - Total Suspended Solids (Dried at 103-105°C)

Lab Sample ID: MB 680-641660/1
Matrix: Water
Analysis Batch: 641660

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.0	U	1.0	1.0	mg/L			10/30/20 13:48	1

Lab Sample ID: LCS 680-641660/2
Matrix: Water
Analysis Batch: 641660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	951	960		mg/L		101	80 - 120

Lab Sample ID: LCSD 680-641660/3
Matrix: Water
Analysis Batch: 641660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	951	940		mg/L		99	80 - 120	2	25

Method: 2540C-2011 - Total Dissolved Solids (Dried at 180 °C)

Lab Sample ID: MB 680-642196/1
Matrix: Water
Analysis Batch: 642196

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			11/04/20 07:25	1

Method: 2540C-2011 - Total Dissolved Solids (Dried at 180 °C) (Continued)

Lab Sample ID: LCS 680-642196/2
Matrix: Water
Analysis Batch: 642196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2460	2360		mg/L		96	80 - 120

Lab Sample ID: LCSD 680-642196/3
Matrix: Water
Analysis Batch: 642196

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	2460	2340		mg/L		95	80 - 120	1	25

Lab Sample ID: 680-190668-1 DU
Matrix: Water
Analysis Batch: 642196

Client Sample ID: DSN 040
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	190		170	F3	mg/L		10	5

Method: 365.4-1974 - Phosphorus, Total

Lab Sample ID: MB 680-641947/1-A
Matrix: Water
Analysis Batch: 642277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 641947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	0.041	U	0.10	0.041	mg/L		11/02/20 16:19	11/04/20 09:33	1

Lab Sample ID: LCS 680-641947/2-A
Matrix: Water
Analysis Batch: 642277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 641947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	2.00	2.04		mg/L		102	90 - 110

Method: 410.4-1993 R2.0 - COD

Lab Sample ID: MB 680-641586/3
Matrix: Water
Analysis Batch: 641586

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	5.0	U	10	5.0	mg/L			10/30/20 10:24	1

Lab Sample ID: LCS 680-641586/4
Matrix: Water
Analysis Batch: 641586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	50.0	48.6		mg/L		97	90 - 110

Method: 5210B-2011 - BOD, 5-Day

Lab Sample ID: USB 680-641392/4
Matrix: Water
Analysis Batch: 641392

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	USB Result	USB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	2.0	U	2.0	2.0	mg/L			10/29/20 12:12	1

Lab Sample ID: LCS 680-641392/5
Matrix: Water
Analysis Batch: 641392

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Biochemical Oxygen Demand			198	185		mg/L		94	85 - 115		

Lab Sample ID: LCSD 680-641392/6
Matrix: Water
Analysis Batch: 641392

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biochemical Oxygen Demand			198	189		mg/L		95	85 - 115	2	30

Method: 9040C - pH

Lab Sample ID: LCS 680-641646/4
Matrix: Water
Analysis Batch: 641646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.01	7.1		SU		101	63 - 158		

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 680-641814/2
Matrix: Water
Analysis Batch: 641814

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.50	U	1.0	0.50	mg/L			10/31/20 05:29	1

Lab Sample ID: LCS 680-641814/3
Matrix: Water
Analysis Batch: 641814

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			20.0	19.4		mg/L		97	80 - 120		
TOC Result 1			20.0	19.1		mg/L		96	80 - 120		
TOC Result 2			20.0	19.5		mg/L		97	80 - 120		
TOC Result 3			20.0	19.7		mg/L		99	80 - 120		
TOC Result 4			20.0	19.2		mg/L		96	80 - 120		
Total Organic Carbon - Quad			20.0	19.4		mg/L		97	80 - 120		

Method: 9060 - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCSD 680-641814/4
Matrix: Water
Analysis Batch: 641814

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon			20.0	19.1		mg/L		95	80 - 120	2	25
TOC Result 1			20.0	18.8		mg/L		94	80 - 120	2	25
TOC Result 2			20.0	19.7		mg/L		99	80 - 120	1	25
TOC Result 3			20.0	19.2		mg/L		96	80 - 120	3	25
TOC Result 4			20.0	18.7		mg/L		94	80 - 120	2	25
Total Organic Carbon - Quad			20.0	19.1		mg/L		95	80 - 120	2	25

General Chemistry

Analysis Batch: 641392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	5210B-2011	
USB 680-641392/4	Method Blank	Total/NA	Water	5210B-2011	
LCS 680-641392/5	Lab Control Sample	Total/NA	Water	5210B-2011	
LCSD 680-641392/6	Lab Control Sample Dup	Total/NA	Water	5210B-2011	

Analysis Batch: 641586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	410.4-1993 R2.0	
MB 680-641586/3	Method Blank	Total/NA	Water	410.4-1993 R2.0	
LCS 680-641586/4	Lab Control Sample	Total/NA	Water	410.4-1993 R2.0	

Analysis Batch: 641646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	9040C	
LCS 680-641646/4	Lab Control Sample	Total/NA	Water	9040C	

Analysis Batch: 641655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	Total Nitrogen	

Analysis Batch: 641660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	2540 D-2011	
MB 680-641660/1	Method Blank	Total/NA	Water	2540 D-2011	
LCS 680-641660/2	Lab Control Sample	Total/NA	Water	2540 D-2011	
LCSD 680-641660/3	Lab Control Sample Dup	Total/NA	Water	2540 D-2011	

Analysis Batch: 641814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	9060	
MB 680-641814/2	Method Blank	Total/NA	Water	9060	
LCS 680-641814/3	Lab Control Sample	Total/NA	Water	9060	
LCSD 680-641814/4	Lab Control Sample Dup	Total/NA	Water	9060	

Prep Batch: 641947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	Digestion	
MB 680-641947/1-A	Method Blank	Total/NA	Water	Digestion	
LCS 680-641947/2-A	Lab Control Sample	Total/NA	Water	Digestion	

Analysis Batch: 642196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	2540C-2011	
MB 680-642196/1	Method Blank	Total/NA	Water	2540C-2011	
LCS 680-642196/2	Lab Control Sample	Total/NA	Water	2540C-2011	
LCSD 680-642196/3	Lab Control Sample Dup	Total/NA	Water	2540C-2011	
680-190668-1 DU	DSN 040	Total/NA	Water	2540C-2011	

Analysis Batch: 642277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	365.4-1974	641947

General Chemistry (Continued)

Analysis Batch: 642277 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-641947/1-A	Method Blank	Total/NA	Water	365.4-1974	641947
LCS 680-641947/2-A	Lab Control Sample	Total/NA	Water	365.4-1974	641947

Prep Batch: 642396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	1664B	
MB 680-642396/1-A	Method Blank	Total/NA	Water	1664B	
LCS 680-642396/2-A	Lab Control Sample	Total/NA	Water	1664B	
LCSD 680-642396/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	

Analysis Batch: 642420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-190668-1	DSN 040	Total/NA	Water	1664B	642396
MB 680-642396/1-A	Method Blank	Total/NA	Water	1664B	642396
LCS 680-642396/2-A	Lab Control Sample	Total/NA	Water	1664B	642396
LCSD 680-642396/3-A	Lab Control Sample Dup	Total/NA	Water	1664B	642396

Lab Chronicle

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-190668-1

Client Sample ID: DSN 040

Date Collected: 10/28/20 08:45
Date Received: 10/29/20 09:50

Lab Sample ID: 680-190668-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1664B			534 mL	500 mL	642396	11/05/20 07:29	JAS	TAL SAV
Total/NA	Analysis	1664B		1			642420	11/05/20 09:50	JAS	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540 D-2011		1	250 mL	1000 mL	641660	10/30/20 13:48	PG	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540C-2011		1	50 mL	200 mL	642196	11/04/20 07:25	PG	TAL SAV
	Instrument ID: NOEQUIP									
Total/NA	Prep	Digestion			20 mL	20 mL	641947	11/02/20 16:19	SM	TAL SAV
Total/NA	Analysis	365.4-1974		1	2 mL	2 mL	642277	11/04/20 09:59	NVF	TAL SAV
	Instrument ID: LACHAT3									
Total/NA	Analysis	410.4-1993 R2.0		10	2 mL	2 mL	641586	10/30/20 10:24	ALG	TAL SAV
	Instrument ID: SPC7									
Total/NA	Analysis	5210B-2011		1			641392	10/29/20 13:50	OLB	TAL SAV
	Instrument ID: BODAssay+									
Total/NA	Analysis	9040C		1			641646	10/30/20 12:14	DR	TAL SAV
	Instrument ID: MANTECH									
Total/NA	Analysis	9060		1	40 mL	40 mL	641814	10/31/20 08:45	RKJ	TAL SAV
	Instrument ID: TOC7									
Total/NA	Analysis	Total Nitrogen		1			641655	11/05/20 13:00	ALG	TAL SAV
	Instrument ID: NOEQUIP									

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: Matrix Environmental Services, LLC
Job ID: 680-190668-1
Project/Site: Parcel 81(5), Landfill 4

Laboratory: Eurofins TestAmerica, Savannah

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-21

Method Summary

Client: Matrix Environmental Services, LLC
Project/Site: Parcel 81(5), Landfill 4

Job ID: 680-190668-1

Method	Method Description	Protocol	Laboratory
1664B	Oil and Grease	EPA	TAL SAV
2540 D-2011	Total Suspended Solids (Dried at 103-105°C)	SM	TAL SAV
2540C-2011	Total Dissolved Solids (Dried at 180 °C)	SM	TAL SAV
365.4-1974	Phosphorus, Total	EPA	TAL SAV
410.4-1993 R2.0	COD	MCAWW	TAL SAV
5210B-2011	BOD, 5-Day	SM	TAL SAV
9040C	pH	SW846	TAL SAV
9060	Organic Carbon, Total (TOC)	SW846	TAL SAV
Total Nitrogen	Nitrogen, Total	EPA	TAL SAV
1664B	HEM and SGT-HEM (Aqueous)	1664B	TAL SAV
Digestion	Digestion, Hot Block	MCAWW	TAL SAV

Protocol References:

1664B = EPA-821-98-002

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6206
Cooler ID 1 of 1
Page 1 of 2

Laboratory TestAmerica
Lab Contact
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 20.094.21-07.1
Lab contract:

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: COD (E410.4) 1 x 250 mL poly, H2SO4	Total Nitrogen (SM 4500-NO3E) 1 x 250 mL poly, H2SO4	TSS (SM2540D) 1 x 1 L poly, None	TDS (SM2540C) 1 x 500 mL poly, None	pH (SW9040) 1 x 125 poly, None	Oil & Grease (E1664) 2 x 500 mL amber glass, H2SO4	BOD (SM5210B) 1 x 1 L poly, None	TOC (SW9060) 3 x 40 mL amber glass, H2SO4
Parcel 81(5), Landfill 4	DSN 040	NS	SW	WQ	Grab	10/28/20	8:45	X	X	X	X	X	X	X	X

NOTES:
QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water
Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water
White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt
COMMENTS:
**Collect FEII in the field

Relinquished by (Signature):
Date/Time: 10/28/20 14:00
Received by (Signature):

Relinquished by (Signature):
Date/Time:
Received by (Signature):

FedEx
10-29-20 950

3.4/3.1

680-190668-01 Chain of Custody

MATRIX ENVIRONMENTAL SERVICES CHAIN OF CUSTODY RECORD

COC Number 6207
Cooler ID 1 of 1
Page 2 of 2

Laboratory TestAmerica
Lab Contact
MES Contact Betty Van Pelt
MES Phone 801-699-1246
Project Parcel 81(5), Landfill 4
Task # 20.094.21-07.1
Lab contract:

Samplers Signature

SWMU	Station ID	QC Code	Station Code	Matrix	Sample Method	Date Collected	Sample Time	Analysis: TP (E365.4) 1 x 250 mL poly, H2SO4				
Parcel 81(5), Landfill 4	DSN 040	NS	SW	WQ	Grab	10/28/20	8:45	X				

NOTES:
QC Code: NS = Investigative Sample, FD = Field Duplicate, MS/MSD = Matrix Spike/Matrix Spike Duplicate, EB = Equipment Blank, TB = Trip Blank, WQ = Water Quality, WS = Source Water
Station Type = MW = Monitoring Well, BH = Bore Hole, SD = Sediment, SW = Surface Water, SS = Surface Soil, SU = Sump, WS = Waste Solid/Soil, WW = Waste Water
White Copy = Lab COC, Yellow COC = Field Copy, Pink COC = Data Mgmt
COMMENTS:
**Collect FEII in the field

Relinquished by (Signature):
Date/Time: 10/28/20 14:00
Received by (Signature):

Relinquished by (Signature):
Date/Time:
Received by (Signature): FedEx

TA 10-29-20 950
3.4/3.1

680-190668-02 Chain of Custody

Login Sample Receipt Checklist

Client: Matrix Environmental Services, LLC

Job Number: 680-190668-1

Login Number: 190668
List Number: 1
Creator: Sims, Robert D

List Source: Eurofins TestAmerica, Savannah

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	